Design and implementation of Computer Applications ~ Assignment 2

Attempt all the questions below, individually.

Submit a zip file containing program code as well as screenshots of working solution to the class rep who will forward one class file before 13th April 2024

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1. Write a sub procedure in Visual Basic that sets the vertical and horizontal sizes of a form named DemoForm to half the vertical size of the screen and to three-quarters the horizontal size of the screen respectively.

2. Write a program that can be used to generate and display the following multiplication table in a text box control. Don't use arrays

Multiplication Table

*	1	2	3	4	5	6	7
1	1	2	3	4	5	6	7
2	2	4	6	8	10	12	14
3	3	6	9	12	15	18	21
4	4	8	12	16	20	24	28
5	5	10	15	20	25	30	35
6	6	12	18	24	30	36	42
7	7	14	21	28	35	42	49

3. A person invests KSh 1000000 in a savings account yielding 5 percent interest. Assuming that all interest is left on the deposit in the account, Calculate and display in a list box the amount of money in the account at the end of each year for 10 years. Use the following formula for determining these amounts:

$$A=P\,(1+R)^{n}$$

Where

P is the original amount invested
R is the annual interest rate
n is number of years
A is the amount of deposit at the end of the nth year

4. Write a Visual Basic program that incorporates a function to return the character which follows the input character according to the ASCII table. For example, if the user specifies "A", the function has to return "B". No error checking necessary. Use inputbox dialog for inputs and messagebox dialog for outputs perform the task after a click of a button.

5. Write a program that uses a progress bar and a timer control to simulate a lengthily process. The current percentage progress of the progress bar should be indicated in a label control. Design your graphical user interface and write down the properties that you would set for all the controls in the GUI and their values.

6. A salesperson earns a weekly base salary plus a commission when sales are at above quota. Using arrays, write a Visual Basic program that allows the user to input the salesperson name and the daily sales, and then calculates the weekly sale and the commission for ten salespersons. The commission is paid if the weekly sale is greater than the set quota. Your program should display the salesperson name, daily sales, weekly sales and weekly salary using a list box control. Use constants to establish the weekly base pay, the quota, and the commission rate as 2500, 1000 and 0.15 respectively. Commission is calculated as shown below. Design your GUI.

Commission = Commission_rate * Weekly_sales