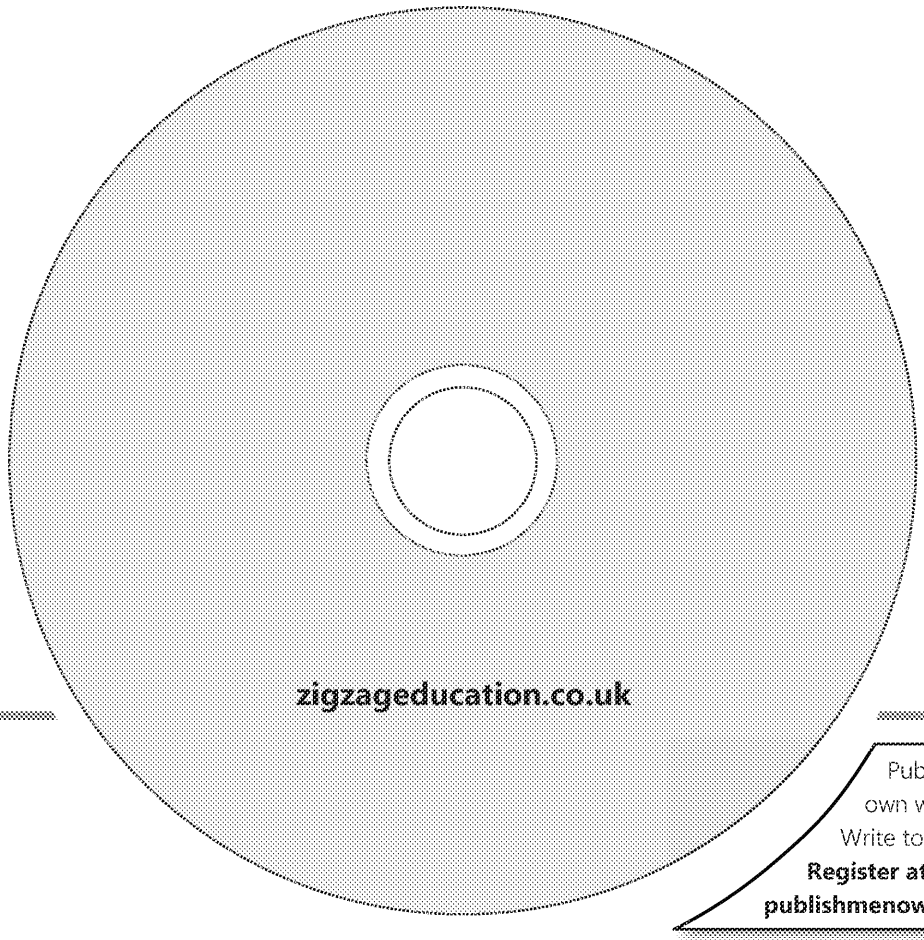
2022 specification
first exams in 2024

# Keyword Activities

*for BTEC Level 1 / Level 2 Tech Award*

*Digital Information Technology*

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# Teacher's Introduction

This resource has been produced to support teaching and learning of the BTEC Tech Award Digital Information Technology specification from September 2022. The learning content is covered by the following sets of keywords with matching descriptions, which cover all of the subject content for Components 1, 2 and 3.

| ***Component 1: User interface design / project planning*** |
|---|
| • *User interfaces* (A1)<br>• *User interface design; users and efficiency* (A2 - A4)<br>• *Project planning techniques* (B1)<br>• *Project planning and initial design* (B2 - B3)<br>• *Develop and review a user interface* (C1 - C3) |

| ***Component 2: Collecting, presenting and interpreting data*** |
|---|
| • *Data and information: characteristics, representation and processing* (A1 - A3)<br>• *Data and information: collection, quality, modelling and threats* (A4 - A7)<br>• *Data processing methods* (B1)<br>• *Produce a dashboard* (B2)<br>• *Draw conclusions and review data presentation methods* (C1 - C2) |

| ***Component 3: Effective digital working practices*** |
|---|
| • *Modern technologies* (A1)<br>• *Impact of modern technologies* (A2)<br>• *Threats to data* (B1)<br>• *Relational Databases and SQL*<br>• *Prevention and management of threats to data* (B2)<br>• *IT policy and responsible use* (B3, C1)<br>• *Legal and ethical* (C2)<br>• *Forms of notation* (D1) |

For each set, there are a number of different keyword activities on CD designed to give you a range of different options for classroom, homework and revision. This variety enables you to take a different approach to different topics – such as using the Crosswords as homework for one topic, and the Match Up as a starter for another.

Alternatively, differentiate the activity for a given topic; for example, you might want to give your stronger students the **Crosswords** early on while you start weaker learners on the **Match Up** (where terms and definitions are both available). **Domino** and **Bingo** activities add an element of fun and reinforcement, as well as potential for pair and group work. Finally, the **Flash Cards** come into their own for revision and the **Table Fill** and **Write Your Own Glossary** allow students to test their understanding by correctly filling in keywords or definitions.

There is more information about the digital format and the different activities included on the following two pages.

## Digital Format

All of the activities are provided electronically on the accompanying CD. To use o
school network/VLE, the entire contents of the CD needs to be copied and paste
accessible location.

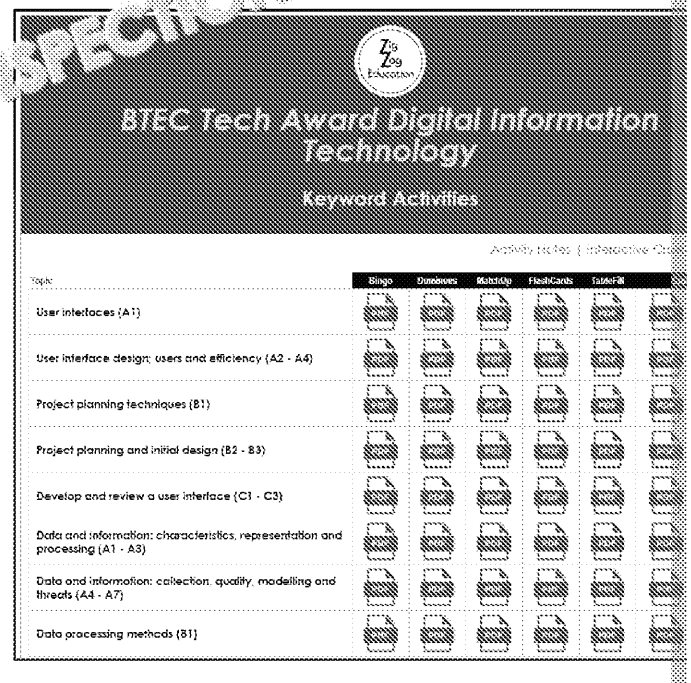
Providing easy access to the activities are two HTML menus:

1. *Access All* Menu

   Location: **index.html**

   This menu, designed primarily for teacher use, includes links to everything on pro
   easily select what you need when preparing your lessons.

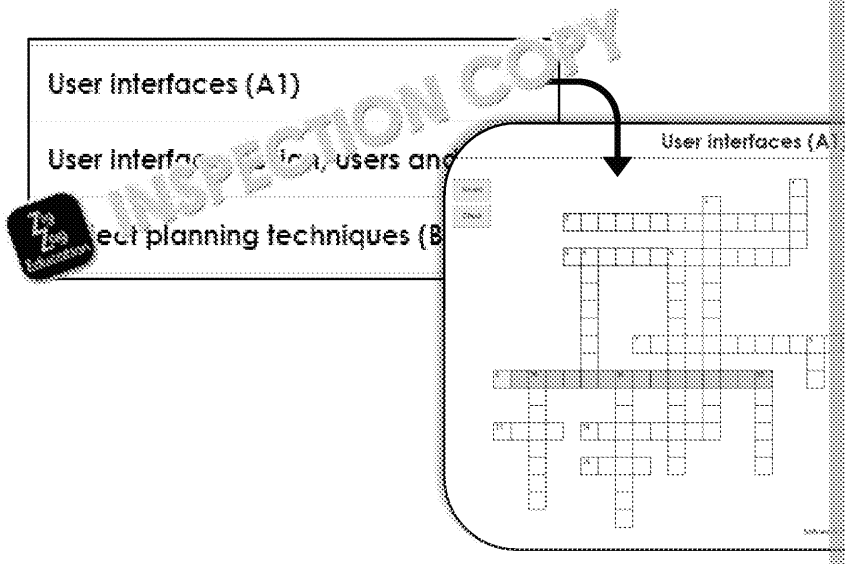
   If you intend to give learners access to this menu, be aware that it does




2. *Interactive Crossword* Menu

   Location: **interactive-crosswords/index.html**

   This menu, which can be accessed via the *Access All* Menu is included to allow
   interactive crosswords (without the answers).

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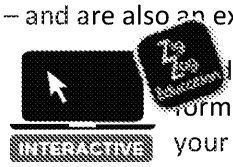
## *Activity Types*

All activities are provided as PDF files, allowing for easy printing and sharing on y
VLE. In addition, each of the single-page activities (*Crosswords*, *Match-up* and *To*
are provided on paper too.

The activities included in this resource are as follows:

**Bingo**
Each student is given a different bingo card containing a selection of words from
teacher reads the definitions using the Keyword Answers, and the student must
to the words on their card to complete rows, columns, and the full bingo card. Th
sets with 12 or more words.

**Crosswords**
These traditional keyword activities are equally effective as lesson or homework
– and are also an excellent way of easing students into their revision programme




In addition to the photocopiable worksheets and PDF, the crosswo
format on the accompanying CD-ROM. These are web-based (HTM
your Internet browser.

**Dominoes / Loop Cards**
This is essentially another match-up activity, but this one is designed to be used
to engage students. It is recommended that students work in pairs or small grou

Half of each card contains a keyword, and the other half contains a description.
students must align all the cards in the correct order. There is a 'Start' and a 'Fini
left outside the chain, then students have gone wrong somewhere.

**Match-up**
Students match descriptions to their keywords by drawing lines between them. B
there are similar descriptions and keywords, students are likely to make the odd
while completing the activity, so it is recommended that they use a pencil to star
keywords that they are familiar with, students can then think about and learn th
confident with.

**Flash Cards**
These are a helpful revision tool. To make the cards, fold the page in half, then c
stick them together so the keyword is on one side and the definition the other. I
could use these to play a game of pairs. Cut each card in two and place them all f
will then take it in turns to turn over two cards with the aim of matching a keywo
cards are removed, and the game is finished when all pairs have been match

**Glossary Builders**

***Table-fill***
Nothing f – simply write the keyword which is being described,
any othe Because this activity tests the students' own knowledge, it is b
as a hom work activity at the end of each topic or during revision. This then
grasped the key terminology for each topic. Alternatively, the tables could be
beginning of the topic, to see what they already know.

***Write Your Own Glossary***
Like the Table-fill, this activity can be used to test students before learning a t
tool after learning a topic. Students are given a list of the keywords and need
definitions. Using Table-fill and Write Your Own Glossary, lessons can be diffe

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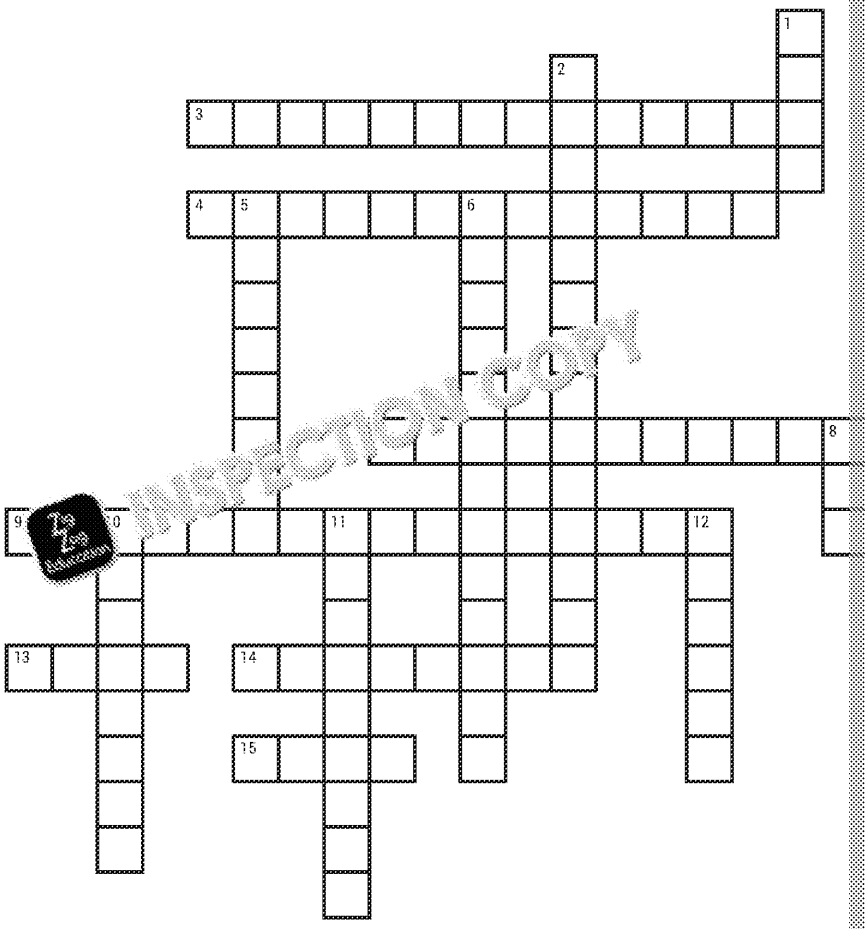
# *User interfaces (A1)*



**Across**

**3** A computer system that forms part of a larger electronic device (8,6)

**4** Software that allows interaction between the user and digital devices (4,9)

**7** An electronic system that manages another system or equipment without the need for human input (11,6)

**9** Conditions that the client needs the product to be able to meet (4,12)

**13** An aspect of a user interface which enables the user to input data (4)

**14** The physical parts that make up a comput[illegible] (8)

**15** A list of words (e.g. at the top of [illegible]), that when clicked/selected allow[illegible] options to be selected (4)

**Down**

**1** Acronym for win[illegible]

**2** Refers to the qua[illegible] particular websit[illegible]

**5** Enables users to [illegible] create somethin[illegible]

**6** Non-graphical in[illegible] command-line o[illegible] (4,9)

**8** Acronym for any [illegible] a computer syste[illegible] (3)

**10** Newly developed [illegible] new forms of inp[illegible]

**11** Human interactio[illegible] keyboard and mo[illegible] and gestures (4,5[illegible]

**12** Device designed [illegible] changes (6)

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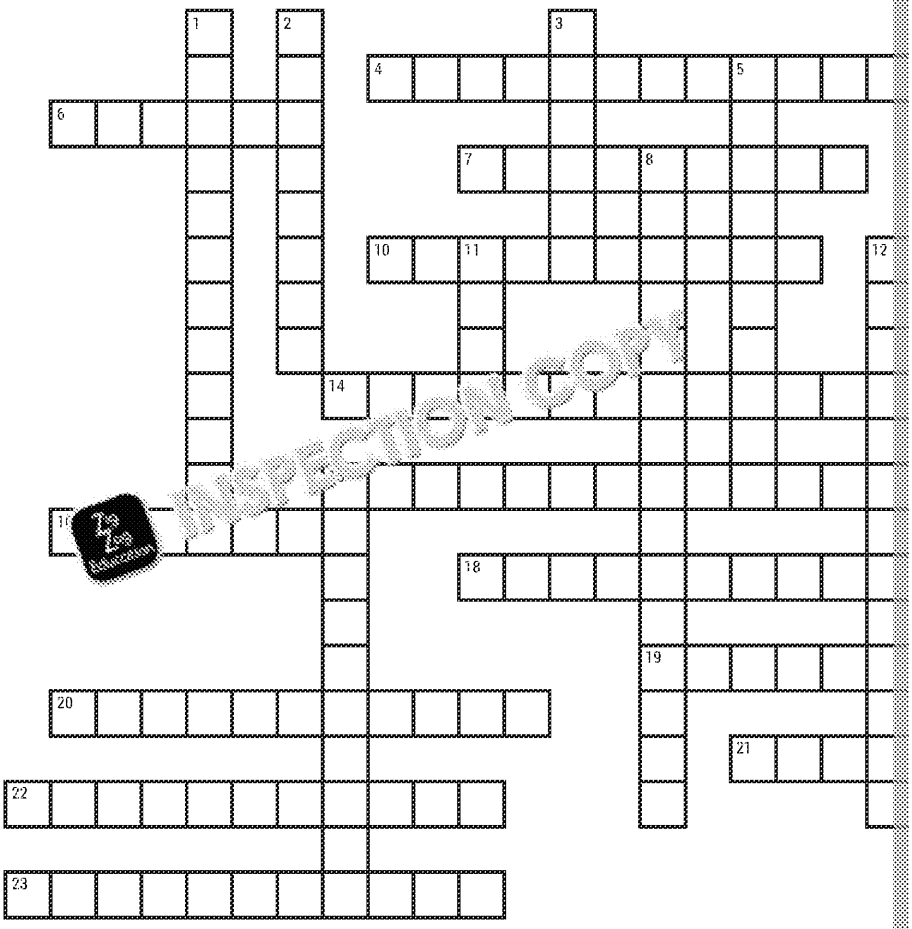
# *User interface design; users and efficiency (A2 - A4)*



**Across**

4 More than one key pressed at the same time to perform an action on a computer, e.g. Control + C for copy (8,8)

6 The way that text, graphics, buttons and other parts of the user interface are arranged on screen (6)

7 Some users have ____ needs for software design; for example, those with developmental delays or other learning disabilities (9)

10 Presentation standards used for all documents produced by an organisation (5,5)

13 Small, clickable images, representing real-world objects, used in user interfaces (5)

14 Letting the user know that what they've done has been recognised by the system - a tick or a success box might appear (11,8)

15 Words or numbers that are pre-populated on a form (but can be changed); for example a country code for a mobile phone number (7,6)

16 A rough or smooth paper surface, a [illegible] an on-screen effect to make the page appear like [illegible] crumpled paper, etc. (7)

18 A trail on a web [illegible] each level that you have visited, e.g. home > products [illegible] > fiction (11)

19 Recognisable shapes and characters which give meaning; for example a green tick is often used to indicate a strong password (7)

20 Particular subsection of a population (e.g. by age, income level, location, etc.) (11)

21 Areas of the screen without text or images, required so that the information on the screen is readable and uncluttered (5,5)

22 A box within an interface or web page that a term or phrase is typed in entered in order to find relevant results (6,5)

23 Ensures that each page within an interface has the same layout, headings and style so that it is easy to navigate, and looks professional (11)

**Down**

1 When a button on a m
show more selectabl

2 Function that popula
the user needing to t

3 An on/off switch, for
(6)

5 Expert, regular or nov
the software or interf

8 A system is created t
as obvious icons, hel

9 A small square or circ
a user interface (4,3)

11 If you change someth
change, you can reve

12 How hardware and so
use with ease (13)

15 Type of font which lo
small screen (10)

17 Type of font which is
or Helvetica (4,5)

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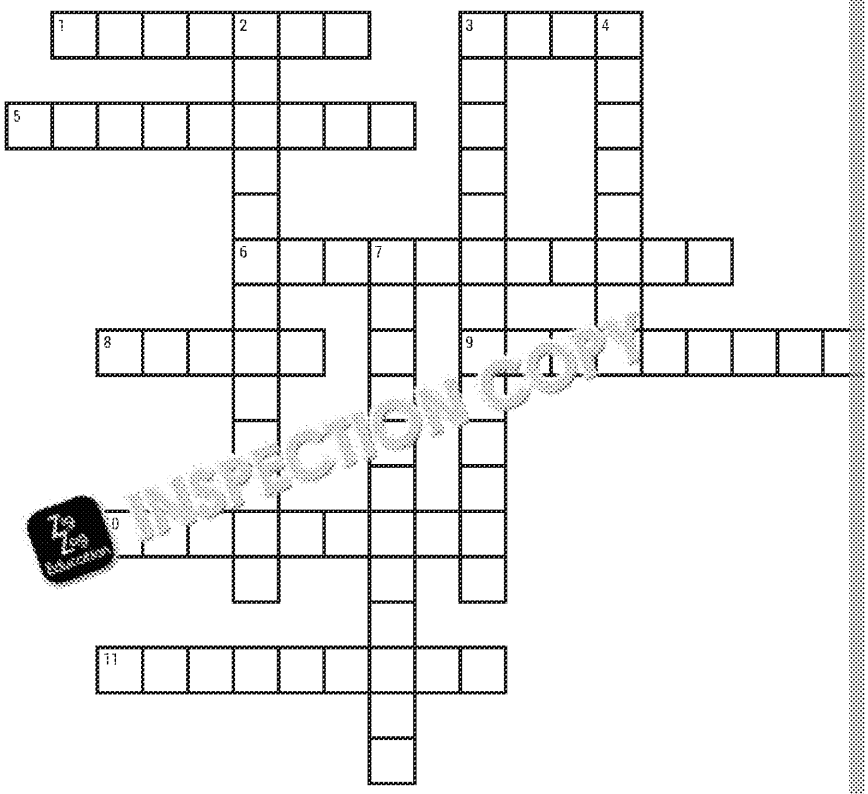
# *Project planning techniques (B1)*



**Across**

**1** Visualisation that shows the main objective and branches off into each of the sub-objectives and the tasks that need to be carried out to complete them (4,3)

**3** Visual representation of a project's milestones, and the tasks that need to be done to reach one milestone after another (4)

**5** Methodology where each stage is assessed in a cycle and if not correct or needs further work, goes back to a previous stage (9)

**6** Mind map expanded with text in order to provide greater detail about each task (11)

**8** Iterative methodology where small aspects of the project are prioritised into sprints, allowing the client to request changes throughout (5)

**9** Visual representation of when tasks need to be performed and how much time each task will take (5,5)

**10** Type of methodology where the tasks are linear - one after the other, not iterative (9)

**11** A visual display of images, themes, colours, etc. normally on a single piece of paper; can be constructed physically or digitally (4,5)

**Down**

**2** The tasks compl could have a clea

**3** A wide range of s manage a projec

**4** Written series of completed - e.g. (4,4)

**7** The sequence of shows the earlies will lead to the p

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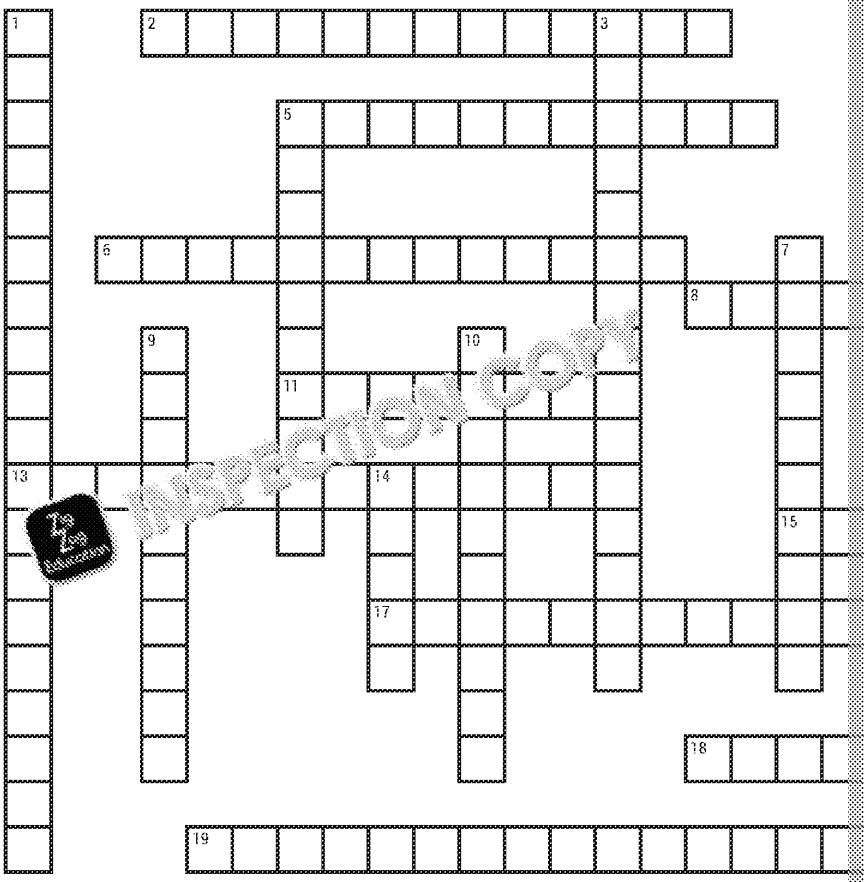
# *Project planning and initial design (B2 - B3)*



