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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2022/2023 ACADEMIC YEAR**  
**FIRST YEAR, SECOND SEMESTER, END OF SEMESTER EXAM**  
**FOR THE DIPLOMA IN INFORMATION TECHNOLOGY**  
**DIT 1009- VISUAL PROGRAMMING**

Date: 1<sup>st</sup> AUGUST 2022  
Time: 2:30PM – 4:30PM

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) Give three advantages and three disadvantages of visual programming. (6 Marks)
- b) Giving examples explain the difference between methods and properties (4 Marks)
- c) Define the IDE (integrated Development Environment). (2 Marks)
- d) The IDE environment consists of many elements. Describe any THREE elements displayed when Visual Studio is started (By default). (6 Marks)
- e) Differentiate between form design window and code editor window. (4 Marks)
- f) Checkbox and radiobutton are some of the tools found in visual studio toolbox. What is the difference between them? (4 Marks)
- g) Describe the structure of the IF statement as used in visual programming. (4 Marks)

**QUESTION TWO (20 MARKS)**

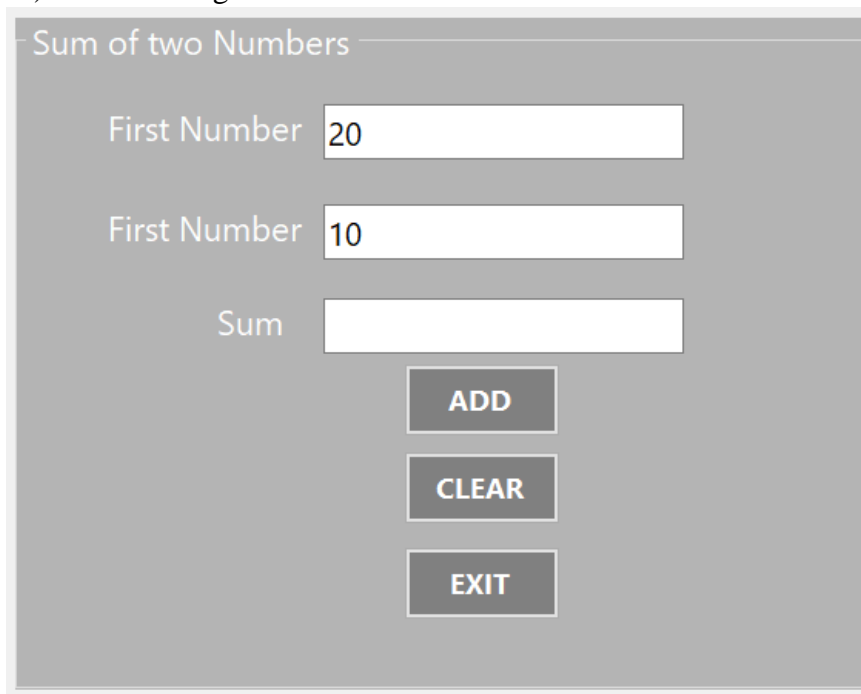
- a) Describe the difference between design time and run time in visual programming. (4 Marks)
- b) You are required to create windows application. What are the steps involved in carrying out this task? (4 Marks)
- c) Within the form design window, you can change the properties of any object in the form. Describe the difference between the following properties. (6 Marks)
  - i) Backcolor property and the Forecolor property
  - ii) Name property and Text property
  - iii) Font property and Size property
- d) In a program, statements may be executed sequentially, selectively or iteratively. Explain the meaning of the following constructs; (6 Marks)
  - i) Sequential Constructs
  - ii) Selection Constructs
  - iii) Iterative Constructs

### **QUESTION THREE (20 MARKS)**

- a) For the fundamental control object types given below, explain their uses. (10 Marks)
- i) Label
  - ii) TextBox
  - iii) Button
  - iv) CheckBox
  - v) RadioButton
- b) Data Types are classifications of what sort of data is contained inside of a variable. Describe any three data types available in Visual C#. (6 Marks)
- c) Using a sample code, show how array data type is declared and initialized in visual C#. (4 Marks)

### **QUESTION FOUR (20 MARKS)**

- a) The figure below shows a form created in visual studio.



- i) Identify different control objects used in designing this interface. (4 Marks)
  - ii) Write the Visual C# code used in the three buttons; ADD, CLEAR and EXIT to perform the expected action. (6 Marks)
- b) The toolbox contains all the necessary controls required for interface design. You are required to design student's admission form. Describe any five controls you can use to design this form to capture all the necessary details for student admission. (10 Marks)

**QUESTION FIVE (20 MARKS)**

- a) In visual programming, you can do type casting. Explain what we mean by type casting and give an example. (4 Marks)
- b) Write a program for a form containing two textbox so that when click on command button "copy" the text copied from first textbox to the second textbox. (6 Marks)
- c) Describe the process of adding a new form to your project in solution explorer. (4 Marks)
- d) Write a program using a for loop to print the word 'hello' into a textbox six times. (6 Marks)