

Averaging Sample Solution

{ Notes: This is a very easy task, all that needs to be done is to get user input in a loop. If you use InputQuery you can loop until cancel is pressed and then return the average of the numbers entered. }

unit Main;

interface

uses

Windows, Messages, SysUtils, Classes, Graphics, Controls, Forms, Dialogs,
StdCtrls;

type

TMainFrm = class(TForm)
 AverageBtn: TButton;
 procedure AverageBtnClick(Sender: TObject);
private
 { Private declarations }
public
 { Public declarations }
end;

var

MainFrm: TMainFrm;

implementation

{ \$R *.DFM }

procedure TMainFrm.AverageBtnClick(Sender: TObject);

var

Total, Count, Value, err: integer;
ValueStr: string;

begin

Total:= 0; // set the running total to zero
Count:= 0; // set the number of items to zero
ValueStr:= ""; // make sure there is no default in the input box
while InputQuery('Average','Enter an integer number',ValueStr) do

begin

Val(ValueStr,Value,err); // convert the string to a integer
if err= 0 then // we don't have an error

begin

Total:= Total + Value; // so add it to the total
Inc(Count); // and update the number count

end

else

MessageDlg(Format('"%s" is not an integer',[ValueStr]),mtInformation,[mbOK],0); // we got an error
ValueStr:= ""; // make sure there is no default in the input box

end;

if Count<> 0 then // make sure some numbers have been entered

MessageDlg(Format('The average of those %d numbers is %.2f',[Count>Total/Count]),mtInformation,[mbOK],0); //

display the average

end;

end.

Exercise Dependent Marks

Mark	Feature
3	User can enter infinite number of numbers.
3	Output is given as a floating-point number.
2	Extension.