**Across**

**2** Graphical representation of how a product should look or be used (e.g. a sketch or storyboard) (13)

**5** Taking into account risks when planning so that setbacks can be handled (11)

**6** How well a product caters to users with additional needs (13)

**8** A well-designed application or interface will make people want to use it, and they will pay _____ to it (9)

**11** Person or people who the final product could be aimed at (8)

**13** If the person or people for whom the product was developed is/are comfortable using the product and can easily use it without excess help or feeling patronised (4,10)

**15** The data processed by a computer system that gives the user the information they require (6)

**17** Considerations that the client needs to discuss with the developer to ensure that people can successfully operate the system or soft[illegible] (12)

**18** A visualisation [illegible]d product - e.g. how it should look; where the different components, icons and menus should be located (6)

**19** A complex application or interface will need a lot of learning in order to master it and, therefore, _____ _____ of how to use it (11,9)

**Down**

**1** Everything that mu[illegible] project such as wh[illegible] outputs (7,12)

**3** At the end of a stag[illegible] successful or refin[illegible] stage for improven[illegible]

**4** Important stage in[illegible]

**5** A limiting factor wi[illegible] expertise or other [illegible]

**7** Series of sketches [illegible] a product (10)

**9** Objectives set for t[illegible] achievable and rea[illegible] (5,5)

**10** Task that can't be [illegible] is complete (10)

**12** The schedule for e[illegible] and that bugs are f[illegible] process (4,8)

**14** The ways that a us[illegible] enter data, such as[illegible] requirements (5)

**16** The expected leng[illegible] (9)

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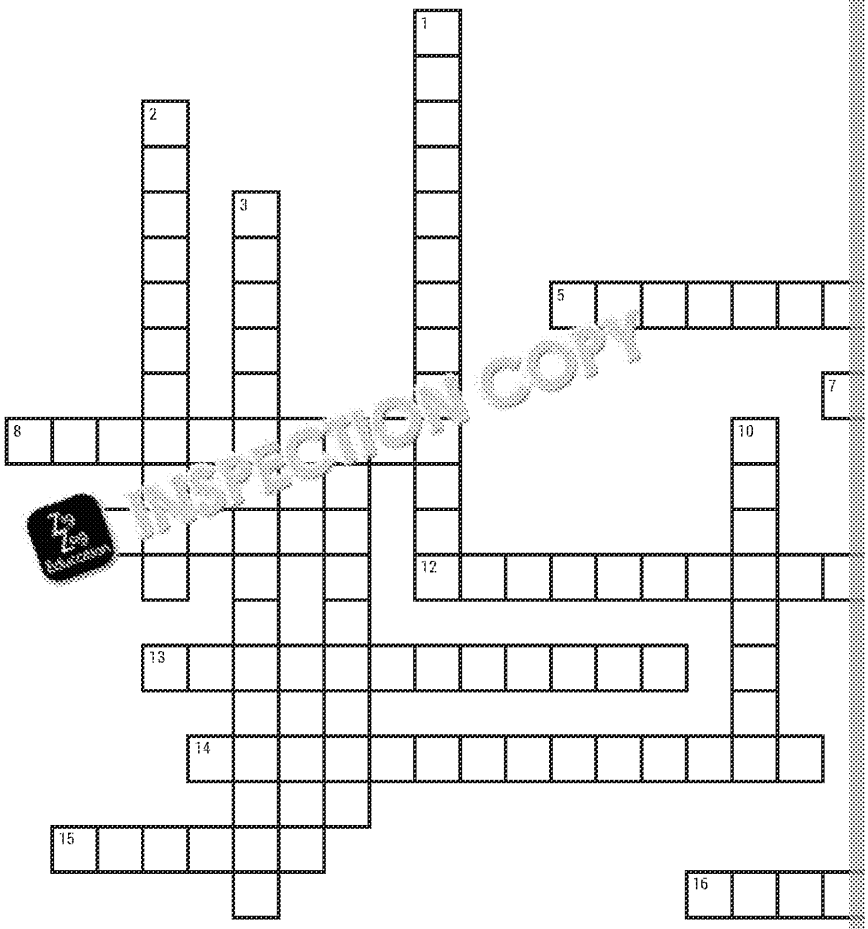
# *Develop and review a user interface (C1 - C3)*



**Across**

**5** Visual and behavioural aspects of a user interface (4,3,4)

**7** Small part of or an ability within an application or interface that is useful, e.g. printing or other services (7)

**8** Improvement to an application or interface based on user feedback or testing (10)

**11** On-screen, tactile or auditory messages provided to the user from the interface (7)

**12** The way that a user interacts with the product in order to click or select, and move from one screen to another (10,6)

**13** Comments, criticisms and suggested improvements provided by the people using the product (4,6)

**14** Improvements discovered during the development of a project that can be applied to the next project in a better way or more efficiently (7,7)

**15** Touch, mouse clicks and typed characters from the user in order to interact with the interface (6)

**16** The reasons for the development of the interface, and the different aspects within it (7)

**Down**

**1** Written evidence works, and the u developers (13)

**2** Limitations place development tim that the interfac

**3** Needs of those w performing requi

**4** Method of refinin feedback from te approves of the

**6** The collection an working on a pro deliver the user i

**9** How complicate

**10** The users of the needs, skill level

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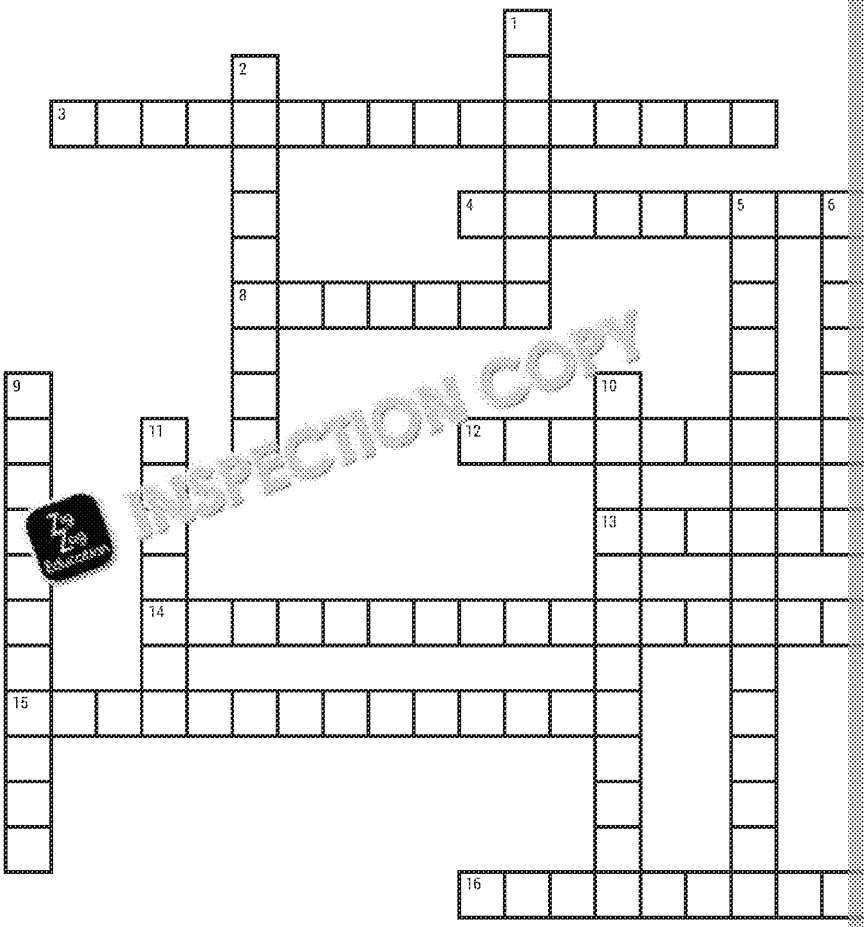
## *Data and information: characteristics, representation and proce*



**Across**

**3** Method of refining a user interface following rounds of feedback from testers including that the tester / client approves of the changes (9,7)

**4** Written evidence of changes to the interface, how it works, and the underlying code to teach users and future developers (13)

**8** Small part of or an ability within an application or interface that is useful, e.g. printing or other services (7)

**12** Limitations placed upon on the interface such as development time (budget) and hardware or software that the interface runs upon (11)

**13** Improvement to an application or interface based on user feedback or testing (

**14** Needs of tho[illegible]op[illegible]ate the interface, such as performing re[illegible] tasks in an intuitive way (4,12)

**15** Improvements discovered during the development of a project that can be applied to the next project in a better way or more efficiently (7,7)

**16** Visual and behavioural aspects of a user interface (4,3,4)

**Down**

**1** The reasons for t[illegible] the different asp[illegible]

**2** How complicate[illegible]

**5** The way that a u[illegible] click or select, a[illegible] (10,6)

**6** The users of the [illegible] needs, skill level[illegible]

**7** Touch, mouse cl[illegible] in order to intera[illegible]

**9** The collection a[illegible] working on a pro[illegible] deliver the user i[illegible]

**10** Comments, critic[illegible] provided by the [illegible]

**11** On-screen, tactil[illegible] user from the int[illegible]

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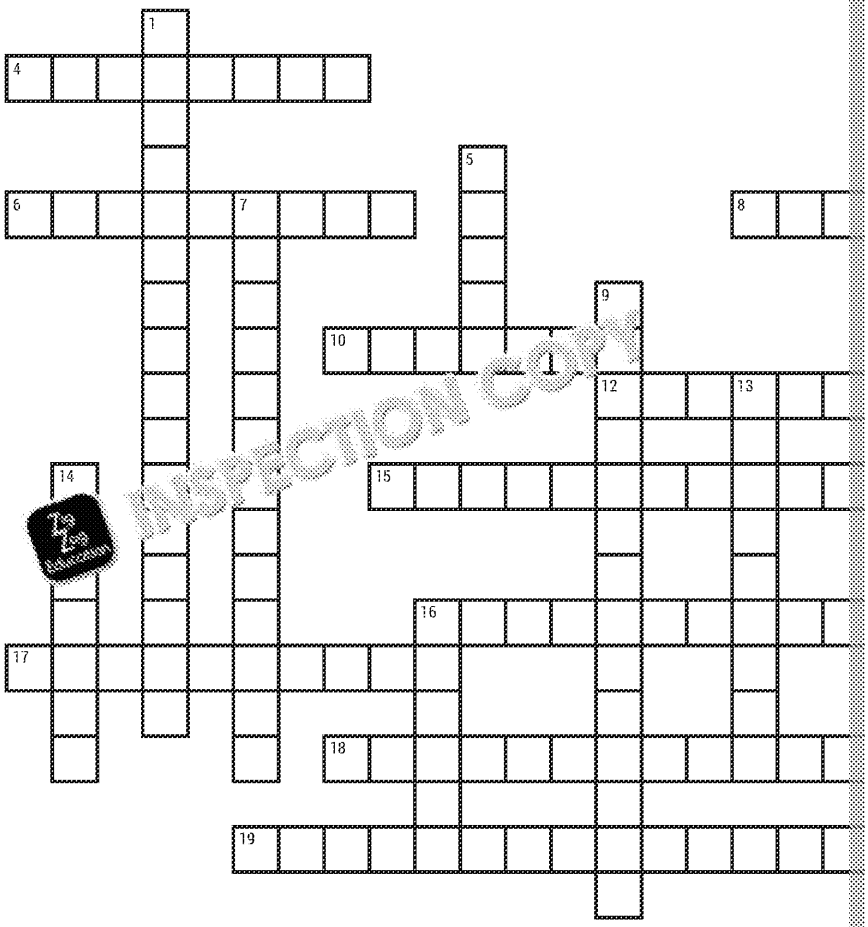
# *Data and information: collection, quality, modelling and threats*



**Across**

**2** Device designed to collect data from environmental changes (6)

**4** Measure of how correct data is (8)

**6** Analysing data sets to see whether there are relationships between them, or seeing how changing a component affects the outcome or forecast (9)

**8** Data collected by someone else (third party) for a different purpose, e.g. customer data from a retailer provided to an advertiser (9)

**10** Data sets that are too large to be processed by conventional means (3,4)

**11** Measure of how old data is (3)

**12** Collective term for a range of issues posed by da[illegible]e - such as invasion of privacy, and fraud when [illegible]ata is stolen (7)

**15** The way that th[illegible]ha[illegible]obtained - e.g. survey, interview, pane[illegible], feedback form, online form (10,6)

**16** Measure of how comprehensive data is (12)

**17** The number of data sets that have been collected, e.g. the number of people who data has been collected about (6,4)

**18** Retailers do not keep much spare stock on site. Instead, stock levels are constantly monitored, and items are sent to the store when they are about to run out. (4-2-4,8)

**19** Felt when businesses appear to build up a substantial profile about our personal lives or habits, or ask us for substantial personal data (8,2,7)

**Down**

**1** Types of people wh[illegible] of fraud, such as th[illegible] (10,6)

**2** The organisation t[illegible] education, finance[illegible]

**3** An online platform[illegible] share updates, con[illegible] each other (6,7)

**5** Wrongful or crimin[illegible] personal gain, e.g.[illegible] (5)

**7** Rewards programm[illegible] customer purchas[illegible]

**9** Methods used to o[illegible] existed before, or [illegible] different purpose [illegible]

**13** Online shopping ar[illegible] delivered to your h[illegible]

**14** New data collected[illegible] completing a door[illegible] group (7)

**16** Large-scale, offici[illegible] country - usually t[illegible]

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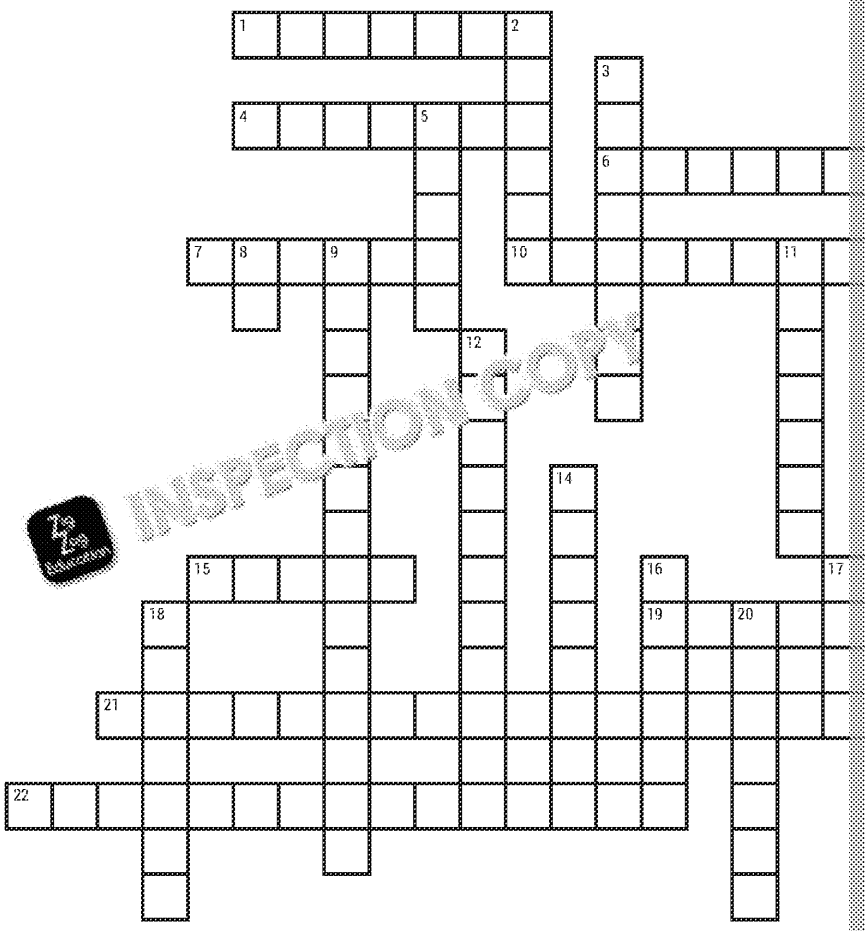
# Data processing methods (B1)



**Across**

**1** Function that returns the number of cells in a given range that satisfy a given condition (7)

**4** Type of operator that involves arguments or reasoning; NOT, AND and OR are examples (7)

**6** When a function is run on a block of text, e.g. left or right (6)

**7** Rows or columns that have been removed from view from the user, but remain in the spreadsheet (6)

**10** Type of cell reference that changes when a formula is copied or moved to another cell (8)

**15** Function that adds all numbers in a range of cells that satisfy a given condition (5)

**19** A set of actions that can be recorded or coded to automate tasks that are repeated often (5)

**21** Colour coding, data bars, etc. automatically generated ... th... value or contents of a cell, allowing fast visu... ...ata (e.g. turn cell red if value >90%) (11,10)

**22** A spreadsheet can h... ma... ...sheets. A formula in one sheet can pull through ... ...ta from a different sheet. (6,9)

**Down**

**2** Reducing the amoun... cells in a column whi...

**3** Type of cell reference ... copied or moved to a...

**5** Function that adds u... not blank) (5)

**8** Carries out one actio... an alternative action...

**9** Involves testing that ... (4,10)

**11** Function that returns ... same row as a given ...

**12** The header row or fir... the spreadsheet you ... (6,5)

**13** Function that adds u... (i.e. are blank) (10)

**14** Expressions that set ... within the spreadshe...

**16** Copy data between d... the Internet into a wo...

**17** Arranging a column o... by smallest to larges...

**18** Function that returns ... the first row is specif...

**20** A note giving further ... spreadsheet (7)

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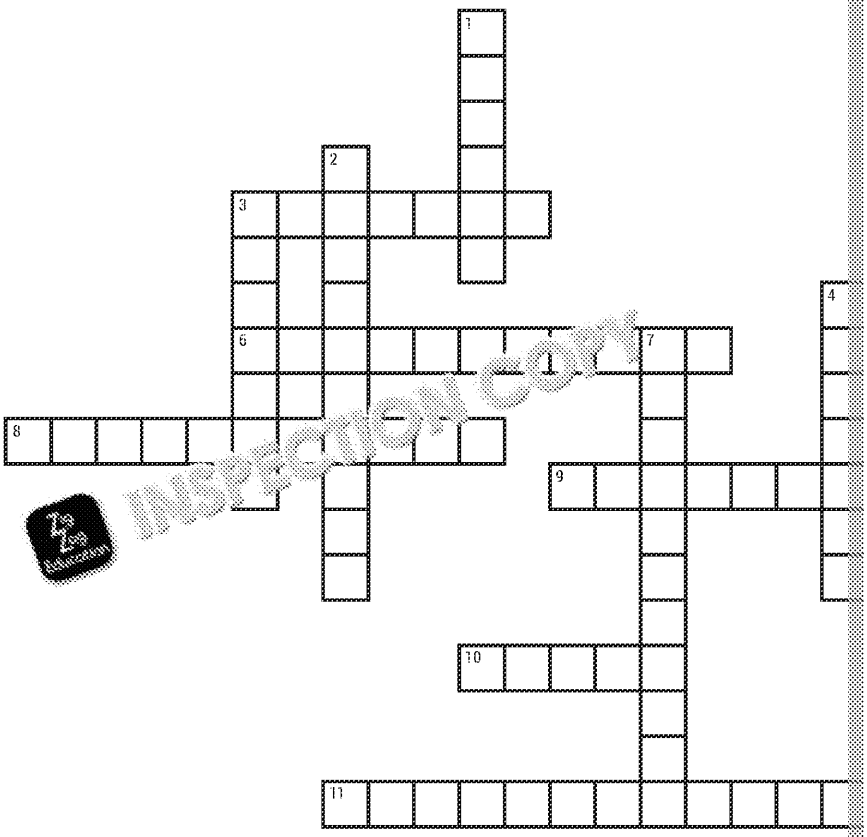
# *Produce a dashboard (B2)*



**Across**

**3** Values can be changed by pressing up or down arrows - e.g. volume control (7)

**4** Heading at the top of a page, section of a document or chart which indicates what the text or chart is going to cover (5)

**6** Presentation of the key data on a dashboard (such as totals, subtotals or other synopsis), allowing it to be seen immediately (4,7)

**8** Values out of 100 - e.g. a dashboard might say that 75% of yesterday's customer calls were answered within five minutes (11)

**9** Found next to the horizontal and vertical axes on a graph so that we know what data is shown and any units (e.g. height in cm, number of people) (4,6)

**10** The total number of specified cells that contain some data; can be represented on a dashboard (5)

**11** When a button on a menu is pressed or clicked, the menu expands to show more selectable options (8,4)

**Down**

**1** The outline arou be changed, or it

**2** Table in a spread analysis (5,5)

**3** The colouring, gr background (7)

**4** Square or circle t within it (4,3)

**5** Sum of all data (

**7** Used where there from which a sin

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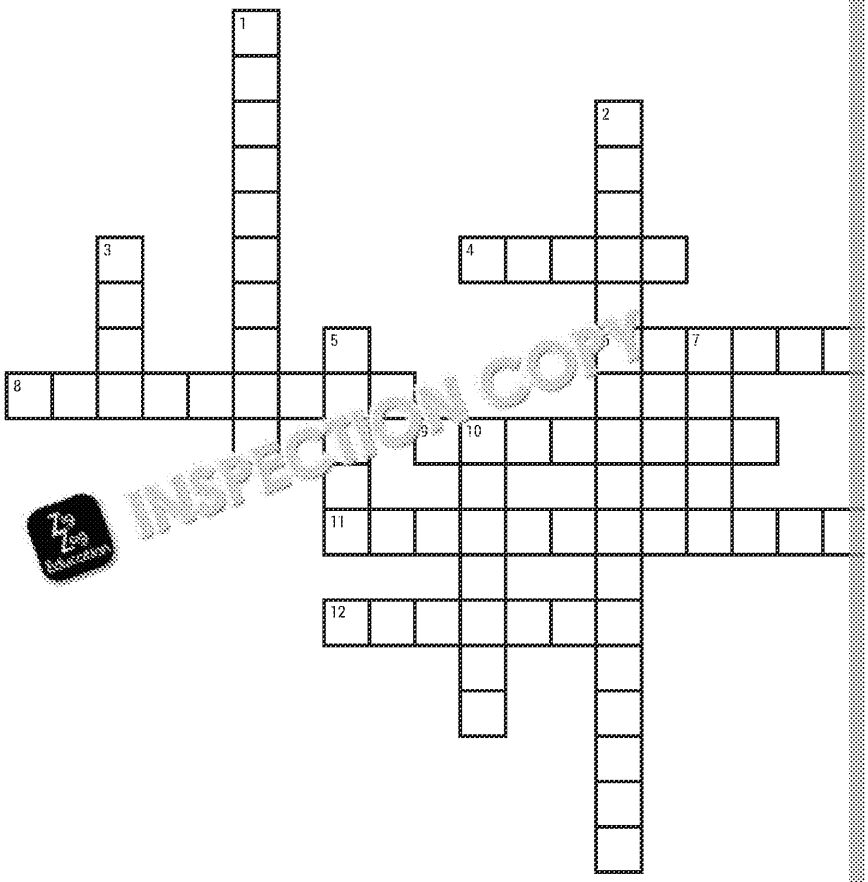
# *Draw conclusions and review data presentation methods (C1 - C*



**Across**

**4** Visual often produced in spreadsheet software, e.g. pie, bar, line, etc. (5)

**6** A graph showing an increase in sales of sun cream every summer would demonstrate a ____ on the graph (7)

**8** Visual representation of data allowing real-time at-a-glance progress and target monitoring (9)

**9** Type of advertising which is aimed at a specific audience/demographic (8)

**11** Graphs and dashboards can be used to make ____ such as when to send stock to a store, or when busy times will necessitate more staff (15)

