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FINAL
Examination Paper
(COVER PAGE)

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Session : AUGUST 2012

Programme : DIPLOMA IN INFORMATION TECHNOLOGY

Course : CSC1113: VISUAL PROGRAMMING

Date of Examination : 17 December 2012

Time : 11a.m. – 1p.m. Reading Time : Nil

Duration : 2 Hours

Special Instructions :

This paper consists of SIX (6) questions. Answer any FOUR (4) questions in the answer booklet provided. All questions carry equal marks.

Materials permitted :

Nil

Materials provided :

Examiner(s) : NOR RAHAYU BINTI NGATIRIN

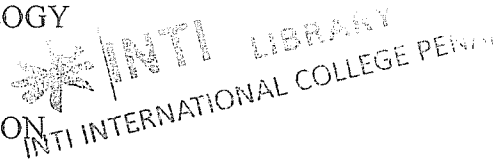
Moderator : ANNIDA SAID

This paper consists of 6 printed pages, including the cover page

INTI INTERNATIONAL COLLEGE PENANG

DIPLOMA IN INFORMATION TECHNOLOGY

CSC1113: VISUAL PROGRAMMING
 FINAL EXAMINATION: AUGUST 2012 SESSION



Instructions: This paper consists of **SIX (6)** questions. Answer any **FOUR (4)** questions in the answer booklet provided. All questions carry equal marks.

Question 1

- (a) Write a code to implement binary search in an integer array of size 20. User is required to enter the values of every element and the target for the binary search. Display the position of the target if found and an appropriate message if the target is not found. (11 marks)
- (b) Write a division by zero program. The program must include the Try-Catch statement to handle errors and type mismatch input. (8 marks)
- (c) Write a program to factor out all the 2s from a number using proper loop. (6 marks)

Question 2

- (a) Write a class definition to store information about computer systems. Properties of objects built with the class should include the model, number of megabytes of RAM and price. Write an application to enter and display entries of this class type. Store the data in an array of size 5. Display the information in a text box (12 marks)
- (b) Write a program with **THREE (3)** menu item (Green, Blue and Red) and **ONE (1)** label. When one menu item is clicked, the background color and text color of the label changed according to the following setting in Table Q2(b).

Menu Item	Background Color	Text Color
Green	LavenderBlush	Green
Blue	Azure	Blue
Red	Crimson	Red

Table Q2(b)

(9 marks)

- (c) By using nested loop, write a program to produce the following pattern in a label, refer Figure Q2(c).

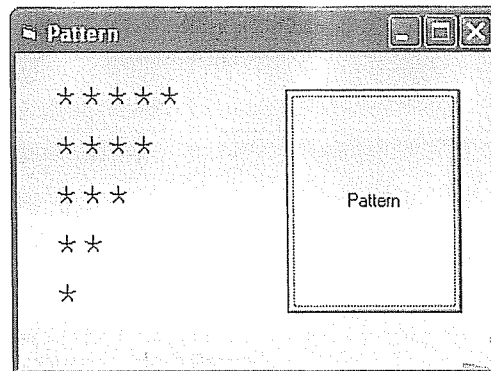


Figure Q2(c)

(4 marks)

Question 3

- (a) (i) Write a program to transfer notable tall building information from the text boxes of a form to a text file. The information should include a name, height and stories of FIVE (5) different building. Use a label to initiate the action. (12 marks)
- (ii) Write a program to read the information stored in the text file in Q3(b)(i) and show the information in a list box. Allow the user to change the font type of the information. (7 marks)
- (b) Briefly explain the FOUR (4) basic conventions when creating Windows menus. (6 marks)

Question 4

- (a) Describe THREE (3) differences between an array and a linked list. (6 marks)

- (b) Trace the output of the following program.

```
Private Sub btnPush_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnPush.Click

    Dim x(3, 3), i, j As Integer
    For i = 0 To 3
        For j = 0 To 3
            x(i, j) = i + j
        Next
    Next
    For i = 0 To 3
        For j = 3 To i + 1 Step -1
            x(i, j) = x(j, i)
            txtO.Text = txtO.Text & x(i, j) & Space(3)
        Next
        txtO.Text = txtO.Text & vbNewLine
    Next
End Sub
```

