

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF
CERTIFICATE IN COMPUTER SCIENCE**

COSC 00107: APPLICATIONS PROGRAMMING

STREAMS: CERT. COMP. SCI

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 24/03/2021

11.30 A.M. – 1.30 P.M

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS

QUESTION ONE

- a) Define the following terms in the context of Event Driven Programming Principles
- i. Intergrated Development Environment(IDE) (1 mark)
 - ii. Forms (1 mark)
 - iii. Properties (1 mark)
 - iv. Modules (1 mark)
 - v. Method (1 mark)
 - vi. An Event (1 mark)
- b) Describe the functions of the following windows found in VB.NET
- i. Properties Window (2 marks)
 - ii. Toolbox (2 marks)
- c) Differentiate the following VB.Net terms:
- i. ProgressBar and ScrollBar (2 marks)
 - ii. Checkbox and RadioButton (2 marks)
- d) Explain the importance of event driven programming (2 marks)

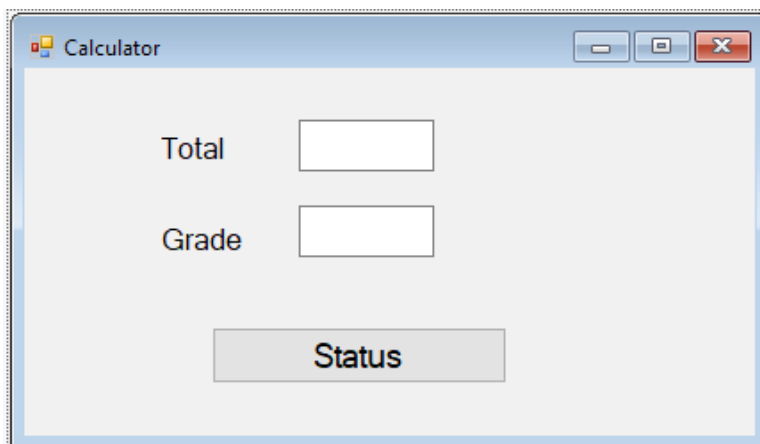
- e) List any four datatypes that are commonly used in Visual Basic Programming. (4 marks)
- f) Define the term Method in Visual Basic Programming. Whats the importance of a method in a visual basic program. (3 marks)
- g) List any three commonly used control structures in Visual Basic Programming (3 marks)
- h) Write a Visual Basic Code that displays the words "Hello world" on a console. (4 marks)

QUESTION TWO

- a) Write a Visual Basic Code that displays the words "This is COSC 00107 Class on Visual Basic Programming" on a form. (4 marks)
- b) What is the difference between an event procedure and general procedure as used in programming? (6 marks)
- c) Explain the standard steps that are followed in development of a Visual Basic Application (10 marks)

QUESTION THREE

- a) As per the form below, write a code where the lecturer would input the mark and if the grade is above 60, PASSED is displayed as the grade, else it should display FAILED. Use the if..then ...else control statement



(6 Marks)

- b) Change the program for the above screenshot so that when the lecturer inputs the marks the grades are displayed based on the range of grades below. Remember also to include a limitation so that the lecturer doesn't enter grade 100 or above.