**12** Structured amount of raw facts which can be processed and analysed by a com... draw conclusions (4,3)

**Down**

**1** A summary at th... key points and m...

**2** Occurs when dat... and statistics are... not reflect reality...

**3** When data is not... collected, e.g. fo... on the time it wa...

**5** Incorrect data be... was not correctly...

**7** Direction of trave... increase or decre...

**10** An outlier on a gr... showing on a rai...

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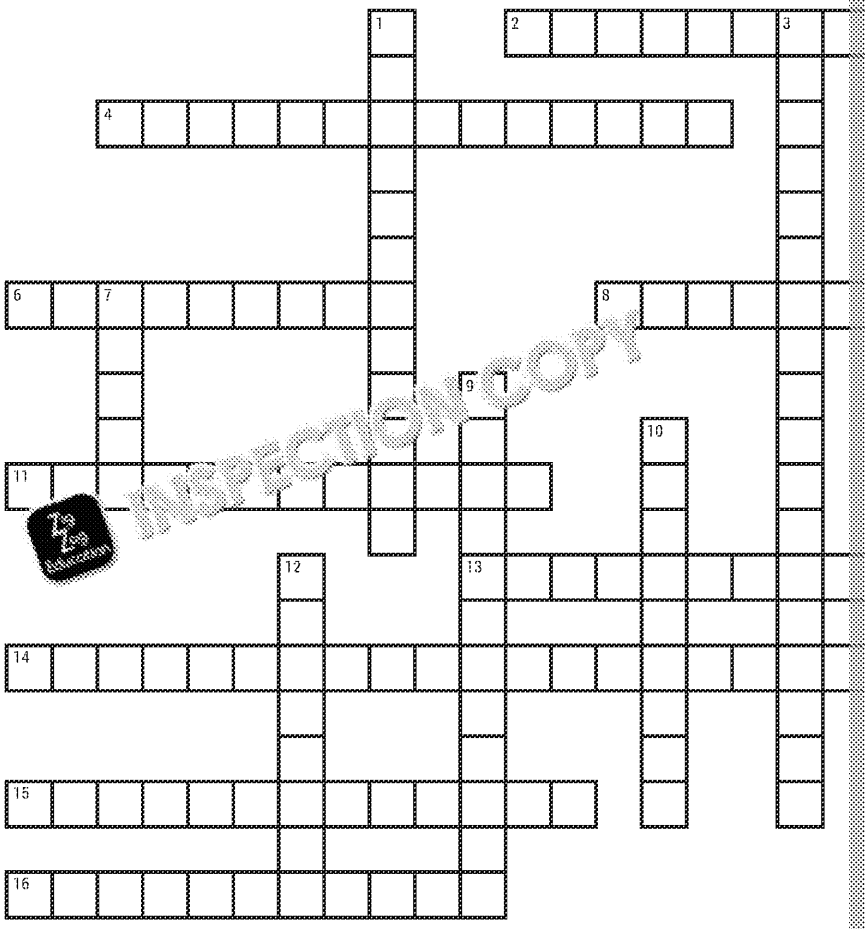
# *Modern technologies (A1)*



**Across**

**2** Small on-screen message alerting the user to some information, for example, a software update becoming available (13)

**4** Using online services instead of local applications, e.g. editing a document from a web browser (5,9)

**6** Area without mobile phone coverage - e.g. a valley surrounded by high mountains (5,4)

**8** Ensuring that services and systems are working as expected and at the right speed (11)

**11** Controlling what permissions each user (or group of users) is given (e.g. allowing only admins to ... certain folder) (6,6)

**13** When files and applicati... on two devices are updated to n... e ... both devices have the same content (15)

**14** Set of procedures used after a significant event such as a fire, flood or ransomware attack causes major business disruption (8,8,6)

**15** If a new system does not work with existing software is has failed what sort of test? (13)

**16** If, when evaluating a system, it is found not to be able to deal with an increase in workload, it has failed what sort of test? (11)

**Down**

**1** Data storage tec... servers accesse...

**3** Software that all... online or share a... simultaneously)

**5** Process of monit... replacing or upd... (11)

**7** A temporary wire... hardware such a... created using a ...

**9** Processes and p... hackers do not a... malware (4,8)

**10** Sharing of a mob... another device s...

**12** A wireless Intern... e.g. provided by ... (and may have n...

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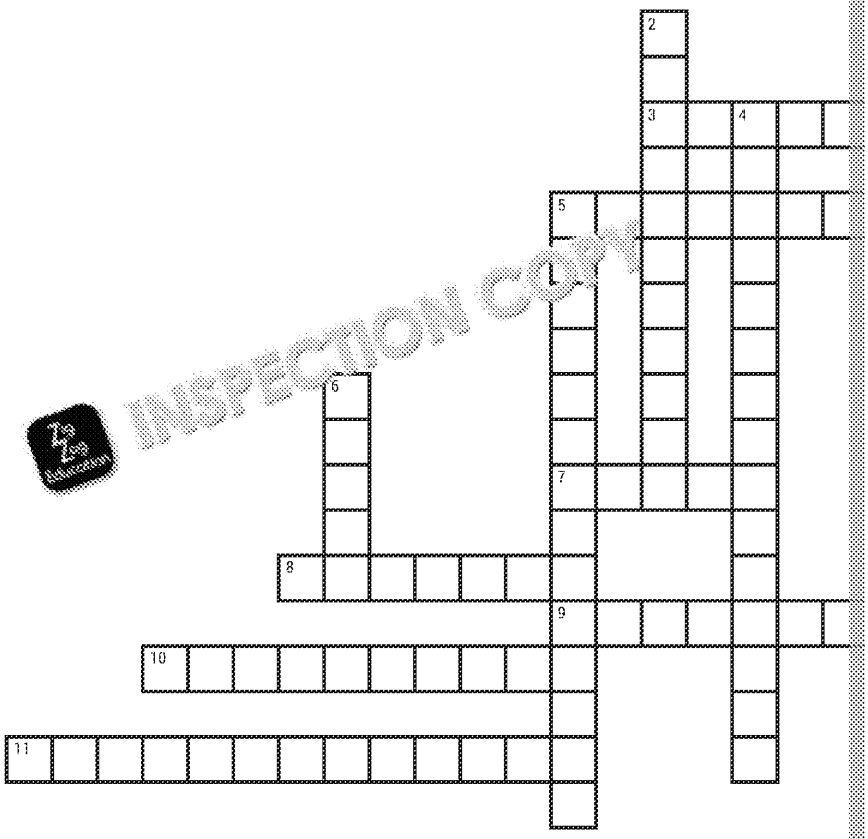
# *Impact of modern technologies (A2)*



**Across**

**3** Travel to and from your place of work - eliminated when working from home! (7)

**5** Software for setting up the tasks for a project, allowing for teams to manage their time, helping to ensure that milestones and targets are achieved (8,4)

**7** Electronic form of messaging sent between individuals, employees, businesses and customers; sometimes with attachments or other media (5)

**8** A collection of webpages hosted on the WWW to present information about an individual or organisation to its followers (7)

**9** An application which narrates the contents of a computer display, used by people with [illegible] or no sight (6,6)

**10** A group of people working on a shared project who are located in different locations and, therefore, time zones and cultures (5,5)

**11** Working away from the office such as at home (6,7)

**Down**

**1** A description of a readers can read

**2** Online platforms which facilitate s the building of or

**4** For most people, others relieves b their ____ ____-_

**5** Otherwise called between two use see (7,7)

**6** Form of spoken c the phone, or VO

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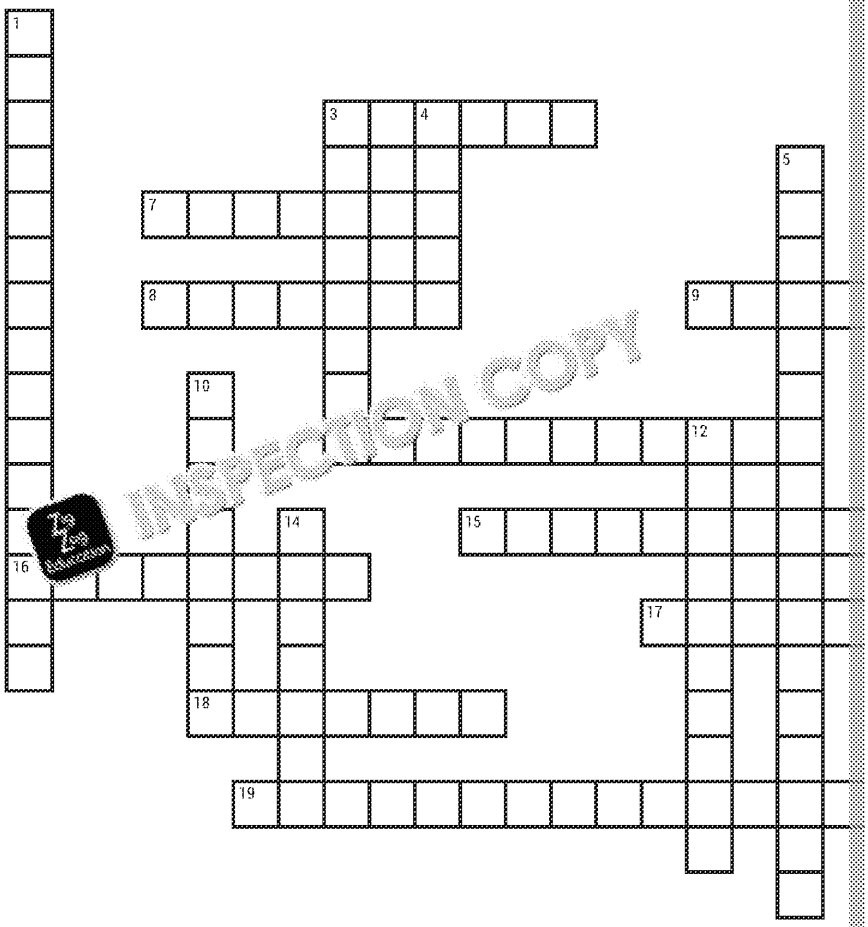
# Threats to data (B1)



**Across**

**3** A network of computers infected with malicious software, often responsible for carrying out DDoS attacks and sending spam (6)

**6** Malware that spreads by injecting its code into other files on the computer system (5)

**7** Software that collects data from a computer system (7)

**8** Collection of software that hides its existence (or the existence of other software) and enables access to restricted parts of a computer system (7)

**9** Impersonating a trusted person or organisation in order to steal data or manipulate the user of a system (8)

**11** Malware that pretends to function as legitimate software (5)

**15** Spying on governments and businesses to obtain secret / trade secrets / intellectual property, industrial espionage and data theft by hackers (9)

**16** Type of threat posed by someone within an organisation, for example, an employee unintentionally installing a virus (8)

**17** The duration that systems are not operational, e.g. if taken offline to investigate a security breach (8)

**18** When an employee deliberately discloses confidential information outside of their organisation (7)

**19** Attack whereby a website or network is flooded with traffic in a deliberate attempt to bring it down (6,2,7)

**Down**

**1** Watching somebo into a system (8,7)

**2** Type of attack that to a fake website c

**3** Hacker who attem reasons to steal da

**4** Stealing of data fr (internal threat) or

**5** Manipulating the u gain unauthorised

**10** Type of threat pos for example a hack

**12** Malware that restr system to make th

**13** Malware that repli computer system

**14** Malicious softwar to damage or disru access (7)

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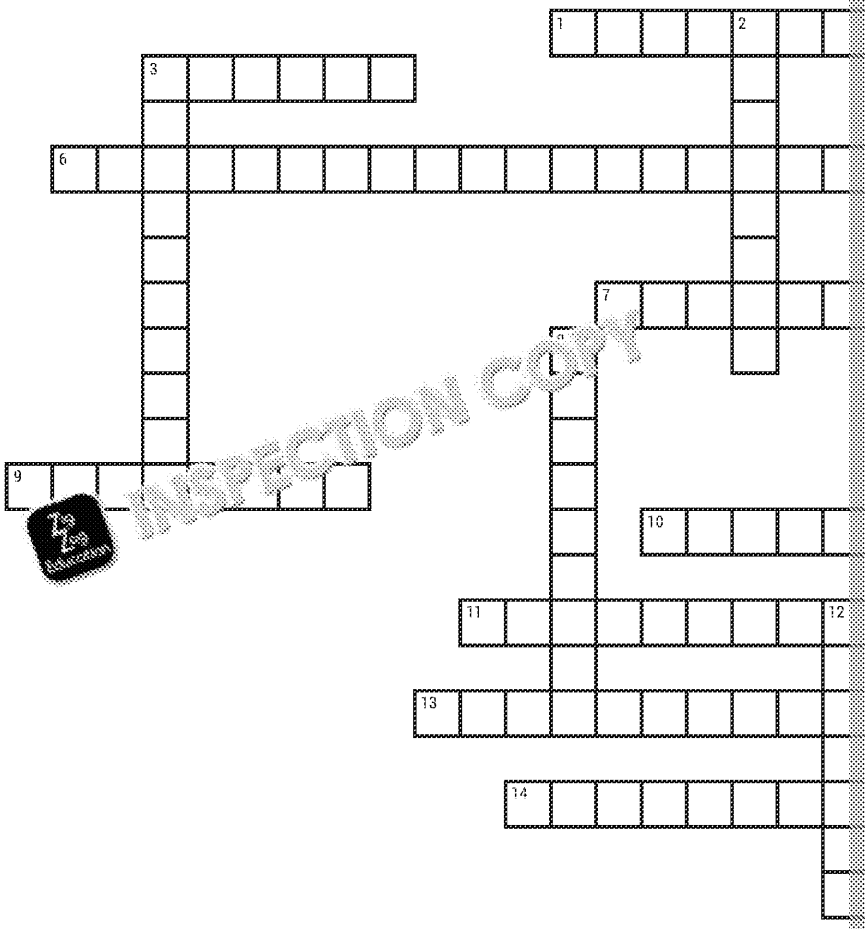
# *Prevention and management of threats to data (B2)*



**Across**

**1** Hardware- or software-based security which controls incoming and outgoing network traffic based on predefined rules (8)

**3** Copy of data that can be used to restore data if the original copy is lost, corrupted or destroyed (6)

**6** Using more than one characteristic in order to verify a transaction - such as sending a text message or email, or requiring a card / card reader (3-6,14)

**7** Restoration of files from backups following a malware attack or a failed drive is called ____ ____ (4,8)

**9** Sequence of characters needed to gain acce… system (8)

**10** Scrambling data so tha… …nly be read by users with the appropri… …sla…on 'key' (10)

**11** General term a…ied to devices which have been designed or modified to prevent intrusion by hackers or malware (9)

**13** The protection of digital devices from physical threats such as theft, e.g. a biometric door lock (8,8)

**14** Testing the security of a system by attempting to break into it with the owner's permission (7,7)

**Down**

**2** A security expert … security and fix t…

**3** Use of personal i… system, e.g. fing…

**4** If you need to typ… might appear pre… address before (…

**5** Process of testin… hacker could exp…

**8** Software used to…

**12** Hacker who atte… systems - doesn't… owner, but witho…

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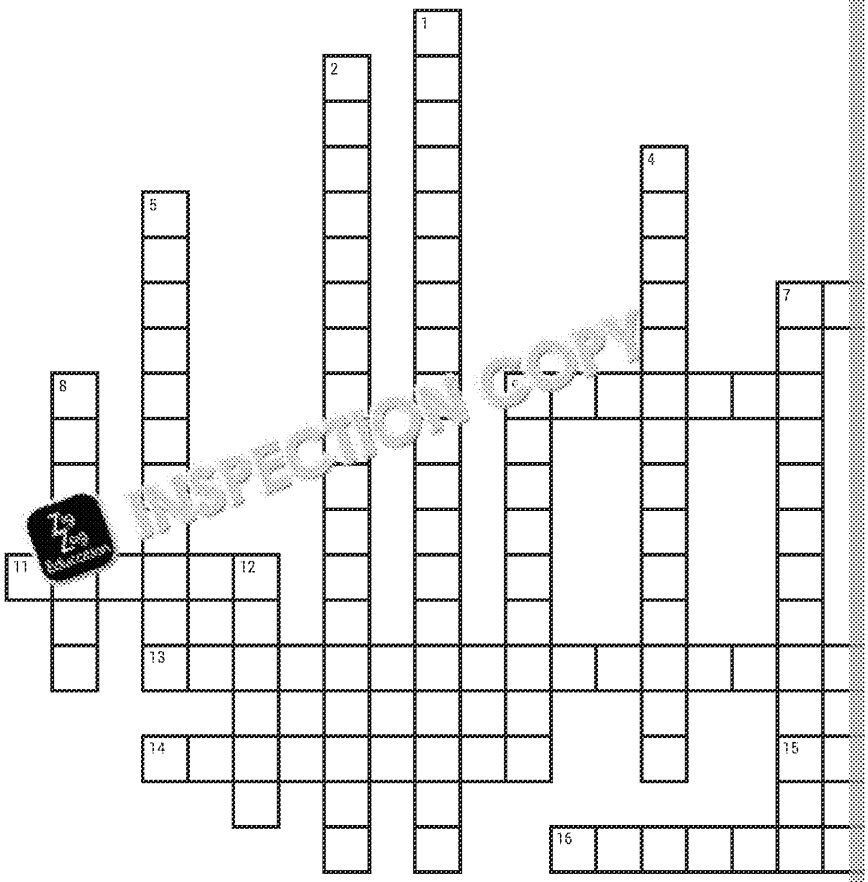
# *IT policy and responsible use (B3, C1)*



**Across**

**7** After an attack, the company needs to ____ - telling stakeholders and authorities (e.g. the ICO) what happened (7)

**9** After an attack, businesses ____ by implementing their disaster plan and taking remedial action (7)

**11** After an attack, companies need to ____ it - by containing the problem and implementing suitable procedures (6)

**13** Method of sharing and making document/information accessible via email, online, etc. without printing it (10,12)

**14** Process where existing technology is replaced with newer or higher-performance technology (9)

**15** The last phase after an attack - updating procedures and policy to ensure that an attack is less likely to happen agai (7)

**16** Settings that reduce energy used by a device t dimming and switching off the screen by if device not used for a while (5,

**Down**

**1** Set of rules which computer system

**2** Apps and program on its computers a

**3** Term for a docume

**4** Length, numbers a determined by the

**5** After an attack, the happened and how

**6** Material left over f itself upon reachin disposed of (5)

**7** Metals and minera other goods, only f geographical area

**8** Increased digital s have led to concer

**9** When a device can slow or old, or bec

**10** Term used to desc behaviour - e.g. th personal data (6)

**12** Various forms of p it and dispose of it

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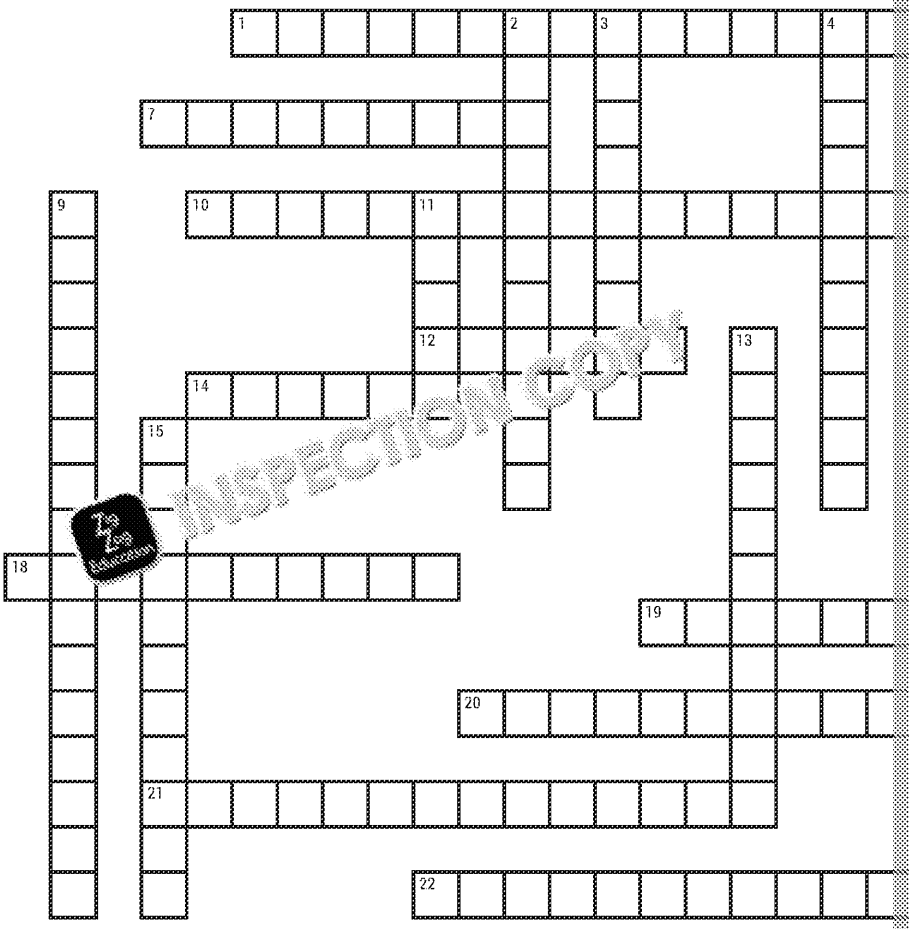
# *Legal and ethical (C2)*



**Across**

**1** Document signed by an employee or service user that governs how they may and may not use a computer system (10,3,6)

**7** A legal right protecting the use of paper and digital intellectual property (9)

**10** Set of actions specific to a particular industry that are widely agreed but not legally enforceable (12,10)

**12** Grants the exclusive rights to a person to use a specific design or invention (6)

**14** Small text file saved on a computer when a website is loaded, storing pages visited and details to personalise the experience (6)

**16** What is covered by an acceptable use policy - e.g. equipment and data owned by a company (6)

**18** An organisation watching employee behaviour - e.g. usage time, emails sent and websites visited (9)

**19** A word or phrase used by a company to identify a brand or product - may have the ™ symbol or ® if registered (9)

**20** Why personal data is collected (8,7)

**21** Act that makes provision for the regulation of the processing of information relating to individuals (4,10)

**22** All traffic on the Internet is treated with equal importance/priority - specific types of traffic cannot be slowed down (3,10)

**Down**

**2** When IP belonging terms state that th - e.g. Creative Con

**3** When a fee is paid to use or distribute

**4** When someone wa within their work -

**5** Creative work belo protected by legisl

**6** Person whom the

**8** Collective term for the acceptable use

**9** The legal basis for

**11** Who an acceptable

**13** Laws or acts which

**15** Online platforms, u facilitate sharing o online communities

**17** Sets of guidelines don't have to), e.g. Consortium (9)

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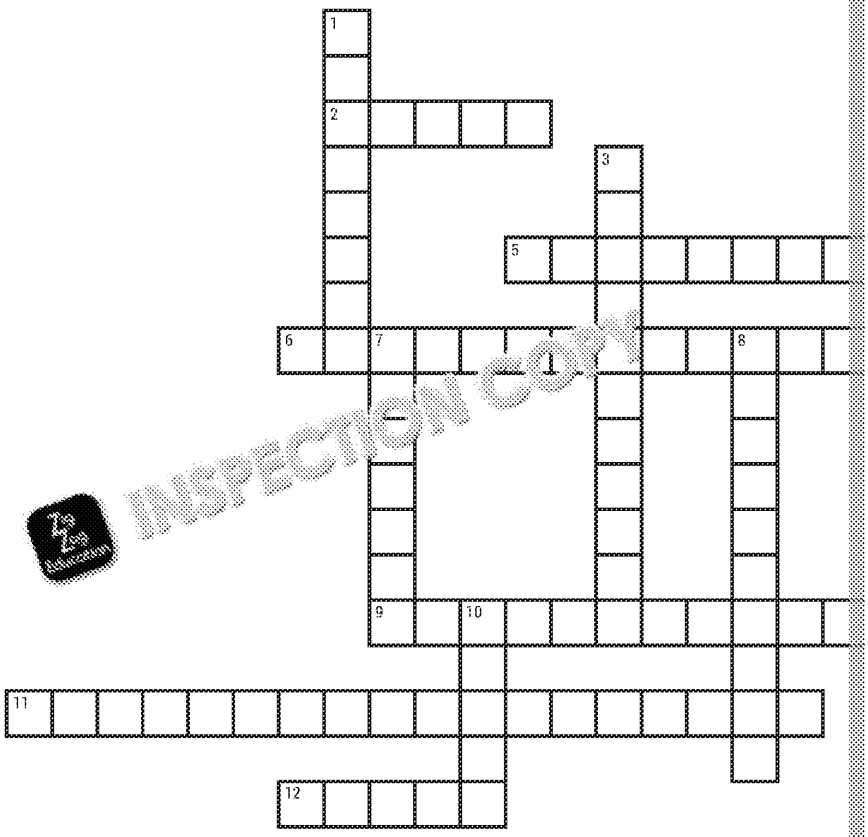
## *Forms of notation (D1)*



**Across**

**2** A term for a graph where tabulated data is displayed graphically (5)

**5** Graphical method of representing an algorithm or process (4,5)

**6** These are both represented by a parallelogram in a flow chart (5,3,6)

**9** Representation of the inputs, processes and outputs within a system or business (6,7)

**11** Data or text that has been analysed and discussed in continuous prose (7,11)

**12** Data provided in rows and columns for clarity and ease ability to spot trends and patterns (4)

**Down**

**1** Yes or no, for exa

**3** Representation s is stored and tra

**4** A person who pro diagram (6)

**7** Represented in a

**8** Start and end of shape (10)

**10** Repository for pr diagram - a data

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# *User interfaces (A1)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | A computer system that forms part of a larger electronic device | | ***CONTROLLING DEVICE*** |
| 2 | A list of words (e.g. at the top of a screen) that when clicked/selected allow for more options to be selected | | ***EMBEDDED SYSTEM*** |
| 3 | Acronym for any interface that enables interaction with a computer system using icons and other visual features | | ***EMERGING*** |
| 4 | Acronym for windows, icons, menus and pointers | | ***FORM*** |
| 5 | An aspect of a user interface which enables the user to input data | | ***GUI*** |
| 6 | An electronic system that manages another system or equipment without the need for human input | | ***HARDWARE*** |
| 7 | Conditions that the client needs the product to be able to meet | | ***MENU*** |
| 8 | Device designed to collect data from environmental changes | | ***SENSOR*** |
| 9 | Enables users to use a computer to complete tasks or create something | | ***SOFTWARE*** |
| 10 | Human interaction with a device, traditionally using a keyboard and mouse, but now including voice control and gestures | | ***TEXT INTERFACE*** |