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(6 marks)

- (c) Write a program for a button that takes input from a text box and display the output on a label. The program will first inspect that the content of the text box should not be less than **FIVE (5)** characters. If it is, an appropriate message will be displayed. Then the program will eliminate all the “e”, “s” and “t” from the input, regardless if it is capital letter or small letter. At the same time, it will also calculate the number of characters eliminated. It will then use the remaining word(s), without “e”, “s” and “t”, and place the number at the end and use it as output.

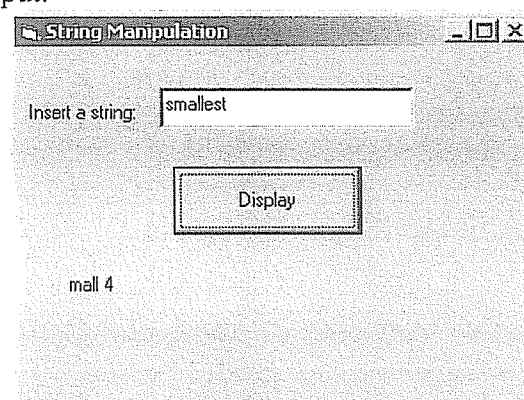


Figure Q4(c)

(13 marks)

Question 5

- (a) Write a program that requests a positive decimal number as input, and then displays the number of digits to the left of the decimal point and the number of digits to the right of the decimal point.

(10 marks)

- (b) Allow the user to enter any quantity of numbers. As each number is entered display the sum and the count of numbers entered. When the user adds a number, the input text box is put into focus. The user should be able to restart at any time. If the user chooses to restart, the output box is cleared and the input box is put into focus. Your output should look as shown in Figure Q5(b).

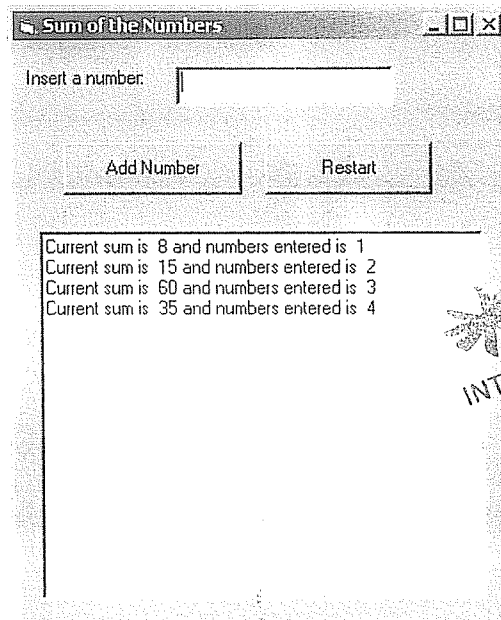


Figure Q5(b)

(8 marks)

- (c) Write a program that uses a stack to enter **FIVE (5)** numbers; reads and returns the value at the top of the stack. The program then reads and removes every element from the stack. Display the removed numbers in a text box.

(7 marks)

Question 6

- (a) Write a VB program of 1-D array to accept **FIVE (5)** student names and their exam scores. The program should declare user-defined data types (UDT). Then the program should store the data into the UDT and display the name and exam score of the students who are above the total average exam score.

(11 marks)

- (b) Write a program to create a simple linked list with one node.

(5 marks)

- (c) Write a program to indicate the number of currency notes necessary to reach a currency figure given by the user. The only notes allowed in this exercise are RM50, RM5, and RM1. The program will only accept whole number. E.g.: If the input is 1375, the string output will be "27xRM50, 5xRM5". Note that the figures are omitted if it is zero (0), e.g. there is no 0xRM1.

(9 marks)

--THE END--

CSC1113(F)/August 2012/Nor Rahayu binti Ngatirin /101012

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