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# KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
## UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
## FIRST YEAR, SECOND SEMESTER EXAMINATION
## FOR THE DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
## DIT 1009 – VISUAL PROGRAMMING

Date: 14TH AUGUST 2023
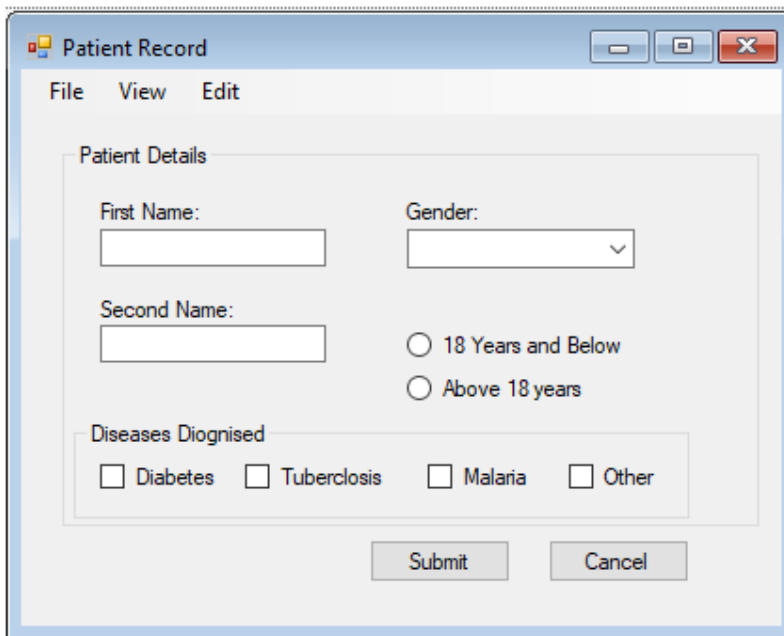Time: 2:30PM – 4:30PM

## INSTRUCTIONS TO CANDIDATES
## ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS
## QUESTION ONE (30 MARKS)

a) Define visual programming (GUI). (2 Marks)

b) A visual programming environment provides all the features that are required to develop a graphical user interface as ready-to-use components. State any six of these features. (6 Marks)

c) Explain the importance of Integrated Development Interface (IDE) in visual programming. (4 Marks)

d) With an example, state the difference between Method and Event as used in visual programming. (4 Marks)

e) State and explain three main disadvantages of visual programming. (6 Marks)

f) Explain the main function of the following components in visual environment. (4 Marks)

   i) Menu bar
   ii) Properties window
   iii) Toolbar
   iv) Toolbox

g) Give the reasons why it is necessary to use correct data types for the corresponding variable. (4 Marks)

## QUESTION TWO (20 MARKS)

a) Define type casting and explain the difference between implicit and explicit type casting giving an example for each. (4 Marks)

b) Explain any four properties you can change or add to a newly created form in visual environment. (4 Marks)

c) Give the difference between design time and runtime as used in visual programming. (2 Marks)

d) The form below is designed using visual studio environment. State and explain any five control/elements you can find in this form. (10 Marks)

**Patient Record** — File  View  Edit

Patient Details

First Name:

Gender:

Second Name:

○ 18 Years and Below
○ Above 18 years

Diseases Diognised

☐ Diabetes  ☐ Tuberclosis  ☐ Malaria  ☐ Other
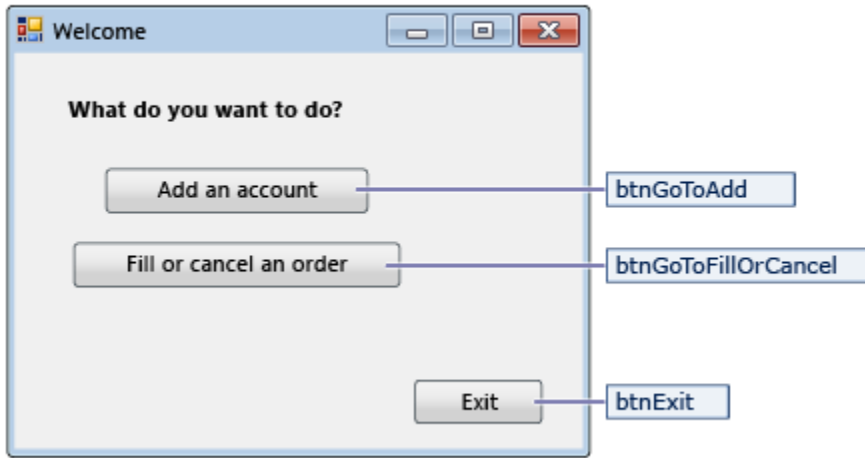
Submit    Cancel

## QUESTION THREE (20 MARKS)

a)  Data Types are classifications of what sort of data is contained inside of a variable. State and explain any three categories data types available in Visual C#. (6 Marks)

b)  Explain the difference between the following controls in visual studio.
    i)      Listbox and combobox
    ii)     Checkbox and radiobutton
    iii)    Label and Textbox
    iv)    Form and groupbox (8 Marks)

c)  Explain the different between the following properties applied to most of the objects you can drag and drop into a form in the design window.
    i)      Backcolor property and the Forecolor property
    ii)     Name property and Text property
    iii)    Font size property and Size property (6 Marks)

## QUESTION FOUR (20 MARKS)

a)  Define event. Give three types of event in visual programming. (4 Marks)
b)  Explain any three buttons you can find in a MessageBox in window forms. (6 Marks)
c)  Explain in details the following types of errors. (6 Marks)

    i)      Syntax error.
    ii)     Logical errors
    iii)    Runtime error

d)  Describe the structure of a while statement as used in visual programming. (4 Marks)

## QUESTION FIVE (20 MARKS)

a)   State any two types of application you can build using visual programming.              (2 Marks)

b)   For you to create a data-aware form, you need to learn AD.NET. explain the purpose of ADO.NET in visual studio.                                                                                                   (4 Marks)

c)   Study the form design below and answer the questions that follows.



i)    Explain the importance of giving a button a name property.                                (2 Marks)

ii)   What is the difference between the name property and text property as applied in a button control shown in the form above?                                                                               (4 Marks)

iii)  Assume you click the button 'Add an account', sketch a form that will be opened once a click event is initiated once that button is clicked.                                                    (6 Marks)

iv)   Write a code for the 'Exit' button.                                                                        (2 Marks)