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# User interface design; users and efficiency (A2 - A4) (Match Up)

| | |
|---|---|
| 1 | A box within an interface or web page that a term or phrase is typed in entered in order to find relevant results |
| 2 | A rough or smooth paper surface, a print effect, or an on-screen effect to make the page appear like fabric, stone or crumpled paper, etc. |
| 3 | A small square or circle [illegible]n be clicked to select an option within a user interface |
| 4 | A system is created that is easy to use without much learning – such as obvious icons, help features and consistent layout |
| 5 | A trail on a web page showing each level that you have visited, e.g. home > products > books > fiction |
| 6 | An on/off switch, for example, to enable or disable a particular setting |
| 7 | Areas of the screen without text or images, required so that the information on the screen is readable and uncluttered |
| 8 | Ensures that each page within an interface has the same layout, headings and style so that it is easy to navigate, and looks professional |
| 9 | Expert, regular or novice – not everyone will be as familiar with using the software or interface |
| 10 | Function that populates previously used data into web forms to save the user needing to type it in full |
| 11 | How hardware and software is designed for people with disabilities to use with ease |
| 12 | If you change something by mistake or you wish you hadn't made the change, you can reverse the change |
| 13 | Letting the user know that what they've done has been recognised by the system – a tick or a success box might appear |
| 14 | More than one key pressed at the same time to perform an action on a computer, e.g. Control + C for copy |
| 15 | Particular subsection of a population (e.g. by age, income level, location, etc.) |
| 16 | Presentation standards used for all documents produced by an organisation |
| 17 | Recognisable shapes and characters which give meaning; for example a green tick is often used to indicate a |

| | |
|---|---|
| ACCESSIBILITY | |
| AUTOFILL | |
| BREADCRUMBS | |
| COGNITIVE | |
| CONSISTENCY | |
| DECORATIVE | |
| DEFAULT VALUES | |
| DEMOGRAPHIC | |
| DROPDOWN LIST | |
| HOUSE STYLE | |
| ICONS | |
| INFORMATIVE FEEDBACK | |
| INTUITIVE DESIGN | |
| KEYBOARD SHORTCUT | |
| LAYOUT | |
| SANS SERIF | |

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# *Project planning techniques (B1)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | A visual display of images, themes, colours, etc. normally on a single piece of paper; can be constructed physically or digitally | | ***AGILE*** | |
| 2 | A wide range of softwar[illegible]ou can use to set out and manage a project and its tasks | | ***CRITICAL PATH*** | |
| 3 | Iterative methodology where [illegible]all aspects of the project are prioritised into stages, allowing the client to request changes throughout | | ***DESCRIPTION*** | |
| 4 | Methodology where each stage i[illegible]sessed in a cycle and if not correct or needs further work, goes back to a previous stage | | ***GANTT CHART*** | |
| 5 | Mind map expanded with text in orde[illegible]to provide greater detail about each task | | ***ITERATIVE*** | |
| 6 | The sequence of tasks represented as n[illegible]; each node shows the earliest start time and latest finish time that will lead to the project being completed | | ***METHODOLOGIES*** | |
| 7 | The tasks completed in order to complete a project – e.g. could have a clear order or an iterative approach | | ***MIND MAP*** | |
| 8 | Type of methodology where the tasks are linear – one after the other, not iterative | | ***MOOD BOARD*** | |

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# *Project planning and initial design (B2 - B3)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | A complex application or interface will need a lot of learning in order to master it and, therefore, ____ ____ of how to use it | | ***ACCESSIBILITY*** |
| 2 | A limiting factor within a project; for example the time, expertise or other resources available | | ***ATTENTION*** |
| 3 | A visualisation of the end product – e.g. how it should look; where the different components, icons and menus should be located | | ***AUDIENCE*** |
| 4 | A well-designed application or interface will make people want to use it, and they will pay ____ to it | | ***CONSTRAINT*** |
| 5 | At the end of a stage, the success is measured; if not successful or refinement is necessary, the project goes back a stage for improvement | | ***CONTINGENCY*** |
| 6 | Considerations that the client needs to discuss with the developer to ensure that people can successfully operate the system or software | | ***DEPENDENCY*** |
| 7 | Everything that must be considered and incorporated into a project such as what the users need and the inputs and outputs | | ***INPUT*** |
| 8 | Graphical representation of how a product should look or be used (e.g. a sketch or storyboard) | | ***ITERATIVE REVIEW*** |
| 9 | How well a product caters to users with additional needs | | ***MILESTONE*** |
| 10 | If the person or people for whom the product was developed is/are comfortable using the product and can easily use it without excess help or feeling patronised | | ***OUTPUT*** |
| 11 | Important stage in a project's timeline | | ***PROJECT REQUIREMENTS*** |
| 12 | Objectives set for the project that are specific, measurable, achievable and realistic, and have a well-defined timescale | | ***SKETCH*** |
| 13 | Person or people who the final product could be aimed at | | ***SMART GOALS*** |
| | | | ***SPECIALISED*** |

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# *Develop and review a user interface (C1 - C3)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | Comments, criticisms and suggested improvements provided by the people using the product | | ***AUDIENCE*** |
| 2 | How complicated a product is to operate | | ***CONSTRAINTS*** |
| 3 | Improvement to an appli[illegible] or interface based on user feedback or testing | | ***DOCUMENTATION*** |
| 4 | Improvements discovered d[illegible]g the development of a project that can be applied to the next project in a better way or more efficientl[illegible] | | ***EASE OF USE*** |
| 5 | Limitations placed upon on the i[illegible]rface such as development time (budget) and hardware or software that the interface runs upon | | ***FEATURE*** |
| 6 | Method of refining a user interface [illegible]llowing rounds of feedback from testers including that the tester / client approves of the changes | | ***INPUTS*** |
| 7 | Needs of those who operate the interf[illegible] such as performing required tasks in an intuitive way | | ***ITERATIVE PROCESS*** |
| 8 | On-screen, tactile or auditory messages p[illegible]vided to the user from the interface | | ***LESSONS LEARNED*** |
| 9 | Small part of or an ability within an application or interface that is useful, e.g. printing or other services | | ***LOOK AND FEEL*** |
| 10 | The collection and ordering of tasks and ways of working on a project to create, refine, document and deliver the user interface | | ***METHODOLOGY*** |
| 11 | The reasons for the development of the interface, and the different aspects within it | | ***NAVIGATION METHOD*** |

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## *Data and information: characteristics, representation and processing (A1 - A3)* *(Match Up)*

| | |
|---|---|
| 1 | A diagram showing the relationship between values |
| 2 | Columns and rows of labelled data that can include numbers and text to present information in context |
| 3 | Combination of text and diagrams to present or summarise information or a process in a graphical way that is easy to understand |
| 4 | Data that has been processed and whose meaning can be understood and has context |
| 5 | Data type used to store a string of characters |
| 6 | Entering data more than once to ensure the entries are the same |
| 7 | Form of validation where an entry is compared against values in another table |
| 8 | How information becomes an output from data |
| 9 | If data has both structure and context we can infer the ____ |
| 10 | Integers, fractions and decimals are examples of this type of data |
| 11 | Method of verification where two sets of input are entered; the computer checks that both sets match each other and if not reports any errors |
| 12 | Process of checking that the input conforms to predefined rules |
| 13 | Raw unprocessed numbers or text with no meaning or context stored on a computer system |
| 14 | Text is checked through for mistakes – typos, poor grammar or unclear meaning – by a person, who then corrects any problems |

| | |
|---|---|
| ***CONTEXT*** | |
| ***DATA*** | |
| ***DOUBLE ENTRY*** | |
| ***GRAPH*** | |
| ***INFOGRAPHIC*** | |
| ***INFORMATION*** | |
| ***LENGTH CHECK*** | |
| ***LOOKUP*** | |
| ***MEANING*** | |
| ***NUMERIC*** | |
| ***PRESENCE CHECK*** | |
| ***PROCESSED*** | |
| ***PROOFREADING*** | |
| ***RANGE CHECK*** | |

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# *Data and information: collection, quality, modelling and threats (A4 - A7)* *(Match Up)*

| | |
|---|---|
| 1 | An online platform where users connect with other people to share updates, comments and photos, and send messages to each other |
| 2 | Analysing data sets to see whether there are relationships between them, or seeing how changing a component affects the outcome or forecast |
| 3 | Collective term for a range of issues posed by data storage – such as invasion of privacy, and fraud when stored data is stolen |
| 4 | Data collected by someone other (third party) for a different purpose, e.g. customer data from a retailer provided to an advertiser |
| 5 | Data sets that are too large to be processed by conventional means |
| 6 | Device designed to collect data from environmental changes |
| 7 | Felt when businesses appear to build up a substantial profile about our personal lives or habits, or ask us for substantial personal data |
| 8 | Large-scale, official data collection about people living in a country – usually takes place once every 10 years in the UK |
| 9 | Measure of how comprehensive data is |
| 10 | Measure of how correct data is |
| 11 | Measure of how old data is |
| 12 | Methods used to obtain data – either new data that's never existed before, or data that someone else collected for a different purpose |
| 13 | New data collected for a purpose – such as a student completing a door-to-door survey, or the results of a focus group |
| 14 | Online shopping and transactions where products are delivered to your home, or downloaded as digital content |

| | |
|---|---|
| ***ACCURACY*** | |
| ***AGE*** | |
| ***BIG DATA*** | |
| ***CENSUS*** | |
| ***COLLECTION METHOD*** | |
| ***COMPLETENESS*** | |
| ***DATA COLLECTION*** | |
| ***E-COMMERCE*** | |
| ***FRAUD*** | |
| ***INVASION OF PRIVACY*** | |
| ***JUST-IN-TIME DELIVERY*** | |
| ***LOYALTY SCHEME*** | |
| ***MODELLING*** | |
| ***PRIMARY*** | |

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# *Data processing methods (B1)* *(Match Up)*

| | |
|---|---|
| 1 | A note giving further detail or an action linked to a cell in a spreadsheet |
| 2 | A set of actions that can be recorded or coded to automate tasks that are repeated often |
| 3 | A spreadsheet can have many different sheets. A formula in one sheet can pull through and analyse data from a different sheet. |
| 4 | Arranging a column of data into ascending or descending order – e.g. by smallest to largest or in alphabetical order |
| 5 | Carries out one action if a given expression is true, or else carries out an alternative action |
| 6 | Colour coding, data bars, etc. automatically generated based on the value or contents of a cell, allowing fast visualisation of the data (e.g. turn cell red if value >90%) |
| 7 | Copy data between different places e.g. from a spreadsheet, file or the Internet into a word processor or database, etc. |
| 8 | Expressions that set the value of a cell by connecting the various cells within the spreadsheet |
| 9 | Function that adds all numbers in a range of cells that satisfy a given condition |
| 10 | Function that adds up the number of cells that contain a value (i.e. are not blank) |
| 11 | Function that adds up the number of cells that do not contain a value (i.e. are blank) |
| 12 | Function that returns the number of cells in a given range that satisfy a given condition |
| 13 | Function that returns the value from a given column that is in the same row as a given value from another given column |
| 14 | Function that returns the value from a given row when a value from the first row is specified |
| 15 | Involves testing that the input conforms to set rules and is reasonable |

| | |
|---|---|
| ***ABSOLUTE*** | |
| ***COMMENT*** | |
| ***CONDITIONAL FORMATTING*** | |
| ***COUNT*** | |
| ***COUNTBLANK*** | |
| ***COUNTIF*** | |
| ***DATA VALIDATION*** | |
| ***FILTER*** | |
| ***FORMULAE*** | |
| ***FREEZE PANES*** | |
| ***HIDDEN*** | |
| ***HLOOKUP*** | |
| ***IF*** | |
| ***IMPORT*** | |
| ***LINKED WORKSHEET*** | |

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# *Produce a dashboard (B2)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | Found next to the horizontal and vertical lines on a graph so that we know which data is shown and any units (e.g. height (m) and number of people) | | ***AXIS LABELS*** |
| 2 | Heading at the top of a p[illegible]ction of a document or chart which indicates what the text or chart is going to cover | | ***BORDER*** |
| 3 | Presentation of the key data on a dashboard (such as totals, subtotals or other synopsis), allowing it to be seen immediately | | ***COUNT*** |
| 4 | Square or circle that can be checked on or off by clicking within it | | ***DATA SUMMARY*** |
| 5 | Sum of all data | | ***DROPDOWN MENU*** |
| 6 | Table in a spreadsheet which assists with management analysis | | ***PERCENTAGES*** |
| 7 | The colouring, gradient or cross-hatching of a cell's background | | ***PIVOT TABLE*** |
| 8 | The outline around a cell – the colour and thickness can be changed, or it can be invisible | | ***RADIO BUTTON*** |
| 9 | The total number of specified cells that contain some data; can be represented on a dashboard | | ***SHADING*** |

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# *Draw conclusions and review data presentation methods (C1 - C2)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | A graph showing an increase in sales of sun cream every summer would demonstrate a ____ on the graph | | ***ANOMALY*** |
| 2 | A summary at the end of a report which highlights the key points and may propose future actions | | ***BIAS*** |
| 3 | An outlier on a graph – such as an extreme storm showing on a rainfall graph | | ***CHART*** |
| 4 | Direction of travel shown on a graph – e.g. general increase or decrease | | ***CONCLUSION*** |
| 5 | Graphs and dashboards can be used to make ____ such as when to send stock to a store, or when busy times will necessitate more staff | | ***DASHBOARD*** |
| 6 | Incorrect data because it was not recorded properly, or was not correctly coded when the data was inputted | | ***DATA SET*** |
| 7 | Occurs when data is not correctly interpreted, or data and statistics are displayed or presented so that they do not reflect reality | | ***ERROR*** |
| 8 | Structured amount of raw facts, what can be processed and analysed by a computer to draw conclusions | | ***MISREPRESENTATION*** |

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## *Modern technologies (A1)* *(Match Up)*

| | |
|---|---|
| 1 | A temporary wireless network that does not rely on fixed hardware such as routers, e.g. a personal hotspot created using a mobile phone |
| 2 | A wireless Internet connection provided for public use – e.g. provided by a café or restaurant for its customers (and may have a password required to connect) |
| 3 | Area without mobile phone coverage – e.g. a valley surrounded by high mountains |
| 4 | Controlling what permissions each user (or group of users) is given (e.g. allowing only admins to view a certain folder) |
| 5 | Data storage technology where data is stored on remote servers accessed from the Internet |
| 6 | Ensuring that services and systems are working as expected and at the right speed |
| 7 | If a new system does not work with existing software it has failed what sort of test? |
| 8 | If, when evaluating a system, it is found not to be able to deal with an increase in workload, it has failed what sort of test? |
| 9 | Process of monitoring computer systems/networks and replacing or updating hardware and software as required |
| 10 | Processes and procedures in place to ensure that hackers do not access a system, steal data or spread malware |
| 11 | Set of procedures used after a significant event such as a fire, flood or ransomware attack causes major business disruption |

| | |
|---|---|
| ***ACCESS RIGHTS*** | |
| ***AD HOC*** | |
| ***BLACK SPOT*** | |
| ***CLOUD COMPUTING*** | |
| ***CLOUD STORAGE*** | |
| ***COLLABORATION TOOLS*** | |
| ***COMPATIBILITY*** | |
| ***DATA SECURITY*** | |
| ***DISASTER RECOVERY POLICY*** | |
| ***MAINTENANCE*** | |
| ***NOTIFICATIONS*** | |

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# *Impact of modern technologies (A2)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | A collection of webpages hosted on the WWW to present information about an individual or organisation to its followers | | ***ALT TEXT*** |
| 2 | A description of an image on a webpage so that screen readers can read out a description of the image | | ***COMMUTE*** |
| 3 | A group of people working on a shared project who are located in different locations and, therefore, time zones and cultures | | ***EMAIL*** |
| 4 | An application which narrates the content of a computer display, used by people with limited or no sight | | ***MENTAL WELL-BEING*** |
| 5 | Electronic form of messaging sent between individuals, employees, businesses and customers; sometimes with attachments or other media | | ***PLANNING TOOL*** |
| 6 | For most people, working with and collaborating with others relieves boredom and is stimulating, improving their ____ _____-_____ | | ***PRIVATE MESSAGE*** |
| 7 | Form of spoken communication either in person, over the phone, or VOIP | | ***REMOTE WORKING*** |
| 8 | Online platforms, used by individuals and organisations, which facilitate sharing of information and media, and the building of online communities | | ***SCREEN READER*** |

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# *Threats to data (B1)* *(Match Up)*

| | |
|---|---|
| 1 | A network of computers infected with malicious software, often responsible for carrying out DDoS attacks and sending spam |
| 2 | Attack whereby a website or network is flooded with traffic in a deliberate attempt to bring it down |
| 3 | Collection of software t[illegible]es its existence (or the existence of other software) and enables access to restricted parts of a computer system |
| 4 | Hacker who attempts to hack into systems for criminal reasons to steal data or extort money |
| 5 | Impersonating a trusted perso[illegible] organisation in order to steal data or manipulate the user of a system |
| 6 | Malicious software transferred [illegible]nd executed on a machine to damage or disrupt the system, or to allow unauthorised access |
| 7 | Malware that pretends to function as legitimate software |
| 8 | Malware that replicates itself to spre[illegible] throughout a computer system |
| 9 | Malware that restricts a user's access to their computer system to make them give money to the attacker |
| 10 | Malware that spreads by injecting its cod[illegible] into other files on the computer system |
| 11 | Manipulating the users of a system in order to steal data or gain unauthorised access |
| 12 | Software that collects data from a computer system |
| 13 | Spying on governments and businesses to obtain secrets / trade secrets / intellectual property, including access and data theft by hackers |
| 14 | Stealing of data from a computer system by an employee (internal threat) or an outside hacker |

| | |
|---|---|
| ***BLACK HAT*** | |
| ***BOTNET*** | |
| ***DENIAL OF SERVICE*** | |
| ***DOWNTIME*** | |
| ***ESPIONAGE*** | |
| ***EXTERNAL*** | |
| ***INTERNAL*** | |
| ***LEAKING*** | |
| ***MALWARE*** | |
| ***PHARMING*** | |
| ***PHISHING*** | |
| ***RANSOMWARE*** | |
| ***ROOTKIT*** | |
| ***SHOULDER SURFING*** | |

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# *Prevention and management of threats to data (B2)* (Match Up)

| | | | |
|---|---|---|---|
| 1 | A security expert hired to find weaknesses in a system's security and fix them | | ***ANTIVIRUS*** |
| 2 | Copy of data that can be used to restore data if the original copy is lost, corrupted or destroyed | | ***AUTOCOMPLETE*** |
| 3 | General term applied to [illegible]s which have been designed or modified to prevent intrusion by hackers or malware | | ***BACKUP*** |
| 4 | Hacker who attempts to gain [illegible]ess to computer systems – doesn't exploit weaknesses and informs the owner, but without prior permission | | ***BIOMETRICS*** |
| 5 | Hardware- or software-based se[illegible]ty which controls incoming and outgoing network traffic based on predefined rules | | ***DATA RECOVERY*** |
| 6 | If you need to type in your address, s[illegible]e of the fields might appear pre-populated if you've typed in your address before | | ***ENCRYPTION*** |
| 7 | Process of testing a system for vulnerab[illegible]es that a hacker could exploit | | ***ETHICAL HACKING*** |
| 8 | Restoration of files from backups following a malware attack or a failed drive is called ____ ____ | | ***FIREWALL*** |
| 9 | Scrambling data so that it can only be read by users with the appropriate translation 'key' | | ***GREY HAT*** |
| 10 | Sequence of characters needed to gain access to a system | | ***HARDENING*** |
| | | | ***PASSWORD*** |

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# *IT policy and responsible use (B3, C1)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | After an attack, businesses ____ by implementing their disaster plan and taking remedial action | | ***ACCEPTABLE SOFTWARE*** |
| 2 | After an attack, companies need to ____ it – by containing the problem and implementing suitable procedures | | ***ACCEPTABLE USE POLICY*** |
| 3 | After an attack, the com[illegible]eeds to ____ – telling stakeholders and authorities (e.g. the ICO) what happen | | ***ANALYSE*** |
| 4 | After an attack, the first stage is to ____ – to see what happened and how bad the attack was | | ***ELECTRONIC DISTRIBUTION*** |
| 5 | Apps and programs which th[illegible]mpany allows to be installed on its computers and devices | | ***ENERGY*** |
| 6 | Increased digital surveillance a[illegible]he rise of social media have led to concerns relating to this | | ***ETHICS*** |
| 7 | Length, numbers and special cha[illegible]ers required to log in are determined by the provider's ____ ____ | | ***HARD COPY*** |
| 8 | Material left over from manufactu[illegible]n[illegible]a product or the product itself upon reaching end of life – needs to be recycled or disposed of | | ***INVESTIGATE*** |
| 9 | Metals and minerals required to manu[illegible]ac[illegible]ure electronics and other goods, only found in limited quantities or in certain geographical areas | | ***MANAGE*** |
| 10 | Method of sharing and making document/i[illegible]ormation accessible via email, online, etc. without printing it | | ***PASSWORD POLICY*** |
| 11 | Process where existing technology is replaced with newer or higher-performance technology | | ***POWER SAVING*** |
| 12 | Set of rules which govern or restrict the ways in which a computer system or network may be used | | ***PRIVACY*** |
| 13 | Settings that reduce energy used by a device such as dimming and switching off the screen, entering standby if device not used for a while, etc. | | |

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# *Legal and ethical (C2)* *(Match Up)*

| | |
|---|---|
| 1 | A legal right protecting the use of paper and digital intellectual property |
| 2 | A word or phrase used by a company to identify a brand or product – may display the ™ symbol or ® if registered |
| 3 | Act that makes provision for the regulation of the processing of information relating to individuals |
| 4 | All traffic on the Internet is treated with equal importance/priority – specific types of traffic cannot be slowed down |
| 5 | An organisation watching employee behaviour – e.g. usage time, emails sent and websites visited |
| 6 | Collective term for the actions taken against an employee if the acceptable use policy is breached |
| 7 | Creative work belonging to a person or organisation and protected by legislation |
| 8 | Document signed by an employee or service user that governs how they may and may not use a computer system |
| 9 | Grants the exclusive rights to a person to use a specific design or invention |
| 10 | Laws or acts which businesses must adhere to |
| 11 | Online platforms, used by individuals and organisations, which facilitate sharing of information and media, and the building of online communities |
| 12 | Person whom the data is about |
| 13 | Set of actions specific to a particular industry that are widely agreed but not legally enforceable |
| 14 | Sets of guidelines that companies agree to adhere to (but don't have to), e.g. World Wide Web Consortium, Unicode Consortium |
| 15 | Small text file saved on a computer when a website is loaded, storing pages visited and details to personalise |

| | |
|---|---|
| ***ACCEPTABLE USE POLICY*** | |
| ***ASSETS*** | |
| ***ATTRIBUTION*** | |
| ***COOKIE*** | |
| ***COPYRIGHT*** | |
| ***DATA PROTECTION*** | |
| ***DATA SUBJECT*** | |
| ***INTELLECTUAL PROPERTY*** | |
| ***LAWFUL PROCESSING*** | |
| ***LEGISLATION*** | |
| ***LICENSING*** | |
| ***MONITORING*** | |
| ***NET NEUTRALITY*** | |
| ***PATENT*** | |
| ***PERMISSIONS*** | |

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## *Forms of notation (D1)* *(Match Up)*

| | | | |
|---|---|---|---|
| 1 | A person who processes or alters data in a data flow diagram | | ***CHART*** |
| 2 | A term for a graph where calculated data is displayed graphically | | ***DECISION*** |
| 3 | Data or text that has been analysed and discussed in continuous prose | | ***ENTITY*** |
| 4 | Data provided in rows and columns for clarity and the ability to spot trends and patterns | | ***FLOW CHART*** |
| 5 | Graphical method of representing an algorithm or process | | ***FLOW DIAGRAM*** |
| 6 | Repository for processed data within a data flow diagram – a data ____ | | ***INPUT AND OUTPUT*** |
| 7 | Representation of the inputs, processes and outputs within a system or business | | ***PROCESS*** |
| 8 | Representation showing who processes data and how it is stored and transmitted within a system | | ***STORE*** |
| | | | ***SYSTEM DIAGRAM*** |

