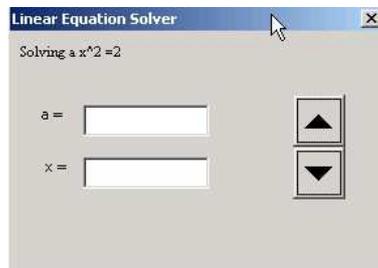# (Part II) Lab-session 8

1) Design a Customized User Form entitled "*Linear Equation Solver*". The UserForm will contain the following controls: one SpinButton, two TextBoxes and three Labels. The program associated to this form should be such that when run it will solve an equation of the form $ax^2 = 2$ for the variable x (just pick the solution $x = \sqrt{2/a}$). The value of a will be associated to the value of the SpinButton which will be displayed in one of the TextBoxes. The solution to the equation, x, will be displayed in the other TextBox. The program associated to the form should be such that the values of a and x will be computed everytime the value of the SpinButton changes. To make your Userform more user-friendly, add three Labels: the label "solving $ax^2 = 2$" on top of the form, the label "x = " just to the left of the TextBox that displays the solution of the equation and the label "a = " just to the left of the TextBox that displays the value of a. Your form should look more or less like this:

- Using the properties window, adjust the properties of the SpinButton so that its maximum value is 10 and its minimum value is 1. Every time you press one of the arrows the value should change by 1.

- Using the properties window, set the caption for the Userform to "Linear Equation Solver".

- Using the properties window, adjust the text font of each of the Labels to be "times new roman".

2) Create a UserForm entitled "*Course Average*" which given a list of Students with marks for two courseworks (CW1, CW2) and the exam, computes the course average for the student and determines whether he/she has passed or failed the course. In order to do this, follow the steps described below:

- Enter these data in the cells A1:D5 of the Excel worksheet:

	A	B	C	D
1	Student Names	CW1	CW2	Exam
2	M. Patel	80	76	67
3	R. Li	40	40	35
4	S. Huerta	54	70	40
5	J.Smith	99	90	81

- Create a Userform with the following controls: A ComboBox, two TextBoxes and two Labels.

- Using the properties window, set Rowsource= A2:D5 and ColumnCount=4 and BoundColumn=1 for the ComboBox.

- When run, the program should do the following: when selecting one particular student's name in the ComboBox (that is the value of the ComboBox), it will compute the course average, according to the formula:

$$CA = \frac{10 * (CW1 + CW2) + \text{Exam} * 80}{100}.$$

  and display the value in one of the TextBoxes. The other TextBox should display one of two messages: if the average is under 40, the message should be "Resit" and otherwise it should display "Pass".

- In order to make the form more user-friendly create two labels which you will put to the left of each of the TextBoxes. The label next to the TextBox displaying the average should read "average = " and the label next to the other TextBox should read "decision="

Your userform should look more or less as below.