A for marks that is equal to 80 and above and below 100

B for marks that is in the range 70 - 79

C for marks that is in the range 60 – 69

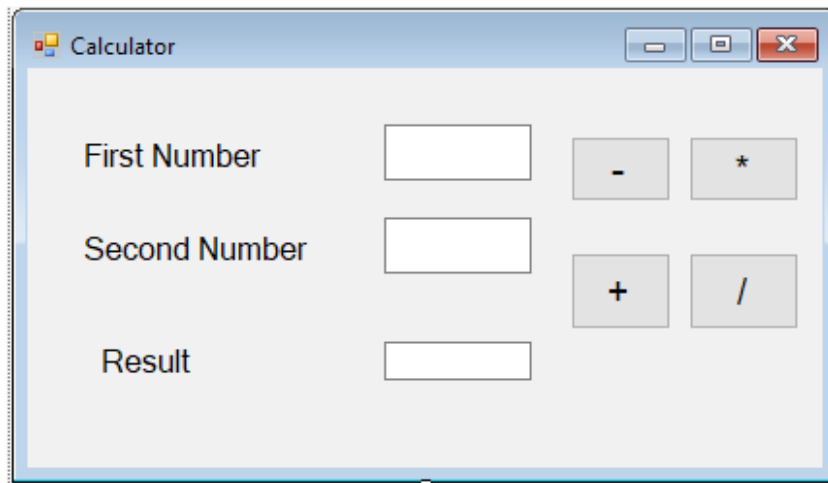
D for marks that is in the range 50 – 59

E for marks that is in the range 40 – 49

F for marks below 40

(6 marks)

- c) Write the code that creates the calculator below using Visual Basic form and elements such as textbox and labelbox.



(8 Marks)

QUESTION 4

- d) Write a Visual Basic program that accepts four values through the use of Inputbox. The program can then determine the mean of the marks and the appropriate grade. The average and grade should be displayed on a form. Use if ..else loop statement.

Marks Range	Grade
Below 40	F
40-49	E
50-59	D
60-69	C
70-79	B
80-100	A

(10 marks)

- e) Write a program that would enable a user to enter a radius of a circle and also its diameter, the program should then give 2 results: Circumference and Area in separate textboxes.

(10 marks)

QUESTION 5

- a) State the standard prefix for the following data types :

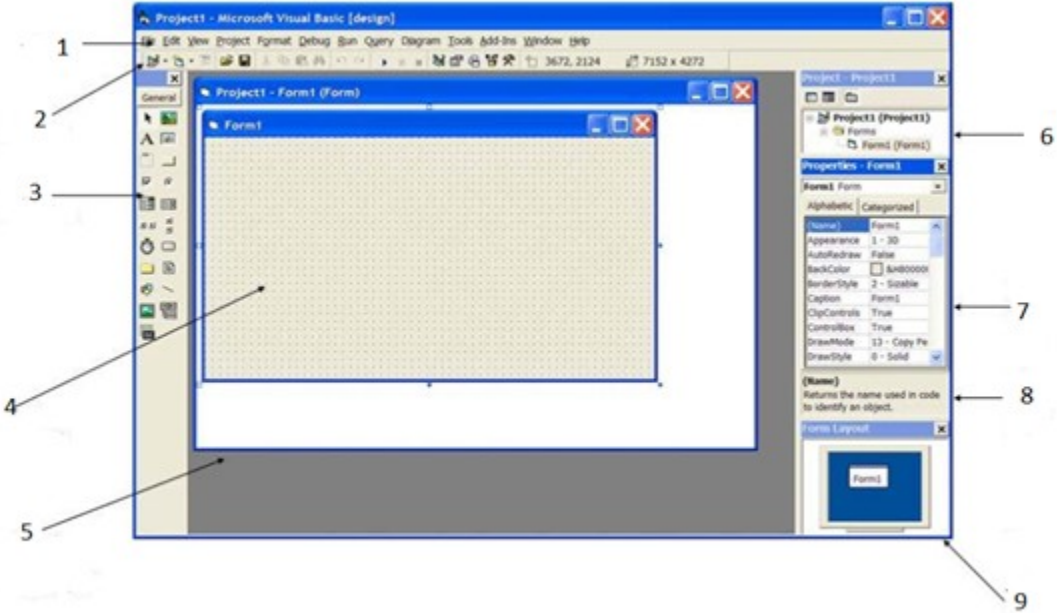
- i. Boolean
- ii. Currency
- iii. Byte
- iv. Double
- v. Variant

(5 marks)

- b) Write a program that accepts the input of a number through a textbox and displays the square and the squareroot of a number.

(6 marks)

c) Identify the following parts of a Visual Basic Program.



(9 marks)