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# User interfaces (A1) *(Table Fill)*

| |
|---|
| An electronic system that manages another system or equipment without the need for human input |
| A computer system that forms part of a larger electronic device |
| Newly developed technology such as wearables, and new forms of input |
| An aspect of a user interface which enables the user to input data |
| Acronym for any interface that enables interaction with a computer system using icons and other visual features |
| The physical parts that make up a computer system |
| A list of words (e.g. at the top of a screen) that when clicked/selected allow for more options to be selected |
| Device designed to collect data from environmental changes |
| Enables users to use a computer to complete tasks or create something |
| Non-graphical interaction with a computer such as a command-line operating system or terminal window |
| Refers to the quality of a users' interaction with a particular website or application |
| Human interaction with a device, traditionally using a keyboard and mouse, but now including voice control and gestures |
| Software that allows interaction between the user and digital devices |
| Conditions that the client needs the product to be able to meet |
| Acronym for windows, icons, menus and pointers |

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# User interface design; users and efficiency (A2 - A

| |
|---|
| How hardware and software is designed for people with disabilities to use with ease |
| Function that populates previously used data into web forms to save the user needing to type it in full |
| A trail on a web page showing each level that you have visited, e.g. home > products > books > fiction |
| Some users have ____ needs for software design; for example, those with developmental delays or other learning disabilities |
| Ensures that each page within an interface has the same layout, headings and style so that it is easy to navigate, and looks professional |
| Type of font which looks attractive, but can be difficult to read on a small screen |
| Words or numbers that are pre-populated on a form (but can be changed); for example a country code for a mobile phone number |
| Particular subsection of the population (e.g. by age, income level, location, etc.) |
| When a button or menu is pressed or clicked, the menu expands to show more selectable options |
| Presentation standards used for all documents produced by an organisation |
| Small, clickable images, representing real-world objects, used in user interfaces |
| Letting the user know that what they've done has been recognised by the system – a tick or a success box might appear |
| A system is created that is easy to use without much learning – such as obvious icons, help features and consistent layout |
| More than one key pressed at the same time to perform an action on a computer, e.g. Control + C for copy |
| The way that text, graphics, buttons and other parts of the user interface are arranged on screen |
| Type of font which is well-suited to on-screen use, for example Arial or Helvetica |
| A box within an interface or web page that a term or phrase is typed in entered in order to find relevant results |
| Expert, regular or novice – not everyone will be as familiar with using the software or interface |
| Recognisable shapes and characters which give meaning; for example a green tick is often used to indicate a strong password |
| A rough or smooth paper surface, a print effect, or an on-screen effect to make the page appear like fabric, stone or crumpled paper, etc. |
| A small square or circle that can be clicked to select an option within a user interface |
| An on/off switch, for example, to enable or disable a particular setting |
| If you change something by mistake or you wish you hadn't made the change, you can reverse the change |
| Areas of the screen without text or images, required so that the information on the screen is readable and uncluttered |

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# *Project planning techniques (B1)* *(Table Fill)*

| |
|---|
| Iterative methodology where small aspects of the project are prioritised into stages, allowing the client to request changes throughout |
| The sequence of tasks represented as nodes; each node shows the earliest start time and latest finish time that will lead to the project being completed |
| Mind map expanded with text in order to provide greater detail about each task |
| Visual representation of when tasks need to be performed and how much time each task will take |
| Methodology where each stage is assessed in a cycle and if not correct or needs further work, goes back to a previous stage |
| The tasks completed in order to complete a project – e.g. could have a clear order or an iterative approach |
| Visualisation that shows the main objective and branches off into each of the sub-objectives and the tasks that need to be carried out to complete them |
| A visual display of images, themes, colours, etc. normally on a single piece of paper; can be constructed physically or digitally |
| Visual representation of a project's milestones, and the tasks that need to be done to reach one milestone after another |
| A wide range of software that you can use to set out and manage a project and its tasks |
| Written series of actions and steps that need to be completed – e.g. within a day, or to complete a project |
| Type of methodology where the tasks are linear – one after the other, not iterative |

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# Project planning and initial design (B2 - B3) *(Table Fill)*

| |
|---|
| How well a product caters to users with additional needs |
| A well-designed application or interface will make people want to use it, and they will pay ____ to it |
| Person or people who the final product could be aimed at |
| A limiting factor within a project; for example the time, expertise or other resources available |
| Taking into account risks when planning so that setbacks can be handled |
| Task that can't be completed until the previous task or stage is complete |
| The ways that a user needs to interact with the product to enter data, such as typing or swiping a screen, are ____ requirements |
| At the end of a ____ the success is measured; if not successful or refinement is necessary, the process goes back a stage for improvement |
| Important stage in a project's timeline |
| The data processed by a computer system that gives the user the information they require |
| Everything that must be considered and incorporated into a project such as what the users need and the inputs and outputs |
| A visualisation of the end product – e.g. how it should look; where the different components, icons and menus should be located |
| Objectives set for the project that are specific, measurable, achievable and realistic, and have a well-defined timescale |
| A complex application or interface will need a lot of learning in order to master it and, therefore, ____ ____ of how to use it |
| Series of sketches showing how the user should interact with a product |
| The schedule for ensuring that the product works as expected and that bugs are found and fixed, giving a timeframe for this process |
| The expected length of a project – e.g. in hours, days, weeks |
| If the person or people for whom the product was developed is/are comfortable using the product and can easily use it without ____ help or feeling patronised |
| Considerations that the client needs to discuss with the developer to ensure that people can successfully operate the system or software |
| Graphical representation of how a product should look or be used (e.g. a sketch or storyboard) |

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# Develop and review a user interface (C1 - C3) (Table Fi

| |
|---|
| The users of the user interface who have different needs, skill levels and of different demographics |
| Limitations placed upon on the interface such as development time (budget) and hardware or software that the interface runs upon |
| Written evidence of changes to the interface, how it works, and the underlying code to teach users and future developers |
| How complicated a product is to operate |
| Small part of or an ability within an application or interface that is useful, e.g. printing or other services |
| Touch, mouse clicks and typed characters from the user in order to interact with the interface |
| Method of refining the user interface following rounds of feedback from testers including that the user / client approves of the changes |
| Improvements discovered during the development of a project that can be applied to the next project in a better way or more efficiently |
| Visual and behavioural aspects of a user interface |
| The collection and ordering of tasks and ways of working on a project to create, refine, document and deliver the user interface |
| The way that a user interacts with the product in order to click or select, and move from one screen to another |
| On-screen, tactile or auditory messages provided to the user from the interface |
| The reasons for the development of the interface, and the different aspects within it |
| Improvement to an application or interface based on user feedback or testing |
| Comments, criticisms and suggested improvements provided by the people using the product |
| Needs of those who operate the interface, such as performing required tasks in an intuitive way |

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# *Data and information: characteristics, representati*

## *- A3)* *(Table Fill)*

| |
|---|
| What information relates to – e.g. a grade of 83% in a test is a B grade because the grade is between 80% and 90% |
| Raw unprocessed numbers or text with no meaning or context stored on a computer system |
| Method of verification where two sets of input are entered; the computer checks that both sets match each other and if not reports any errors |
| A diagram showing the relationship between values |
| Combination of text and diagrams to present or summarise information or a process in a graphical way that is easy to understand |
| Data that has been processed and whose meaning can be understood and has context |
| Validation technique that checks that a value meets an expected number of characters |
| Form of validation where an entry is compared against values in another table |
| If data has both structure and context, we can infer the ____ |
| Integers, fractions and decimals are examples of this type of data |
| Validation technique that checks that some value is present |
| How information becomes an output from data |
| Text is checked through for mistakes – typos, poor grammar or unclear meaning – by a person, who then corrects any problems |
| Validation technique that checks that a value is between a specified minimum and maximum value |
| The way that the data is laid out or coded, e.g. in columns, or separated so that each unique piece of data is identifiable |
| Columns and rows of labelled data that can include numbers and text to present information in context |
| Data type used to store a string of characters |
| Validation method to confirm that the data is classified as the correct type – e.g. text, percentage, date |
| Process of checking that the input conforms to predefined rules |
| Entering data more than once to ensure the entries are the same |

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# Data and information: collection, quality, modelling

*(Table Fill)*

| |
|---|
| Measure of how correct data is |
| Measure of how old data is |
| Data sets that are too large to be processed by conventional means |
| Large-scale, official data collection about people living in a country – usually takes place once every 10 years in the UK |
| The way that the data has been obtained – e.g. survey, interview, panel, sensor, feedback form, online form |
| Measure of how comprehensive data is |
| Methods used to obtain data – either new data that's never existed before, or data that someone else collected for a different purpose |
| Online shopping transactions where products are delivered to your home, or downloaded as digital content |
| Wrongful or criminal deception resulting in financial or personal gain, e.g. identity theft, or using stolen credit cards |
| Felt when businesses appear to build up a substantial profile about our personal lives or habits, or ask us for substantial personal data |
| Retailers do not keep much spare stock on site. Instead, stock levels are constantly monitored, and items are sent to the store when they are about to run out. |
| Rewards programme offered by companies to encourage customer purchases and collect customer data |
| Analysing data sets to see whether there are relationships between them, or seeing how changing a component affects the outcome or forecast |
| New data collected for a purpose – such as a student completing a door-to-door survey, or the results of a focus group |
| The number of data sets that have been collected, e.g. the number of people who data has been collected about |
| Data collected by someone else (third party) for a different purpose, e.g. customer data from a retailer provided to an advertiser |
| The organisation type that uses data modelling – e.g. retail, education, finance |
| Device designed to collect data from environmental changes |
| An online platform where users connect with other people to share updates, comments and photos, and send messages to each other |
| Collective term for a range of issues posed by data storage – such as invasion of privacy, and fraud when stored data is stolen |
| Types of people who are less aware of risks, e.g. more at risk of fraud, such as the elderly or people with learning issues |

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# Data processing methods (B1) *(Table Fill)*

| |
|---|
| Type of cell reference that remains constant even when a formula is copied or moved to another cell |
| A note giving further detail or an action linked to a cell in a spreadsheet |
| Colour coding, data bars, etc. automatically generated based on the value or contents of a cell, allowing fast visualisation of the data (e.g. turn cell red if value >90%) |
| Function that adds up the number of cells that contain a value (i.e. are not blank) |
| Function that adds up the number of cells that do not contain a value (i.e. are blank) |
| Function that returns the number of cells in a given range that satisfy a given condition |
| Involves testing that the input data conforms to set rules and is reasonable |
| Reducing the amount of visible data to a specific category, such as cells in a column which contain a specified value |
| Expressions that set the value of a cell by connecting the various cells within the spreadsheet |
| The header row or first column is always visible, no matter where in the spreadsheet you are, so that you always see the column titles |
| Rows or columns that have been removed from view from the user, but remain in the spreadsheet |
| Function that returns the value from a given row when a value from the first row is specified |
| Carries out one action if a given expression is true, or else carries out an alternative action |
| Copy data between different places – e.g. from a spreadsheet, file or the Internet into a word processor or database, etc. |
| A spreadsheet can have many different sheets. A formula in one sheet can pull through and analyse data from a different sheet. |
| Type of operator that involves arguments or reasoning; NOT, AND and OR are examples |
| A set of actions that can be recorded or coded to automate tasks that are repeated often |
| Type of cell reference that changes when a formula is copied or moved to another cell |
| Arranging a column of data in ascending or descending order – e.g. by smallest to largest or in alphabetical order |
| When a function is run on a block of text, e.g. left or right |
| Function that adds all numbers in a range of cells that satisfy a given condition |
| Function that returns the value from a given column that is in the same row as a given value from another given column |

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# Produce a dashboard (B2) *(Table Fill)*

| |
|---|
| Found next to the horizontal and vertical lines on a graph so that we know which data is shown and any units (e.g. height (m) and number of people) |
| The outline around a cell – the colour and thickness can be changed, or it can be invisible |
| The total number of specified cells that contain some data; can be represented on a dashboard |
| Presentation of the key data on a dashboard (such as totals, subtotals or other synopsis), allowing it to be seen immediately |
| When a button on a menu is pressed or clicked, the menu expands to show more selectable options |
| Values out of 100 – e.g. a dashboard might say that 75% of yesterday's customer calls were answered within [illegible] minutes |
| Table in a spreadsheet which assists with management analysis |
| Used where there are two or more selectable options from which a single selection is required |
| The colouring, gradient or cross-hatching of a cell's background |
| Values can be changed by pressing up or down arrows – e.g. volume control |
| Square or circle that can be checked on or off by clicking within it |
| Heading at the top of a page, section of a document or chart which indicates what the text or chart is going to cover |
| Sum of all data |

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# Draw conclusions and review data presentation me

| |
|---|
| An outlier on a graph – such as an extreme storm showing on a rainfall graph |
| When data is not fully accurate in the way it was collected, e.g. focusing on a specific viewpoint or based on the time it was collected |
| Visual often produced in spreadsheet software, e.g. pie, bar, line, etc. |
| A summary at the end of a report which highlights the key points and may propose future actions |
| Visual representation of data allowing real-time at-a-glance progress and target monitoring |
| Structured amount of raw facts, what can be processed / analysed by a computer to draw conclusions |
| Incorrect data because it was not recorded properly, or was not correctly coded when the data was input |
| Occurs when data is not correctly interpreted, or data and statistics are displayed or presented so that they do not reflect reality |
| A graph showing an increase in sales of sun cream every summer would demonstrate a ____ on the graph |
| Graphs and dashboards can be used to make ____ such as when to send stock to a store, or when busy times will necessitate more staff |
| Type of advertising which is aimed at a specific audience/demographic |
| Direction of travel shown on a graph – e.g. general increase or decrease |

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# Modern technologies (A1) *(Table Fill)*

| |
|---|
| Controlling what permissions each user (or group of users) is given (e.g. allowing only admins to view a certain folder) |
| A temporary wireless network that does not rely on fixed hardware such as routers, e.g. a personal hotspot created using a mobile phone |
| Area without mobile phone coverage – e.g. a valley surrounded by high mountains |
| Using online services instead of local applications – e.g. editing a document from a web browser |
| Data storage technology where data is stored on remote servers accessed from the Internet |
| Software that allows several people to communicate online or share and edit documents (sometimes simultaneously) |
| If a new system does not work with existing software it has failed what sort of test? |
| Processes and procedures in place to ensure that hackers do not access a system, steal data or spread malware |
| Set of procedures used after a significant event such as a fire, flood or ransomware attack causes major business disruption |
| Process of monitoring computer systems/networks and replacing or updating hardware and software as required |
| Small on-screen message alerting the user to some information, for example, a software update becoming available |
| A wireless Internet connection provided for public use – e.g. provided by a café or restaurant for its customers (and may have no password required to connect) |
| Ensuring that services and systems are working as expected and at the right speed |
| If, when evaluating a system, it is found not to be able to deal with an increase in workload, it has failed what sort of test? |
| When files and applications held on two devices are updated to make sure that both devices have the same content |
| Sharing of a mobile phone's data connection with another device such as a laptop |

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# *Impact of modern technologies (A2)* *(Table Fill)*

| |
|---|
| A description of an image on a page so that screen readers can read out a description of the image |
| Travel to and from your place of work – eliminated when working from home! |
| Electronic form of messaging sent between individuals, employees, businesses and customers; sometimes with attachments or other media |
| For most people, working with and collaborating with others relieves boredom and is stimulating, improving their ____ _____-_____ |
| Software for setting up the tasks for a project, allowing for team to manage their time, helping to ensure that milestones and targets are achieved |
| Otherwise called a direct message, a message between two users of social media that nobody else can see |
| Working away from the office such as at home |
| An application which narrates the content of a computer display, used by people with limited or no sight |
| Online platforms, used by individuals and organisations, which facilitate sharing of information and media, and the building of online communities |
| Form of spoken communication either in person, over the phone, or VOIP |
| A collection of webpages hosted on the WWW to present information about an individual or organisation to its followers |
| A group of people working on a shared project who are located in different locations and, therefore, time zones and cultures |

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# Threats to data (B1) *(Table Fill)*

| |
|---|
| Hacker who attempts to hack into systems for criminal reasons to steal data or extort money |
| A network of computers infected with malicious software, often responsible for carrying out DDoS attacks and sending spam |
| Attack whereby a website or network is flooded with traffic in a deliberate attempt to bring it down |
| The duration that systems are not operational, e.g. if taken offline to investigate a security breach |
| Spying on governments and businesses to obtain secrets / trade secrets / intellectual property, including access and data theft by hackers |
| Type of threat posed by someone outside an organisation, for example a hacker |
| Type of threat posed by someone within an organisation, for example, an employee unintentionally installing a virus |
| When an employee deliberately discloses confidential information outside of their organisation |
| Malicious software transferred to and executed on a machine to damage or disrupt the system, or to allow unauthorised access |
| Type of attack that redirects users from a legitimate website to a fake website designed to steal their data |
| Impersonating a trusted person or organisation in order to steal data or manipulate the user of a system |
| Malware that restricts a user's access to their computer system to make them give money to the attacker |
| Collection of software that hides its existence (or the existence of other software) and enables access to restricted parts of a computer system |
| Watching somebody as they enter data, such as passwords, into a system |
| Manipulating the users of a system in order to steal data or gain unauthorised access |
| Software that collects data from a computer system |
| Stealing of data from a company server by an employee (internal threat) or an outside hacker |
| Malware that pretends to function as legitimate software |
| Malware that spreads by injecting its code into other files on the computer system |
| Malware that replicates itself to spread throughout a computer system |

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# Prevention and management of threats to data (B2)

| |
|---|
| Software used to identify and remove malware |
| If you need to type in your address, some of the fields might appear pre-populated if you've typed in your address before |
| Copy of data that can be used to restore data if the original copy is lost, corrupted or destroyed |
| Use of personal identifiable features to grant access to a system, e.g. fingerprints, iris, voice |
| Restoration of files from backups following a malware attack or failed drive is called ____ ____ |
| Scrambling data so that it can only be read by users with the appropriate translation 'key' |
| Testing the security of a system by attempting to break into it with the owner's permission |
| Hardware- or software-based security which controls incoming and outgoing network traffic based on predefined rules |
| Hacker who attempts to gain access to computer systems – doesn't exploit weaknesses and informs the owner, but without prior permission |
| General term applied to devices which have been designed or modified to prevent intrusion by hackers or malware |
| Sequence of characters needed to gain access to a system |
| Process of testing a system for vulnerabilities that a hacker could exploit |
| The protection of digital devices from physical threats such as theft, e.g. a biometric door lock |
| Using more than one characteristic in order to verify a transaction – such as sending a text message or email, or requiring a card / card reader |
| A security expert hired to find weaknesses in a system's security and fix them |

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# IT policy and responsible use (B3, C1) *(Table Fill)*

| |
|---|
| Apps and programs which the company allows to be installed on its computers and devices |
| Set of rules which govern or restrict the ways in which a computer system or network may be used |
| The last phase after an attack – updating procedures and policy to ensure that an attack is less likely to happen again |
| Method of sharing and making document/information accessible via email, online, etc. without printing it |
| Various forms of power required to manufacture a device, use it and dispose of it |
| Term used to describe the moral principles that dictate human behaviour – e.g. this is considered when using/processing personal data |
| Term for a document or image that has been printed |
| After an attack, the first stage is to ____ – to see what happened and how bad the attack was |
| After an attack, companies need to ____ it – by containing the problem and implementing suitable procedures |
| Length, numbers and special characters required to log in are determined by the provider's ____ ____ |
| Settings that reduce energy used by a device such as dimming and switching off the screen, entering standby if device not used for a while, etc. |
| Increased digital surveillance and the rise of social media have led to concerns relating to this |
| Metals and minerals required to manufacture electronics and other goods, only found in limited quantities or in certain geographical areas |
| After an attack, businesses ____ by implementing their disaster plan and taking remedial action |
| When a device can't be upgraded any further and is still too slow or old, or becomes obsolete |
| After an attack, the company needs to ____ – telling stakeholders and authorities (e.g. the ICO) what happened |
| Process where existing technology is replaced with newer or higher-performance technology |
| Material left over from manufacturing a product or the product itself upon reaching end of life – needs to be recycled or disposed of |

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# Legal and ethical (C2) *(Table Fill)*

| |
|---|
| Document signed by an employee or service user that governs how they may and may not use a computer system |
| What is covered by an acceptable use policy – e.g. equipment and data owned by a company |
| When IP belonging to someone else is used, but the licence terms state that the creator's name is included within the work – e.g. Creative Commons |
| Small text file saved on a computer when a website is loaded, storing pages visited and details to personalise the experience |
| A legal right protecting the use of paper and digital intellectual property |
| Act that makes provision for the regulation of the processing of information relating to individuals |
| Person whom the data is about |
| Creative work belonging to a person or organisation and protected by legislation |
| The legal basis for holding and using personal data |
| Laws or acts which businesses must adhere to |
| When a fee is paid to the copyright holder to obtain the right to use or distribute content |
| An organisation watching employee behaviour – e.g. usage time, emails sent and websites visited |
| All traffic on the Internet is treated with equal importance/priority – specific types of traffic cannot be slowed down |
| Grants the exclusive rights to a person to use a specific design or invention |
| When someone wants to use a copyrighted image or quote within their work – and the author allows it |
| Set of actions specific to a particular industry that are widely agreed but not legally enforceable |
| Collective term for the actions taken against an employee if the acceptable use policy is breached |
| Who an acceptable use policy refers to |
| Online platforms, used by individuals and organisations, which facilitate sharing of information, ideas and the building of online communities |
| Why personal data is collected |
| Sets of guidelines that companies agree to adhere to (but don't have to), e.g. World Wide Web Consortium, Unicode Consortium |
| A word or phrase used by a company to identify a brand or product – may display the ™ symbol or ® if registered |

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# Forms of notation (D1) *(Table Fill)*

| |
|---|
| A term for a graph where tabulated data is displayed graphically |
| Yes or no, for example – diamond on a flow chart |
| A person who processes or alters data in a data flow diagram |
| Graphical method of representing an algorithm or process |
| Representation showing who processes data and how it is stored and transmitted within a system |
| These are both represented by a parallelogram in a flow chart |
| Represented in a rectangular box on a flow chart |
| Repository for processed data within a data flow diagram – a data ____ |
| Representation of inputs, processes and outputs within a system or business |
| Data provided in rows and columns for clarity and the ability to spot trends and patterns |
| Start and end of a flow chart, represented in an oval shape |
| Data or text that has been analysed and discussed in continuous prose |

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# User interfaces (A1)

| | |
|---|---|
| **CONTROLLING DEVICE** | An electronic system that manages another sy the need for human input |
| **EMBEDDED SYSTEM** | A computer system that forms part of a larger |
| **EMERGING** | Newly developed technology such as wearable |
| **FORM** | An aspect of a user interface which enables the |
| **GUI** | Acronym for any interface that enables interac using icons and other visual features |
| **HARDWARE** | The physical parts that make up a computer sy |
| **MENU** | A list of words (e.g. at the top of a screen) that for menu options to be selected |
| **SENSOR** | Device designed to collect data from environm |
| **SOFTWARE** | Enables users to use a computer to complete ta |
| **TEXT INTERFACE** | Non-graphical interaction with a computer such operating system or terminal window |
| **USER EXPERIENCE** | Refers to the quality of a users' interaction with application |
| **USER INPUT** | Human interaction with a device, traditionally but now including voice control and gestures |
| **USER INTERFACE** | Software that allows interaction between the u |
| **USER REQUIREMENTS** | Conditions that the client needs the product to |
| **WIMP** | Acronym for windows, icons, menus and pointe |

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# User interface design; users and efficiency (A2 - A

| | |
|---|---|
| **ACCESSIBILITY** | How hardware and software is designed for pe with ease |
| **AUTOFILL** | Function that populates previously used data i user needing to type it in full |
| **BREADCRUMBS** | A trail on a web page showing each level that y products > books > fiction |
| **COGNITIVE** | Some users have ___ needs for software desig developmental delays or other learning disabil |
| **CONSISTENCY** | Ensures that each page within an interface has and style so that it is e to navigate, and look |
| **DECORATIVE** | Type of fo ch looks attractive, but can be scr |
| **DEFAULT VALUES** | Words or numbers that are pre-populated on a example a country code for a mobile phone num |
| **DEMOGRAPHIC** | Particular subsection of a population (e.g. by ag |
| **DROPDOWN LIST** | When a button on a menu is pressed or clicked, more selectable options |
| **HOUSE STYLE** | Presentation standards used for all documents |
| **ICONS** | Small, clickable images, representing real-worl interfaces |
| **INFORMATIVE FEEDBACK** | Letting the user know that what they've done h system – a tick or a success box might appear |
| **INTUITIVE DESIGN** | A system is created that is easy to use without obvious icons, help features and consistent lay |
| **KEYBOARD SHORTCUT** | More than one key pressed at the same time to computer, e.g. Control + C for copy |
| **LAYOUT** | The way that text, graphics, buttons and other are arranged on screen |
| **SANS SERIF** | Type of font which is well-suited to on-screen u Helvetica |
| **SEARCH FIELD** | A box within an interface or web page that a te entered in order to find re nt results |
| **SKILL LEVEL** | Expert, regula or no – not everyone will be softwa or face |
| **SYMBOLS** | cognisable shapes and characters which give green tick is often used to indicate a strong pas |
| **TEXTURE** | A rough or smooth paper surface, a print effect make the page appear like fabric, stone or crum |
| **TICK BOX** | A small square or circle that can be clicked to s interface |
| **TOGGLE** | An on/off switch, for example, to enable or disa |
| **UNDO** | If you change something by mistake or you wis you can reverse the change |
| **WHITE SPACE** | Areas of the screen without text or images, rec on the screen is readable and uncluttered |

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# Project planning techniques (B1)

| | |
|---|---|
| **AGILE** | Iterative methodology where small aspects of t into stages, allowing the client to request chan |
| **CRITICAL PATH** | The sequence of tasks represented as nodes; e start time and latest finish time that will lead t |
| **DESCRIPTION** | Mind map expanded with text in order to provi task |
| **GANTT CHART** | Visual representation of when tasks need to be time each task will take |
| **ITERATIVE** | Methodology where each stage is assessed in a needs further work, go back to a previous sta |
| **METHODOLOGIES** | The tasks and steps in order to complete a pro order using an iterative approach |
| **MIND MAP** | Visualisation that shows the main objective an sub-objectives and the tasks that need to be ca |
| **MOOD BOARD** | A visual display of images, themes, colours, etc paper; can be constructed physically or digitall |
| **PERT** | Visual representation of a project's milestones be done to reach one milestone after another |
| **PLANNING TOOLS** | A wide range of software that you can use to se and its tasks |
| **TASK LIST** | Written series of actions and steps that need t day, or to complete a project |
| **WATERFALL** | Type of methodology where the tasks are linea iterative |

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# Project planning and initial design (B2 - B3)

| | |
|---|---|
| **ACCESSIBILITY** | How well a product caters to users with additio |
| **ATTENTION** | A well-designed application or interface will ma they will pay ___ to it |
| **AUDIENCE** | Person or people who the final product could be |
| **CONSTRAINT** | A limiting factor within a project; for example t resources available |
| **CONTINGENCY** | Taking into account risks when planning so tha |
| **DEPENDENCY** | Task that can't be completed until the previous |
| **INPUT** | The ways that a u[illegible]s to interact with the as typing o[illegible]g a screen, are ___ requirem |
| **ITERATIVE REVIEW** | [illegible]he end of a stage, the success is measured; refinement is necessary, the project goes back |
| **MILESTONE** | Important stage in a project's timeline |
| **OUTPUT** | The data processed by a computer system that information they require |
| **PROJECT REQUIREMENTS** | Everything that must be considered and incorp what the users need and the inputs and output |
| **SKETCH** | A visualisation of the end product – e.g. how it s different components, icons and menus should |
| **SMART GOALS** | Objectives set for the project that are specific realistic, and have a well-defined timescale |
| **SPECIALISED KNOWLEDGE** | A complex application or interface will need a l master it and, therefore, ___ ___ of how to use |
| **STORYBOARD** | Series of sketches showing how the user should |
| **TEST STRATEGY** | The schedule for ensuring that the product wor are found and fixed, giving a timeframe for this |
| **TIMESCALE** | The expected length of a project – e.g. in hours, |
| **USER CONFIDENCE** | If the person or people for whom the product w comfortable using the product and can easily u feeling patronised |
| **USER REQUIREMENTS** | Considerations that the [illegible]er needs to discuss that people can successfully operate the syste |
| **VISUALISATION** | Graphical representation of how a product sho sketch or storyboard) |

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# Develop and review a user interface (C1 - C3)

| | |
|---|---|
| ***AUDIENCE*** | The users of the user interface who have differ different demographics |
| ***CONSTRAINTS*** | Limitations placed upon on the interface such a and hardware or software that the interface ru |
| ***DOCUMENTATION*** | Written evidence of changes to the interface, h underlying code to teach users and future deve |
| ***EASE OF USE*** | How complicated a product is to operate |
| ***FEATURE*** | Small part of or an ability within an application printing or other services |
| ***INPUTS*** | Touch, mouse clic[illegible]d [illegible]ped characters from with the i[illegible]e |
| ***ITERATIVE PROCESS*** | [illegible] th[illegible] of refining a user interface following ro testers including that the tester / client approv |
| ***LESSONS LEA*** | Improvements discovered during the developm applied to the next project in a better way or m |
| ***LOOK AND FEEL*** | Visual and behavioural aspects of a user interf |
| ***METHODOLOGY*** | The collection and ordering of tasks and ways o create, refine, document and deliver the user in |
| ***NAVIGATION METHOD*** | The way that a user interacts with the product move from one screen to another |
| ***OUTPUTS*** | On-screen, tactile or auditory messages provid interface |
| ***PURPOSE*** | The reasons for the development of the interfa within it |
| ***REFINEMENT*** | Improvement to an application or interface bas testing |
| ***USER FEEDBACK*** | Comments, criticisms and suggested improvem using the product |
| ***USER REQUIREMENTS*** | Needs of those who operate the interface, such in an intuitive way |

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# Data and information: characteristics, representati
# - A3)

| | |
|---|---|
| **CONTEXT** | What information relates to – e.g. a grade of 8 because the grade is between 80% and 90% |
| **DATA** | Raw unprocessed numbers or text with no mea computer system |
| **DOUBLE ENTRY** | Method of verification where two sets of input checks that both sets match each other and if n |
| **GRAPH** | A diagram showing the relationship between v |
| **INFOGRAPHIC** | Combination of text and ...grams to present o process in a graphical way that is easy to under |
| **INFORMATION** | Dat... has been processed and whose mean ...context |
| **LENGTH CHE** | Validation technique that checks that a value n characters |
| **LOOKUP** | Form of validation where an entry is compared table |
| **MEANING** | If data has both structure and context, we can |
| **NUMERIC** | Integers, fractions and decimals are examples |
| **PRESENCE CHECK** | Validation technique that checks that some va |
| **PROCESSED** | How information becomes an output from data |
| **PROOFREADING** | Text is checked through for mistakes – typos, p meaning – by a person, who then corrects any p |
| **RANGE CHECK** | Validation technique that checks that a value i minimum and maximum value |
| **STRUCTURE** | The way that the data is laid out or coded, e.g. i that each unique piece of data is identifiable |
| **TABLES** | Columns and rows of labelled data that can inc present information in context |
| **TEXT** | Data type used to store a string of characters |
| **TYPE CHECK** | Validation method to confirm that all the data type – e.g. text, perc...e, date |
| **VALIDATION** | Proces... ...ing that the input conforms to |
| **VERIFICATION** | ...ing data more than once to ensure the en |

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# Data and information: collection, quality, modelling

| | |
|---|---|
| **ACCURACY** | Measure of how correct data is |
| **AGE** | Measure of how old data is |
| **BIG DATA** | Data sets that are too large to be processed by |
| **CENSUS** | Large-scale, official data collection about peop takes place once every 10 years in the UK |
| **COLLECTION METHOD** | The way that the data has been obtained – e.g. sensor, feedback form, online form |
| **COMPLETENESS** | Measure of how comprehensive data is |
| **DATA COLLECTION** | Methods used to obtain data – either new data or data that somebody else collected for a differ |
| **E-COMMERCE** | Online shopping and transactions where produ home, or downloaded as digital content |
| **FRAUD** | Wrongful or criminal deception resulting in fina identity theft, or using stolen credit cards |
| **INVASION OF PRIVACY** | Felt when businesses appear to build up a subs personal lives or habits, or ask us for substanti |
| **JUST-IN-TIME DELIVERY** | Retailers do not keep much spare stock on site constantly monitored, and items are sent to th to run out. |
| **LOYALTY SCHEME** | Rewards programme offered by companies to e purchases and collect customer data |
| **MODELLING** | Analysing data sets to see whether there are r seeing how changing a component affects the o |
| **PRIMARY** | New data collected for a purpose – such as a st door survey, or the results of a focus group |
| **SAMPLE SIZE** | The number of data sets that have been collect who data has been collected about |
| **SECONDARY** | Data collected by someone else (third party) fo customer data from a retailer provided to an a |
| **SECTOR** | The organisation type that uses data modelling finance |
| **SENSOR** | Device designed to collect data from environm |
| **SOCIAL NETWORK** | An online platform where users connect with ot timelines and photos, and send messages to e |
| **THREATS** | Collective term for a range of issues posed by d invasion of privacy, and fraud when stored data |
| **VULNERABLE GROUPS** | Types of people who are less aware of risks, e.g. the elderly or people with learning issues |

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# Data processing methods (B1)

| | |
|---|---|
| **ABSOLUTE** | Type of cell reference that remains constant ev or moved to another cell |
| **COMMENT** | A note giving further detail or an action linked t |
| **CONDITIONAL FORMATTING** | Colour coding, data bars, etc. automatically ger contents of a cell, allowing fast visualisation of value >90%) |
| **COUNT** | Function that adds up the number of cells that c blank) |
| **COUNTBLANK** | Function that adds up the number of cells that c blank) |
| **COUNTIF** | Function that returns the number of cells in a g given condition |
| **DATA VALIDATION** | Involves testing that the input conforms to set |
| **FILTER** | Reducing the amount of visible data to a specif column which contain a specified value |
| **FORMULAE** | Expressions that set the value of a cell by conn the spreadsheet |
| **FREEZE PANES** | The header row or first column is always visible spreadsheet you are, so that you always see th |
| **HIDDEN** | Rows or columns that have been removed from remain in the spreadsheet |
| **HLOOKUP** | Function that returns the value from a given ro row is specified |
| **IF** | Carries out one action if a given expression is t alternative action |
| **IMPORT** | Copy data between different places – e.g. from Internet into a word processor or database, etc |
| **LINKED WORKSHEET** | A spreadsheet can have many different sheets, pull through and analyse data from a different s |
| **LOGICAL** | Type of operator that involves arguments or re are examples |
| **MACRO** | A set of actions that can be recorded or coded t repeated often |
| **RELATIVE** | Type of cell reference that changes when a for to this cell |
| **SORT** | Arranging a column of data into ascending or d smallest to largest or in alphabetical order |
| **STRING** | When a function is run on a block of text, e.g. le |
| **SUMIF** | Function that adds all numbers in a range of cel condition |
| **VLOOKUP** | Function that returns the value from a given co as a given value from another given column |

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# Produce a dashboard (B2)

| | |
|---|---|
| ***AXIS LABELS*** | Found next to the horizontal and vertical lines o which data is shown and any units (e.g. height (r |
| ***BORDER*** | The outline around a cell – the colour and thick be invisible |
| ***COUNT*** | The total number of specified cells that contain represented on a dashboard |
| ***DATA SUMMARY*** | Presentation of the key data on a dashboard (s other synopsis), allowing it to be seen immedia |
| ***DROPDOWN MENU*** | When a button on a menu is pressed or clicked, more selectable optio |
| ***PERCENTAGES*** | Values out of 100 e.g. a dashboard might say cust[illegible]s were answered within five minu |
| ***PIVOT TABLE*** | Table in a spreadsheet which assists with mana |
| ***RADIO BUTTO*** | Used where there are two or more selectable o selection is required |
| ***SHADING*** | The colouring, gradient or cross-hatching of a c |
| ***SPINNER*** | Values can be changed by pressing up or down a |
| ***TICK BOX*** | Square or circle that can be checked on or off b |
| ***TITLE*** | Heading at the top of a page, section of a docur what the text or chart is going to cover |
| ***TOTAL*** | Sum of all data |

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# Draw conclusions and review data presentation me

| | |
|---|---|
| **ANOMALY** | An outlier on a graph – such as an extreme stor |
| **BIAS** | When data is not fully accurate in the way it wa specific viewpoint or based on the time it was c |
| **CHART** | Visual often produced in spreadsheet software |
| **CONCLUSION** | A summary at the end of a report which highlig propose future actions |
| **DASHBOARD** | Visual representation of data allowing real-tim target monitoring |
| **DATA SET** | Structured amount of ra s, what can be pr computer to draw co lusions |
| **ERROR** | Incor data because it was not recorded pro when the data was inputted |
| **MISREPRESE IC** | Occurs when data is not correctly interpreted, displayed or presented so that they do not refl |
| **PATTERN** | A graph showing an increase in sales of sun cre demonstrate a ___ on the graph |
| **RECOMMENDATIONS** | Graphs and dashboards can be used to make __ to a store, or when busy times will necessitate |
| **TARGETED** | Type of advertising which is aimed at a specific |
| **TREND** | Direction of travel shown on a graph – e.g. gene |

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# Modern technologies (A1)

| | |
|---|---|
| **ACCESS RIGHTS** | Controlling what permissions each user (or gro allowing only admins to view a certain folder) |
| **AD HOC** | A temporary wireless network that does not re routers, e.g. a personal hotspot created using a |
| **BLACK SPOT** | Area without mobile phone coverage – e.g. a va mountains |
| **CLOUD COMPUTING** | Using online services instead of local applicati from a web browser |
| **CLOUD STORAGE** | Data storage technology where data is stored from the Internet |
| **COLLABORATION TOOLS** | Software th lo several people to commu doc sometimes simultaneously) |
| **COMPATIBILITY** | If a new system does not work with existing so of test? |
| **DATA SECURITY** | Processes and procedures in place to ensure th system, steal data or spread malware |
| **DISASTER RECOVERY POLICY** | Set of procedures used after a significant even ransomware attack causes major business disr |
| **MAINTENANCE** | Process of monitoring computer systems/netw updating hardware and software as required |
| **NOTIFICATIONS** | Small on-screen message alerting the user to s a software update becoming available |
| **OPEN WI-FI** | A wireless Internet connection provided for pu café or restaurant for its customers (and may h connect) |
| **PERFORMANCE** | Ensuring that services and systems are workin speed |
| **SCALABILITY** | If, when evaluating a system, it is found not to b increase in workload, it has failed what sort of |
| **SYNCHRONISATION** | When files and applications held on two device that both devices have the same content |
| **TETHERING** | Sharing of a mobile phone's data connection wi laptop |

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# Impact of modern technologies (A2)

| | |
|---|---|
| ***ALT TEXT*** | A description of an image on a page so that scr description of the image |
| ***COMMUTE*** | Travel to and from your place of work – elimina |
| ***EMAIL*** | Electronic form of messaging sent between ind businesses and customers; sometimes with att |
| ***MENTAL WELL-BEING*** | For most people, working with and collaboratin boredom and is stimulating, improving their ___ |
| ***PLANNING TOOL*** | Software for setting up the tasks for a project, their time, helping to ensure that milestones ar |
| ***PRIVATE MESSAGE*** | Otherwise called ___ed message, a message social me___t nobody else can see |
| ***REMOTE WORKING*** | ___rking away from the office such as at home |
| ***SCREEN REA___*** | An application which narrates the content of a people with limited or no sight |
| ***SOCIAL MEDIA*** | Online platforms, used by individuals and orga sharing of information and media, and the build |
| ***VOICE*** | Form of spoken communication either in perso |
| ***WEBSITE*** | A collection of webpages hosted on the WWW an individual or organisation to its followers |
| ***WORLD TEAMS*** | A group of people working on a shared project v locations and, therefore, time zones and cultur |

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# Threats to data (B1)

| | |
|---|---|
| **BLACK HAT** | Hacker who attempts to hack into systems for or extort money |
| **BOTNET** | A network of computers infected with malicious for carrying out DDoS attacks and sending spa |
| **DENIAL OF SERVICE** | Attack whereby a website or network is floode attempt to bring it down |
| **DOWNTIME** | The duration that systems are not operational investigate a security breach |
| **ESPIONAGE** | Spying on governments and businesses to obta intellectual property, including access and data |
| **EXTERNAL** | Type of th[illegible]os[illegible] by someone outside of an hac[illegible] |
| **INTERNAL** | Type of threat posed by someone within an org employee unintentionally installing a virus |
| **LEAKING** | When an employee deliberately discloses confi their organisation |
| **MALWARE** | Malicious software transferred to and execute disrupt the system, or to allow unauthorised ac |
| **PHARMING** | Type of attack that redirects users from a legit website designed to steal their data |
| **PHISHING** | Impersonating a trusted person or organisatio manipulate the user of a system |
| **RANSOMWARE** | Malware that restricts a user's access to their them give money to the attacker |
| **ROOTKIT** | Collection of software that hides its existence software) and enables access to restricted par |
| **SHOULDER SURFING** | Watching somebody as they enter data, such a |
| **SOCIAL ENGINEERING** | Manipulating the users of a system in order to unauthorised access |
| **SPYWARE** | Software that collects data from a computer sy |
| **THEFT** | Stealing of data from a company server by an e an outside hacker |
| **TROJAN HORSE** | Malware that [illegible]re [illegible]o function as legitimat |
| **VIRUS** | M[illegible]wa[illegible]t spreads by injecting its code into [illegible]stem |
| **WORM** | Malware that replicates itself to spread throug |

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# Prevention and management of threats to data (B2

| | |
|---|---|
| **ANTIVIRUS** | Software used to identify and remove malware |
| **AUTOCOMPLETE** | If you need to type in your address, some of the<br>populated if you've typed in your address befor |
| **BACKUP** | Copy of data that can be used to restore data i<br>corrupted or destroyed |
| **BIOMETRICS** | Use of personal identifiable features to grant a<br>fingerprints, iris, voice |
| **DATA RECOVERY** | Restoration of files from backups following a m<br>drive is called ___ ___ |
| **ENCRYPTION** | Scrambling data s[illegible] it can only be read by u<br>translatio[illegible] |
| **ETHICAL HACKING** | [illegible]ting the security of a system by attempting<br>owner's permission |
| **FIREWALL** | Hardware- or software-based security which c<br>network traffic based on predefined rules |
| **GREY HAT** | Hacker who attempts to gain access to comput<br>weaknesses and informs the owner, but withou |
| **HARDENING** | General term applied to devices which have be<br>prevent intrusion by hackers or malware |
| **PASSWORD** | Sequence of characters needed to gain access t |
| **PENETRATION TESTING** | Process of testing a system for vulnerabilities t |
| **PHYSICAL SECURITY** | The protection of digital devices from physical<br>biometric door lock |
| **TWO-FACTOR AUTHENTICATION** | Using more than one characteristic in order to<br>sending a text message or email, or requiring a |
| **WHITE HAT** | A security expert hired to find weaknesses in a<br>them |

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# IT policy and responsible use (B3, C1)

| | |
|---|---|
| **ACCEPTABLE SOFTWARE** | Apps and programs which the company allows t computers and devices |
| **ACCEPTABLE USE POLICY** | Set of rules which govern or restrict the ways i network may be used |
| **ANALYSE** | The last phase after an attack – updating proce that an attack is less likely to happen again |
| **ELECTRONIC DISTRIBUTION** | Method of sharing and making document/infor online, etc. without printing it |
| **ENERGY** | Various forms of power required to manufactur of it |
| **ETHICS** | Term used to describe the moral principles tha considered when using/processing p |
| **HARD COPY** | Term for a document or image that has been pr |
| **INVESTIGATE** | After an attack, the first stage is to ___ – to se the attack was |
| **MANAGE** | After an attack, companies need to ___ it – by implementing suitable procedures |
| **PASSWORD POLICY** | Length, numbers and special characters require the provider's ___ ___ |
| **POWER SAVING** | Settings that reduce energy used by a device s off the screen, entering standby if device not us |
| **PRIVACY** | Increased digital surveillance and the rise of so concerns relating to this |
| **RARE MATERIALS** | Metals and minerals required to manufacture e only found in limited quantities or in certain ge |
| **RECOVER** | After an attack, businesses ___ by implementi taking remedial action |
| **REPLACING** | When a device can't be upgraded any further a becomes obsolete |
| **RESPOND** | After an attack, the company needs to ___ – te authorities (e.g. the ICO) what happened |
| **UPGRADING** | Process where existing technology is replaced performance tech |
| **WASTE** | Mat leftover from manufacturing a produ reaching end of life – needs to be recycled or di |

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# Legal and ethical (C2)

| | |
|---|---|
| **ACCEPTABLE USE POLICY** | Document signed by an employee or service us and may not use a computer system |
| **ASSETS** | What is covered by an acceptable use policy – owned by a company |
| **ATTRIBUTION** | When IP belonging to someone else is used, bu the creator's name is included within the work |
| **COOKIE** | Small text file saved on a computer when a web visited and details to personalise the experien |
| **COPYRIGHT** | A legal right protecting the use of paper and di |
| **DATA PROTECTION** | Act that makes provision for the regulation of t relating to individuals |
| **DATA SUBJECT** | The person whom the data is about |
| **INTELLECTUAL PROPERTY** | Creative work belonging to a person or organis legislation |
| **LAWFUL PROCESSING** | The legal basis for holding and using personal d |
| **LEGISLATION** | Laws or acts which businesses must adhere to |
| **LICENSING** | When a fee is paid to the copyright holder to ob distribute content |
| **MONITORING** | An organisation watching employee behaviour and websites visited |
| **NET NEUTRALITY** | All traffic on the Internet is treated with equal types of traffic cannot be slowed down |
| **PATENT** | Grants the exclusive rights to a person to use a |
| **PERMISSIONS** | When someone wants to use a copyrighted ima – and the author allows it |
| **PROFESSIONAL GUIDELINES** | Set of actions specific to a particular industry t legally enforceable |
| **SANCTIONS** | Collective term for the actions taken against a use policy is breached |
| **SCOPE** | Who an acceptable use policy refers to |
| **SOCIAL MEDIA** | Online platforms, used by individuals and organ sharing of information and media, and the build |
| **SPECIFIC PURPOSE** | Why personal data is collected |
| **STANDARDS** | Sets of guidelines that companies agree to adh World Wide Web Consortium, Unicode Consor |
| **TRADEMARK** | A word or phrase used by a company to identify display the ™ symbol or ® if registered |

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# Forms of notation (D1)

| | |
|---|---|
| ***CHART*** | A term for a graph where tabulated data is disp |
| ***DECISION*** | Yes or no, for example – diamond on a flow char |
| ***ENTITY*** | A person who processes or alters data in a data |
| ***FLOW CHART*** | Graphical method of representing an algorithm |
| ***FLOW DIAGRAM*** | Representation showing who processes data a transmitted within a system |
| ***INPUT AND OUTPUT*** | These are both represented by a parallelogram |
| ***PROCESS*** | Represented in a rectang box on a flow cha |
| ***STORE*** | Repository f rc sed data within a data flo |
| ***SYSTEM DIAGRAM*** | Re ore e tation of the inputs, processes and ou Business |
| ***TABLE*** | Data provided in rows and columns for clarity a and patterns |
| ***TERMINATOR*** | Start and end of a flow chart, represented in an |
| ***WRITTEN INFORMATION*** | Data or text that has been analysed and discus |

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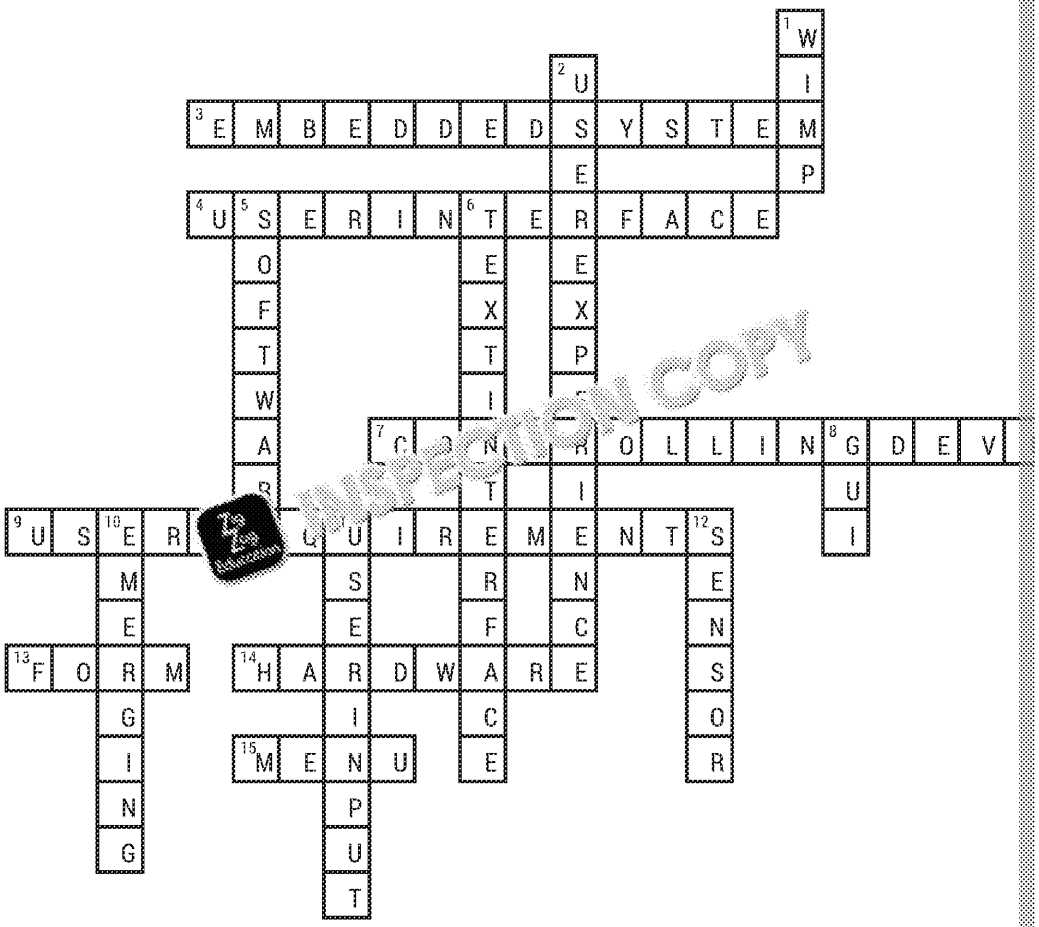
## *User interfaces (A1)*



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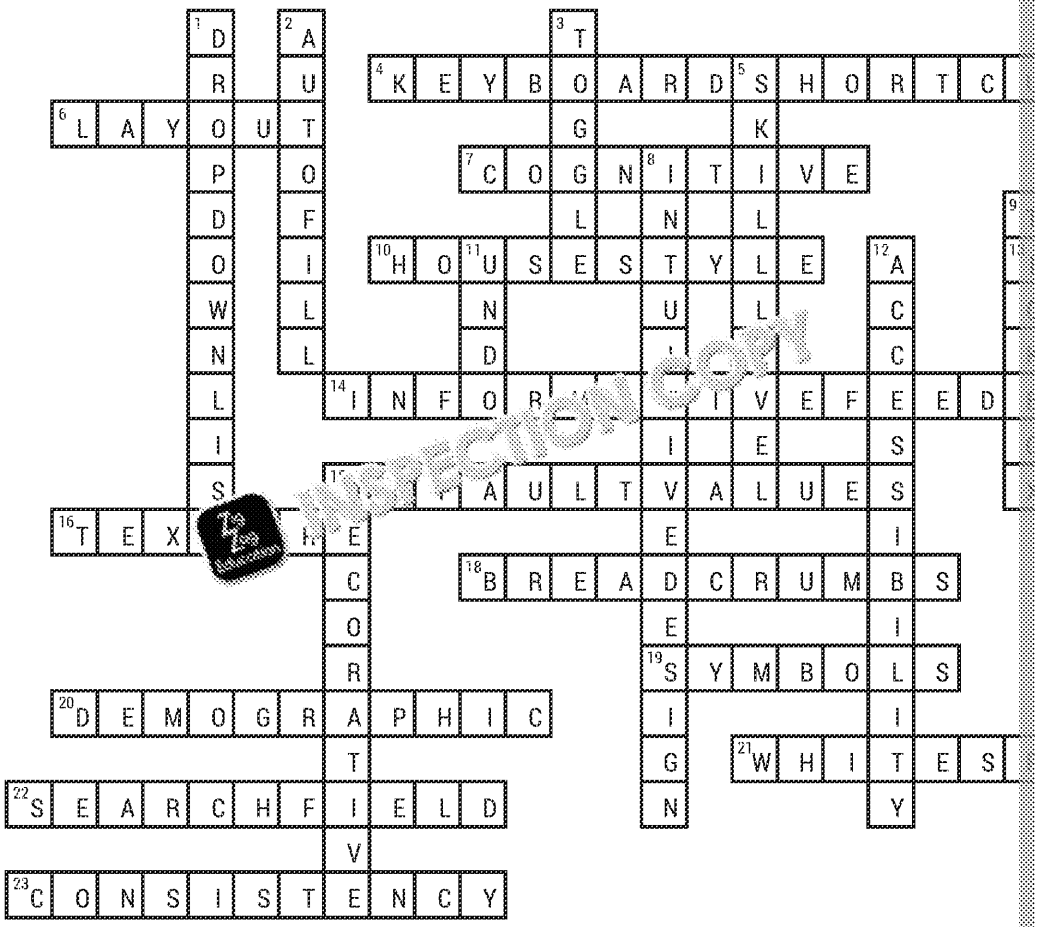
## *User interface design; users and efficiency (A2 - A4)*

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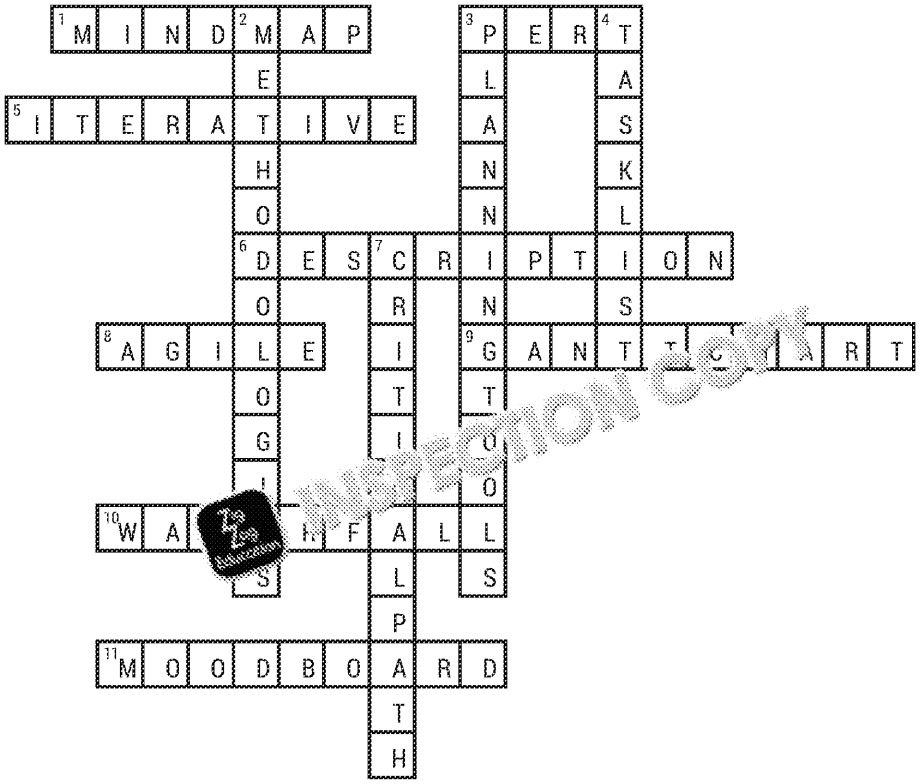
## *Project planning techniques (B1)*

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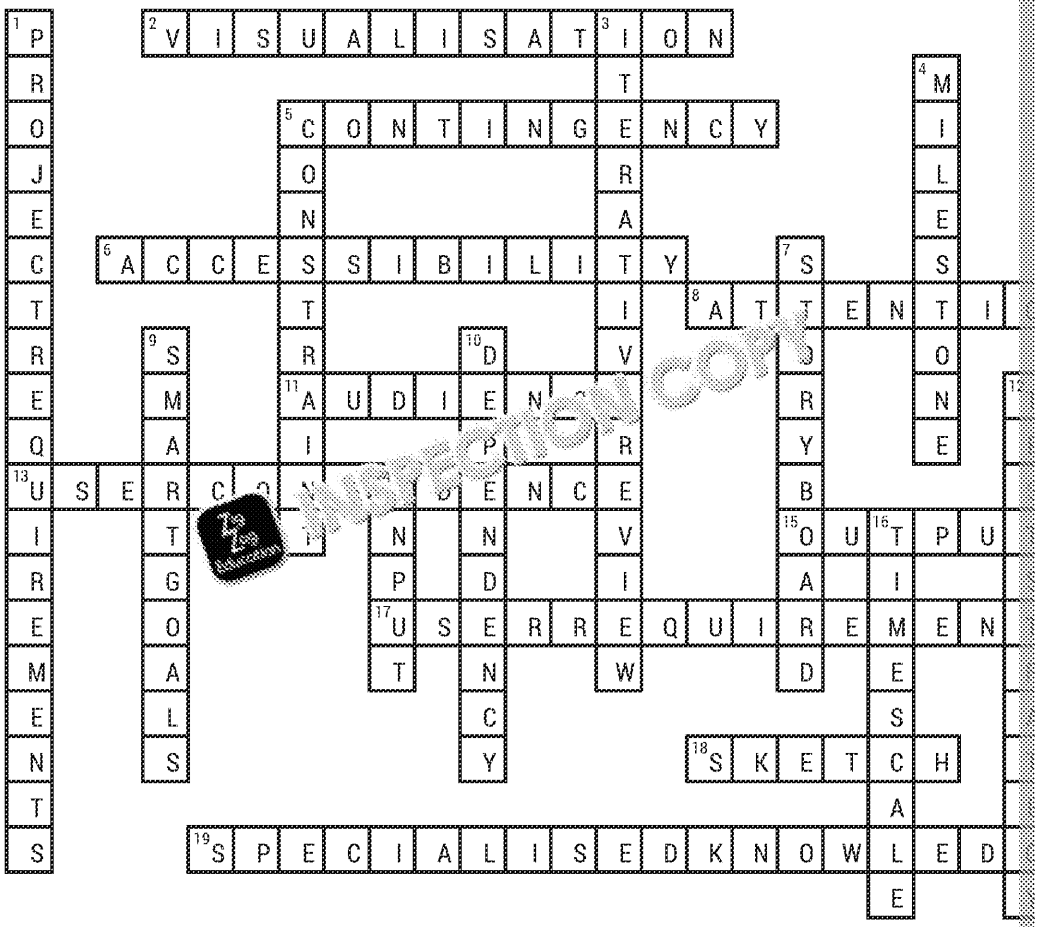
## *Project planning and initial design (B2 - B3)*

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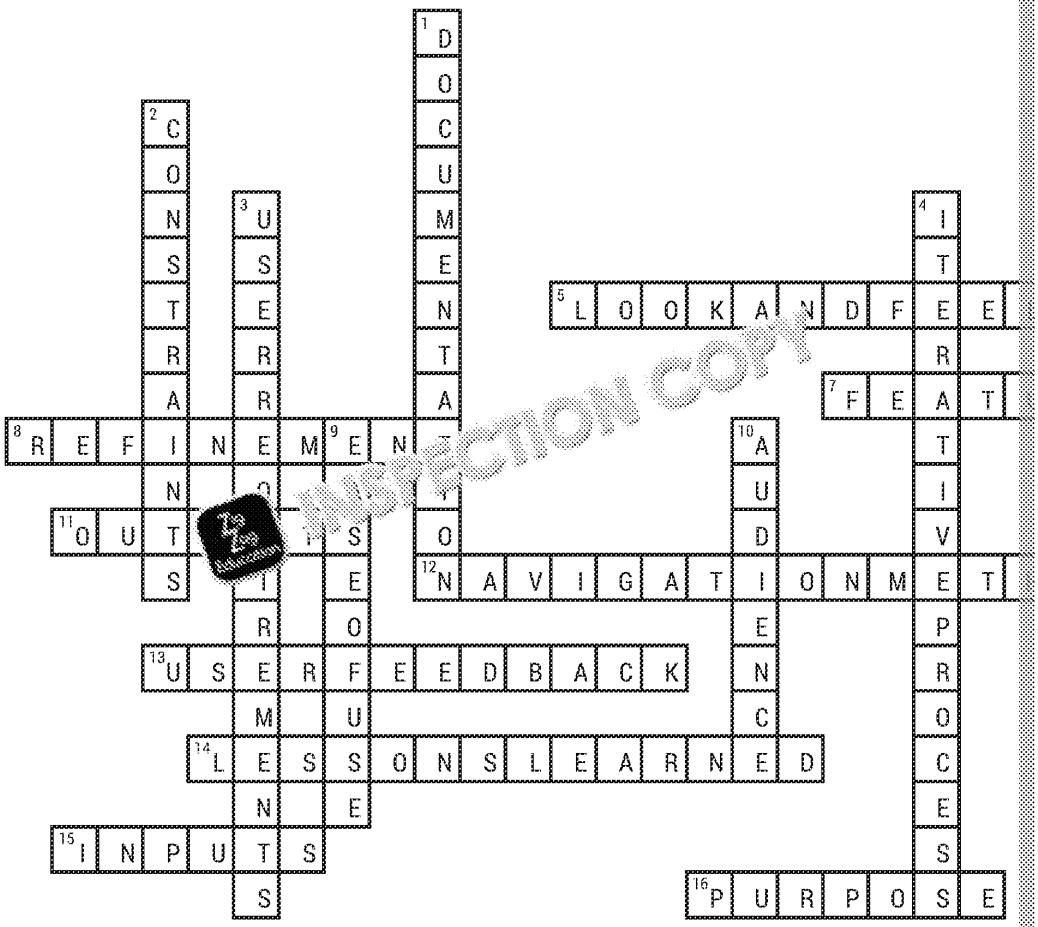
## *Develop and review a user interface (C1 - C3)*

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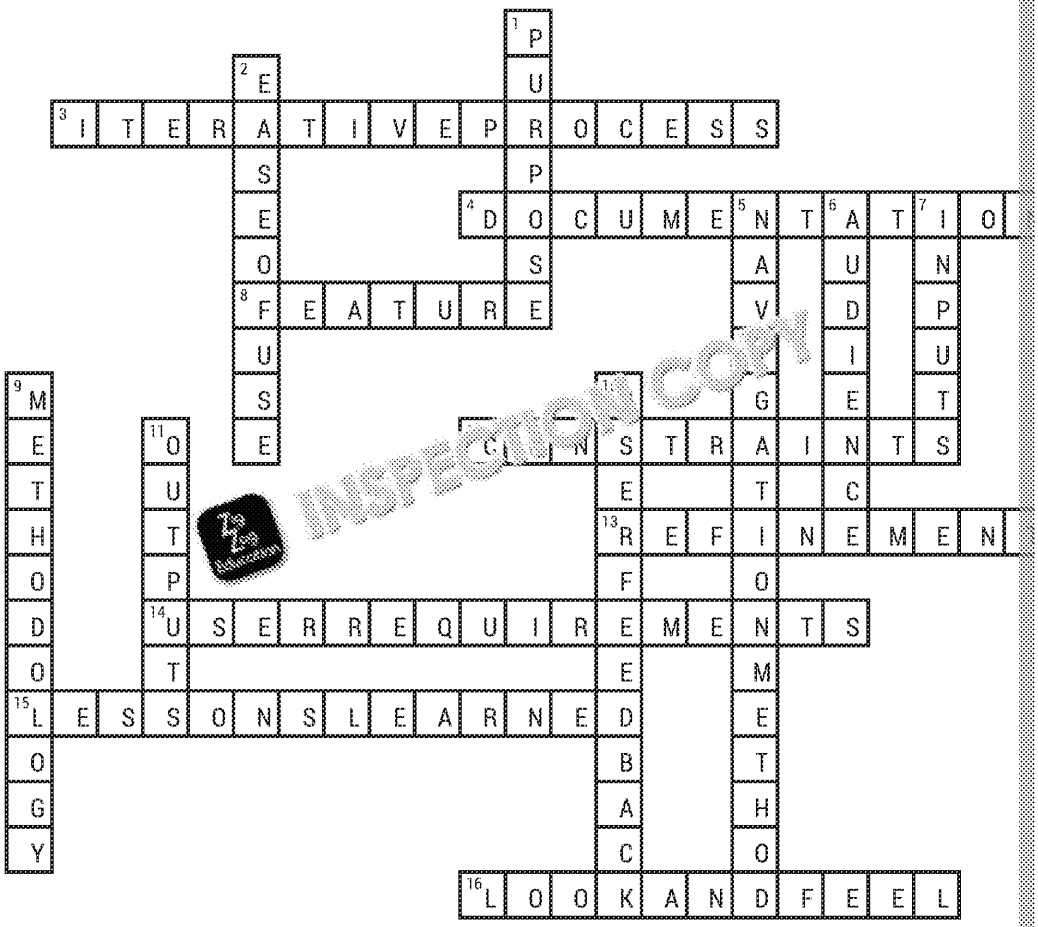
*Data and information: characteristics, representation and proce*

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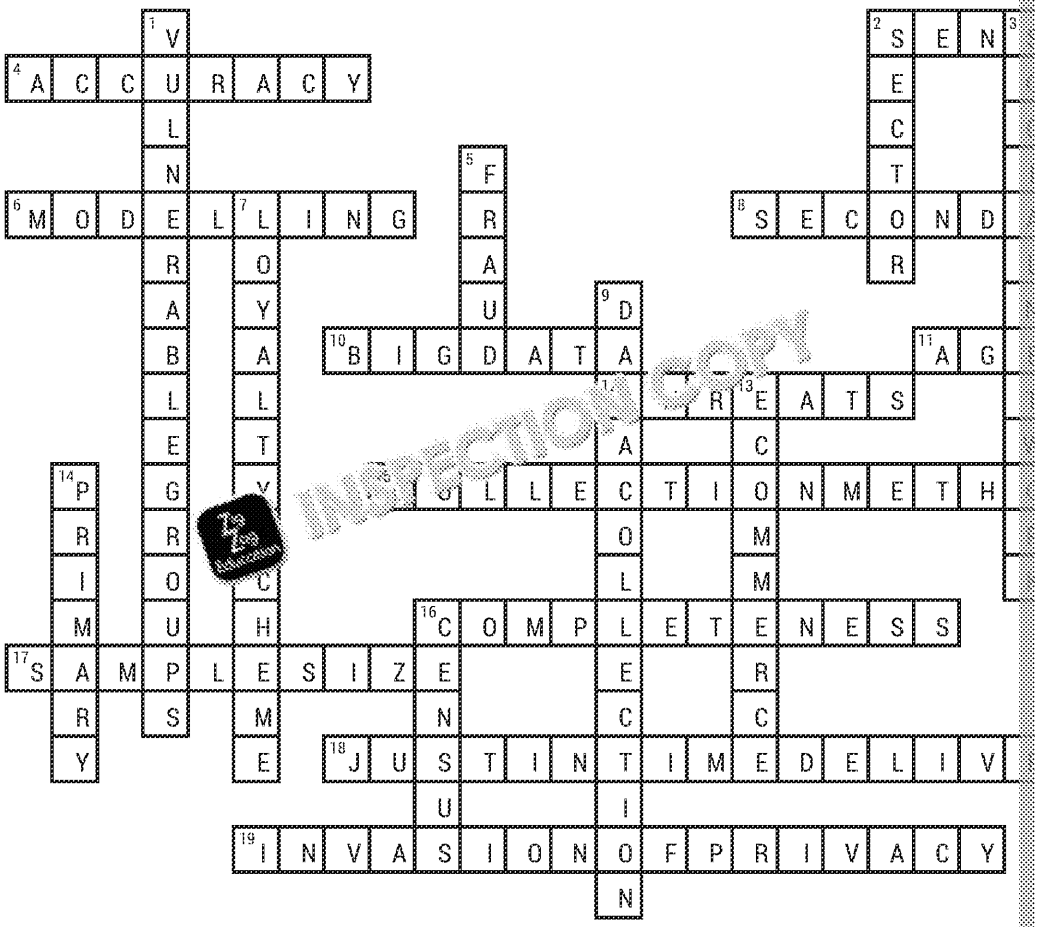
## *Data and information: collection, quality, modelling and threats*

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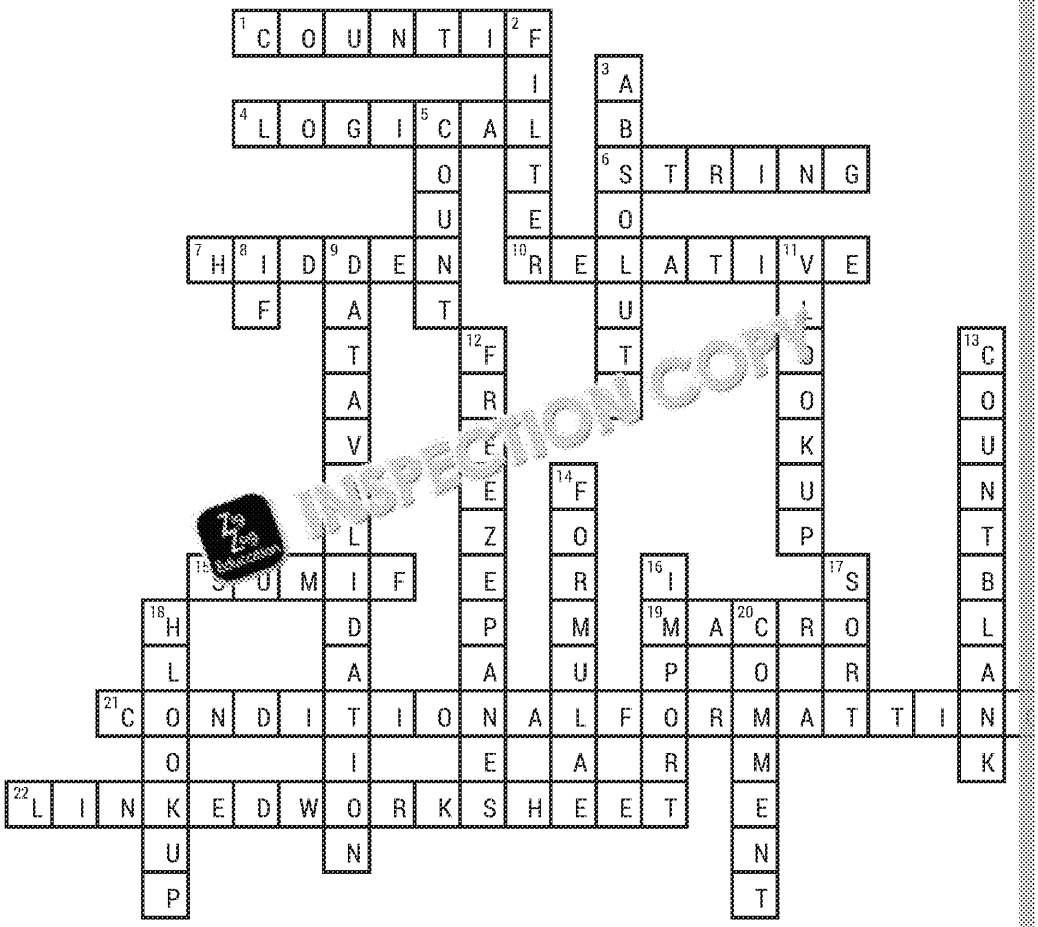
## *Data processing methods (B1)*

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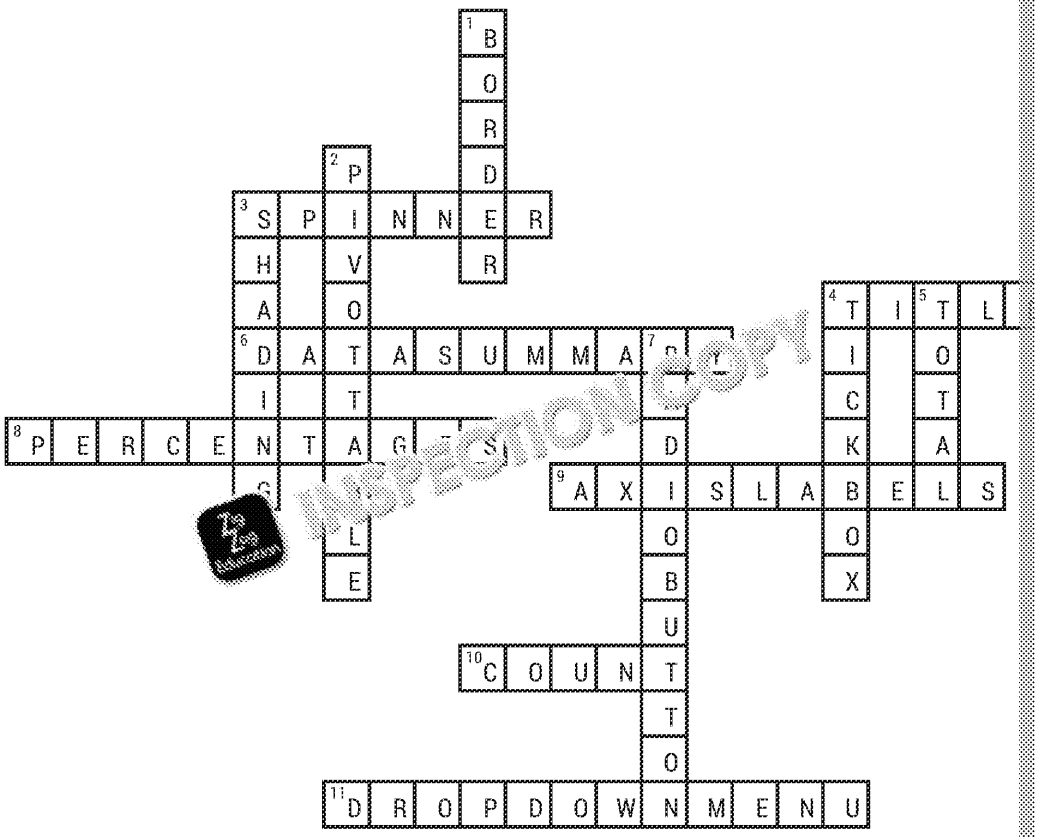
## *Produce a dashboard (B2)*

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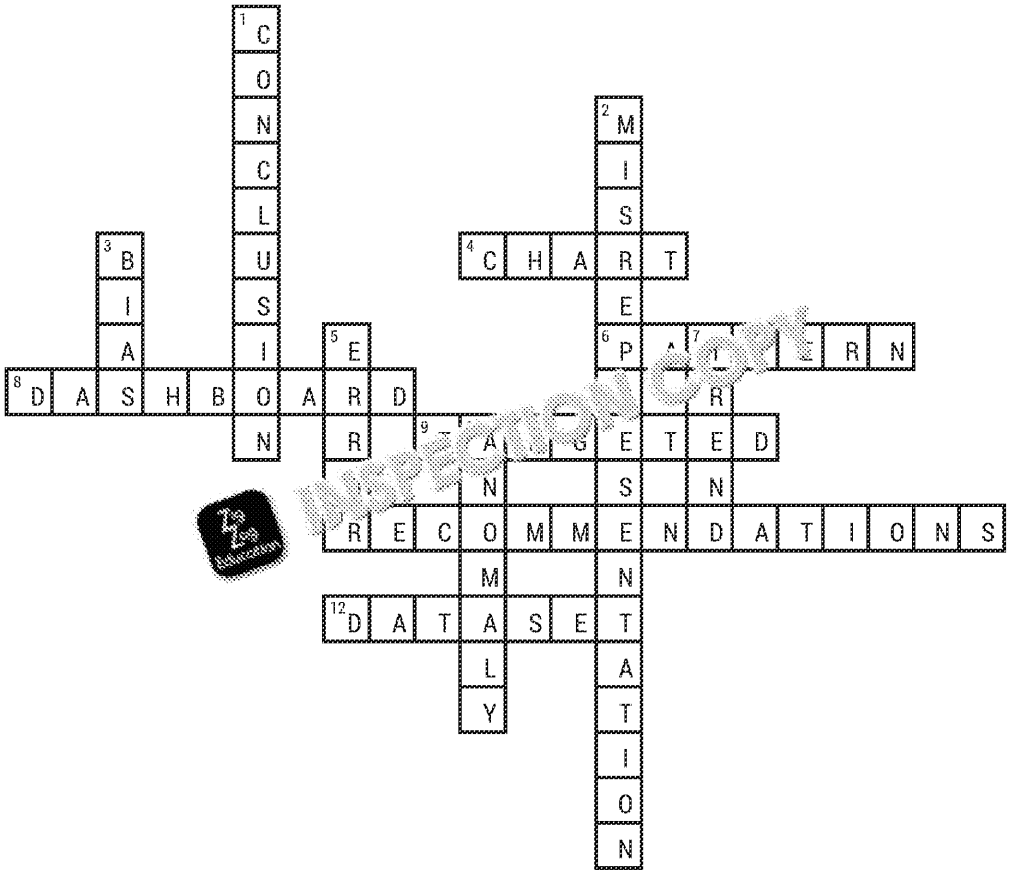
## *Draw conclusions and review data presentation methods (C1 - C*

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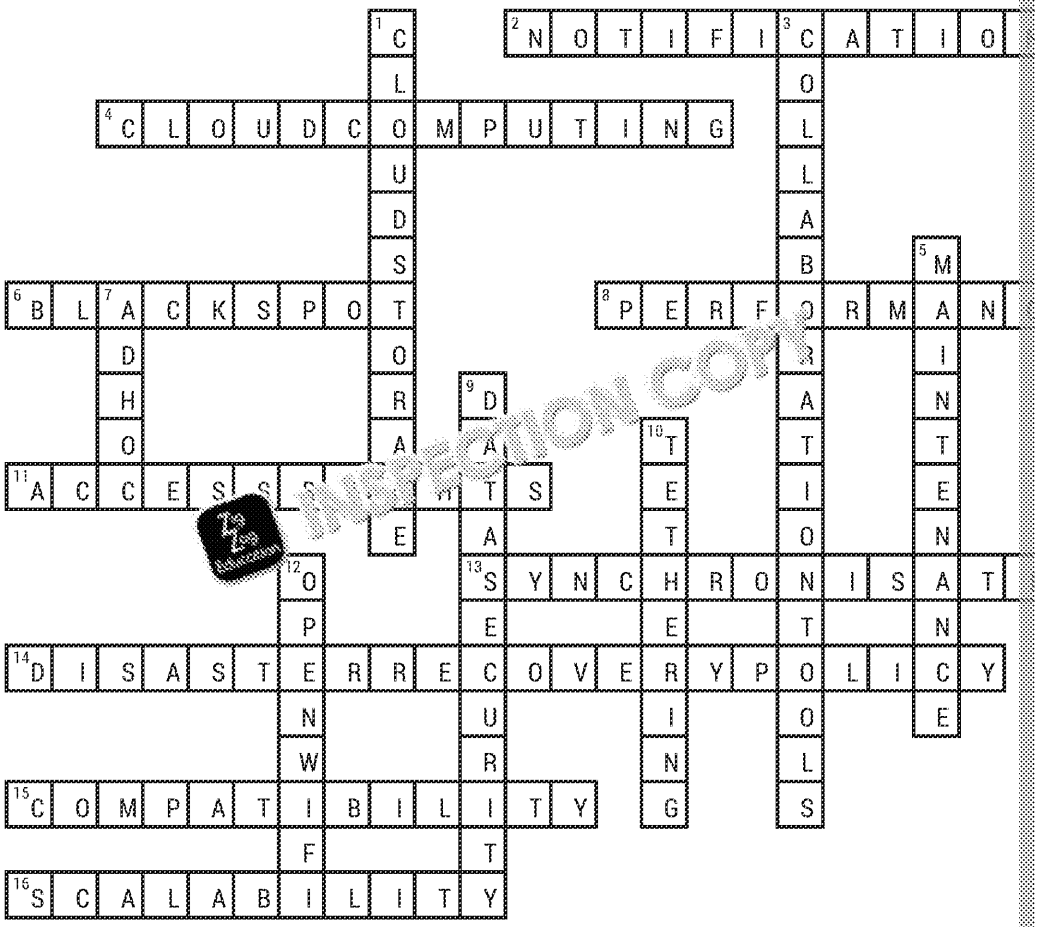
## *Modern technologies (A1)*

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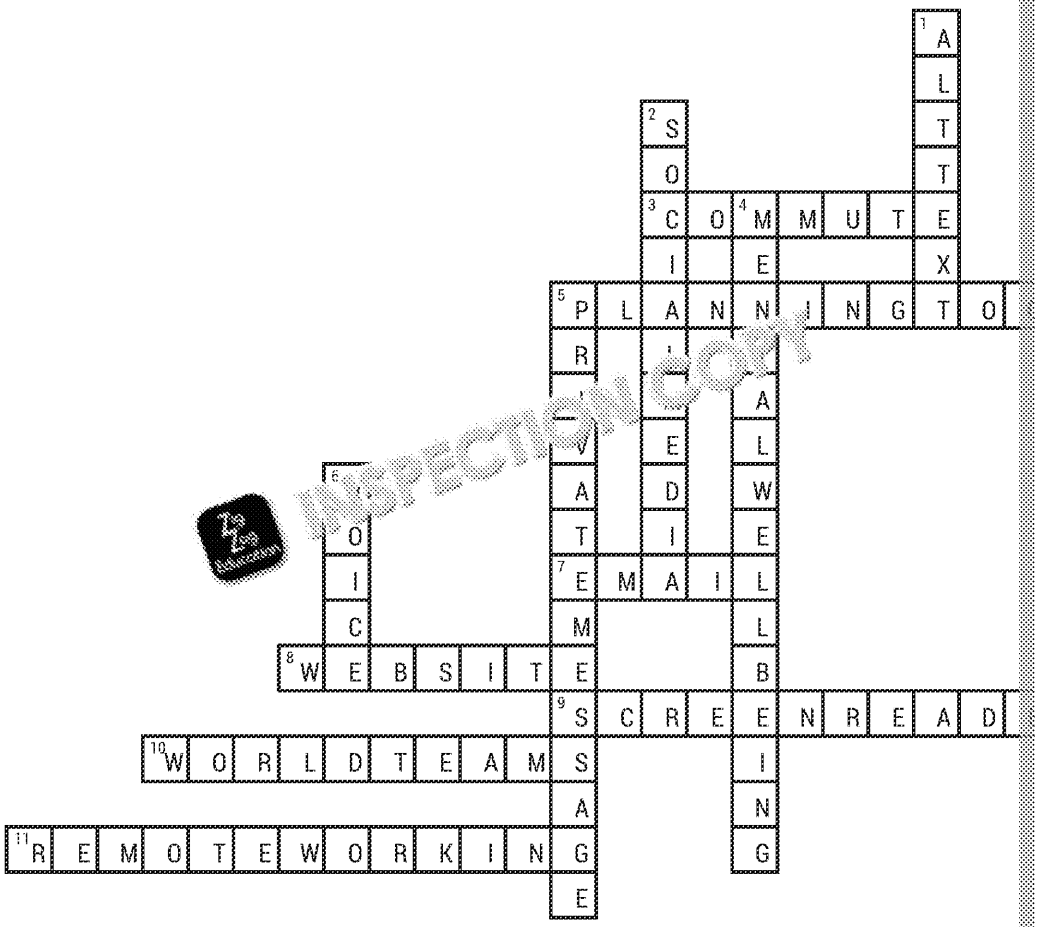
*Impact of modern technologies (A2)*

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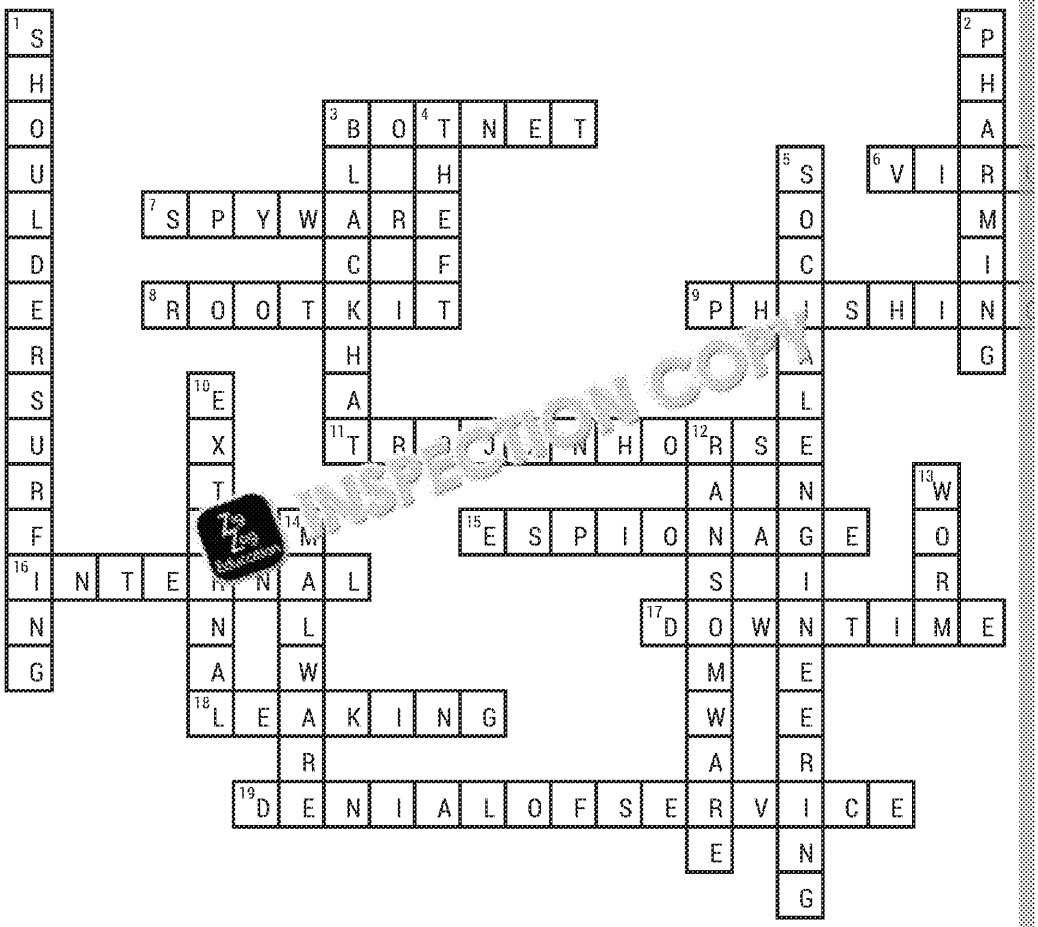
## *Threats to data (B1)*



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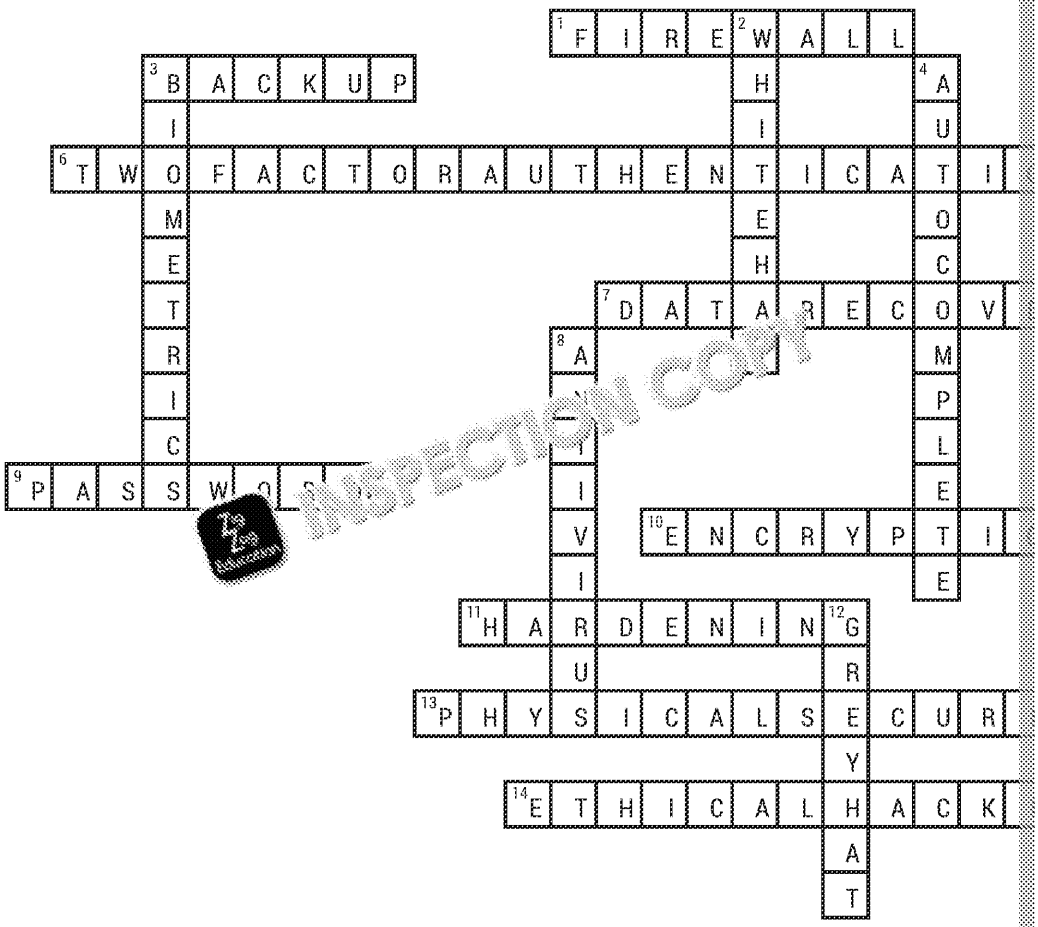
## *Prevention and management of threats to data (B2)*

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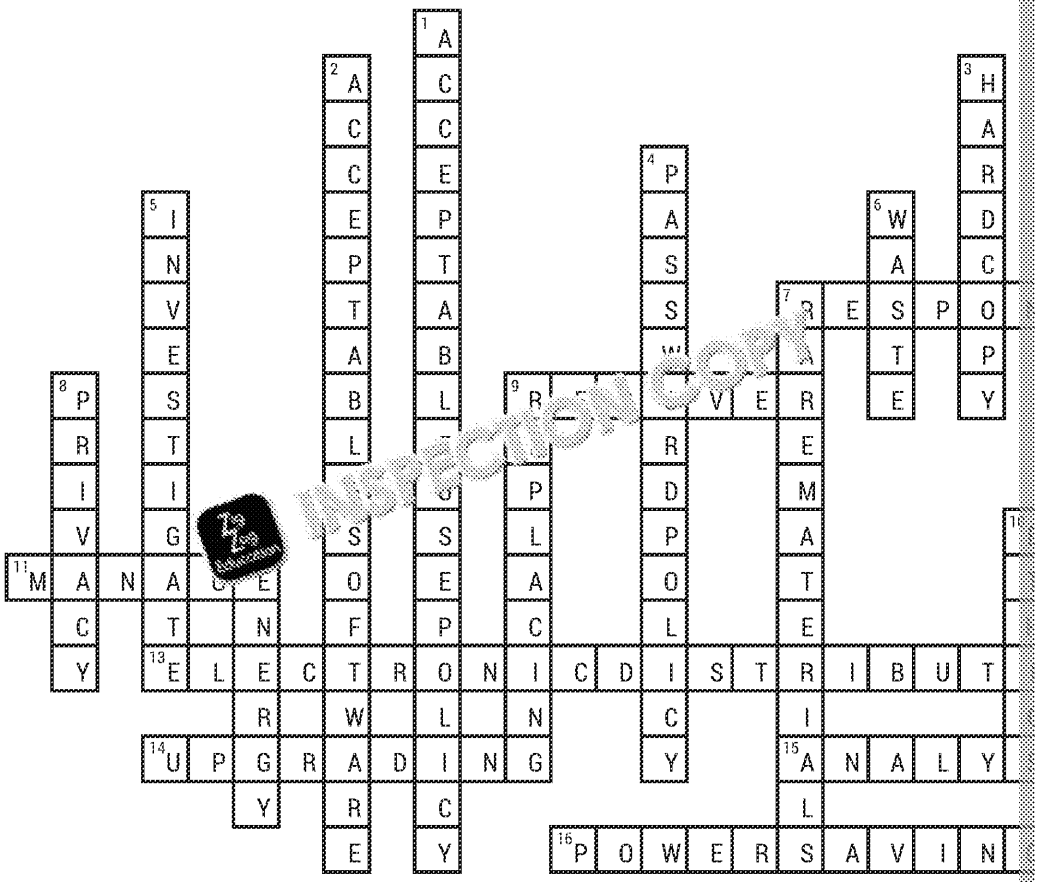
## *IT policy and responsible use (B3, C1)*



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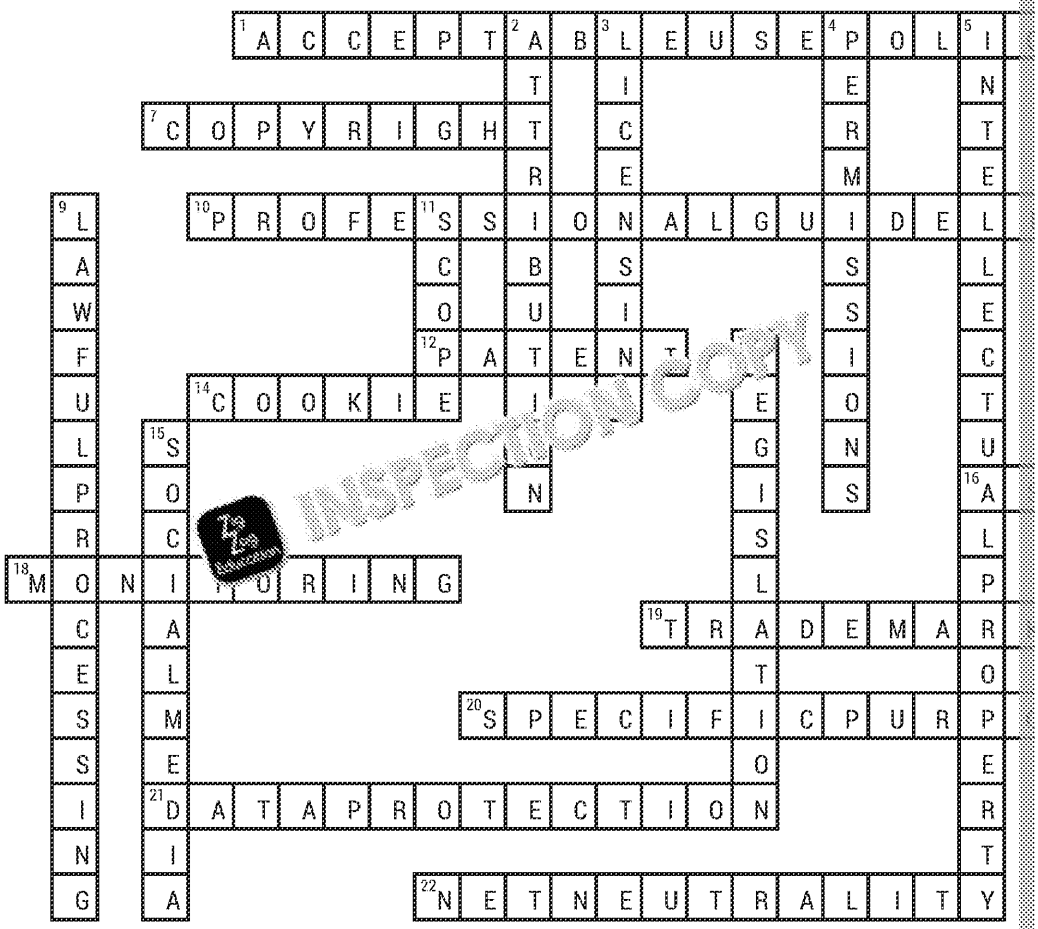
## *Legal and ethical (C2)*

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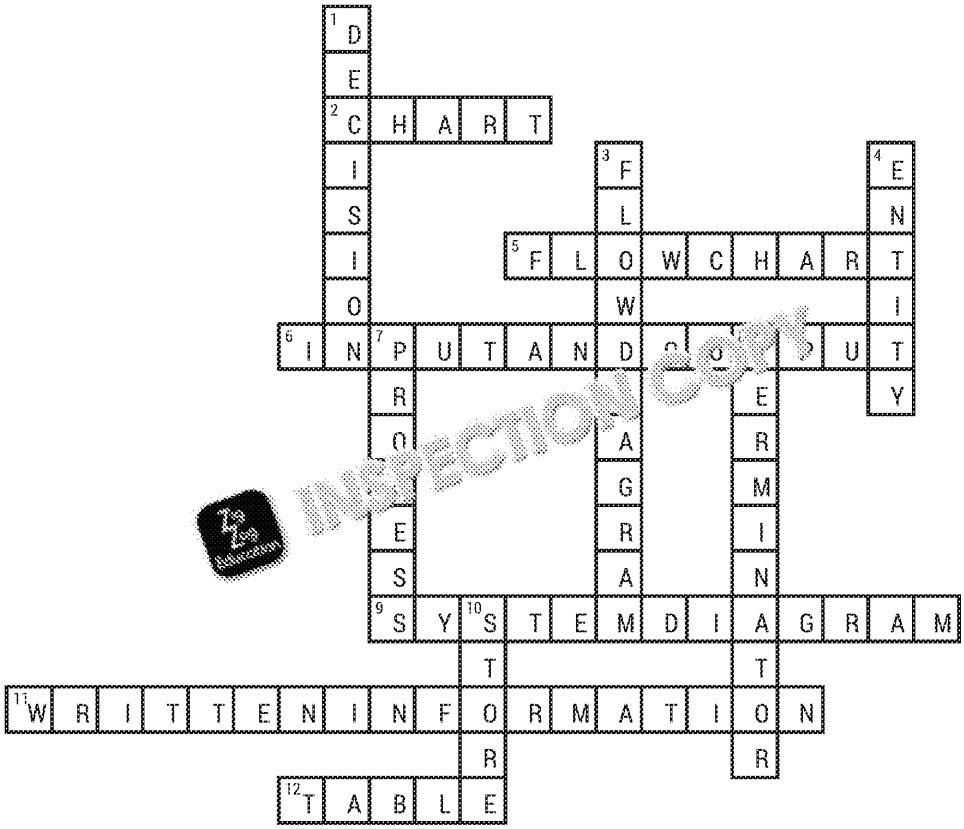
## *Forms of notation (D1)*

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