Final Examination
Semester 2 / Year 2011

COURSE : VISUAL BASIC .NET
COURSE CODE : PROG2024
TIME : 2 1/2 HOURS
DEPARTMENT : COMPUTER SCIENCE
LECTURER : DR. LEE ZHI SAM

Student’s ID : 
Batch No. : 

Notes to candidates:
1) The question paper consists of 6 pages
   ■ Section A: 10 questions (20 marks)
   ■ Section B: 2 questions (40 marks)
   ■ Section C: 1 question (40 marks)
2) Answer all questions.
3) Write your answer for Section A and Section B in answer booklet.
4) Save your answer for question in Section C and submit your answer in softcopy to Southern College E-Learning System.
VISUAL BASIC .NET

SECTION A: MULTIPLE CHOICE QUESTION

( 10 questions  x 2 marks= 20 marks )

Please choose most appropriate answer. State the answer in the answer booklet.

1. You use the ____ method to add items to a list box.
   a. AddList          b. Item
   c. AddItems         d. Add

2. Which of the following will return a random value within the range of 1 to 10?
   a. randomGenerator.Next(0,11) b. randomGenerator.Next(1,10)
   c. randomGenerator.Next(0,10) d. None of above

3. Dim count As Integer = 2
   Do
       MessageBox.Show(“VB.NET”)
       count = count + 2
   Loop While count > 10
   How many times will the MessageBox.Show method in the code above be processed?
   a. 1          b. 4
   c. 5          d. 10

4. Dim sVariable as String = “Hello World”
   sOutput = sVariable.Substring(1,3)
   What is the content of sOutput?
   a. llo          b. Hel
   c. ell          d. None of above

5. Dim fullName As String = “Hello World”
   Which of the following change the fullName to “Helly World”?
   a. fullName = fullName.Change(“o”, “y”) b. Mid(fullName, 5,1) = “y”
   c. fullName = fullName.Replace(“o”, “y”) d. Both b and c

6. Dim IntArray(5) As Integer
   How many elements in IntArray?
   a. 4          b. 5
   c. 6          d. None of above
7. Which of the following is FALSE about procedure?

a. There are two type of procedure which are sub procedure and function procedure.

b. Sub procedure return a value after performing its task, whereas, function procedure does not return a value.

c. You can pass information to both sub and function procedure either by value or by reference.

d. When calling a procedure, the number of arguments listed in the argumentList should agree with the number of parameters listed in the parameterList in the procedure header.

8. Dim num() as Integer = {1, 2, 3, 4, 5, 6, 7, 8}
Which of the following value stored in the num(5).

a. 4  
b. 5  
c. 6  
d. None of above

9. Which of the following statements sort the Hello array in descending order?

a. Sort(Hello)  
b. Hello.Reverse()  
c. Array.Sort(Hello)  
d. Array.Reverse(Hello)

10. If the elements in two or more array are related by their subscripts, the arrays are called as ______ arrays.

a. parallel  
b. coupled  
c. matching  
d. associated
VISUAL BASIC .NET
SECTION B: SHORT QUESTIONS. ANSWER ALL THE QUESTION
( 2 questions x 20 marks = 40 marks )

**Question 1 (20 marks):**

a) Write a statement code that enable the option of Explicit and Strict function. Meanwhile, disable the Infer option. (3 Marks)

b) Write a Private Sub Procedure namely ProTotal. The ProTotal should contain two integer parameter variables passing by references. The two variable are given the name as iNumber and iTotal. (4 marks)

c) Write a calculation statement in ProTotal sub procedure. The calculation statement is as follow:
   iTotal is equal to iNumber multiply iNumber. (2 marks)

d) Write a statement that declares iNum and iSum as integer. (2 marks)

e) Write an assignment statement that assigns the variable iNum to 0 and iSum to 0. (2 marks)

f) Write a statement that assign InputTextNum.text to variable iNum. The assignment statement should include the statement of integer try parse. (3 marks)

g) Write a statement that to call the sub procedure namely ProTotal. The statement should include the argument list of variable iNum and iSum. (2 marks)

h) Display the iSum variable in LabelBox. The iSum variable should be convert to String before display.(2 marks)

**Question 2 (20 marks)**

Consider the following Visual Basic code. Answer the following question based on the code below.

```vbnet
dim state() as string = {"Malaysia", "Singapore", "Thailand", "United America"}
dim phoneNum() as string = {"1-800-999-9998", "1-800-999-8006", "1-800-999-6709"}
phoneNum(1) = phoneNum(1).replace("800", "877")
```

(a) Mid(state(3), 8) = “Kindom”
displayLabel.Text = state(3) (b)

a). What is the latest value for phoneNum(1) after we execute statement (a) (2 Marks)

b) Write the Visual Basic code that uses the Like operator to determine whether any elements in the state array contains a string begin with letter N then end with letter k. If found, then display that element in statusLabel, otherwise, display “Not Found” (10 Marks)
c). What is the output of state(3) in statement (b)? (2 Marks)

d) Write the Visual Basic code to show the string length for state(3). (2 Marks)

e) What is the output for the code Array.Reverse(state) after statement (b) (2 marks)

f). Write a statement to declare an integer type two dimensional array namely Table. The Table array consist of 3 row elements and 2 column elements. (2 marks)

SECTION C: CODING QUESTIONS (40 MARKS)

Question 1:
You need to create an application named as Main that generates ID and score number randomly. Meanwhile the generated ID and score can be added to ListBoxID and ListBoxScore respectively. Finally you can type the ID number the search the score value. Figure 1.0 show the example output of this application. You are advised to use sub procedure/ function and array to answer this question.

Your tasks are as follows:

a) Create user interface as show in figure 1.0. (5 marks)

b) Write the function for ID Generator button and Score Generator button. (10 marks)

The ID generator must follow the format of XXX-YYY where XXX and YYY are both integer random number within the range of 0 to 999. Both numbers are not allowed to repeat where XXX cannot equal to YYY or vice versa. The final output of the ID must in 7 characters which including “-” between XXX and YYY. Each ID should be in String data type and not repeated.

The Score generator should within the range of (0-100) and the variable is in integer format.
c) Write a function to for ADD ID and ADD SCORE button. For the ADD ID button, once clicked, ID will added to IdListBox while once click the ADD SCORE button, score will be added to ScoreListBox. If there is no value in ID text or Score textbox, the system will pop out a message dialog to inform the user “Invalid Input”. Figure 1.1 show the output (5 marks)

d) Write a search function for Search ID button. The system should able to retrieve relevant score value in Label 6 based on the ID number in IDTextBox. You are required to create an public String sArrayID(100) and public integer sArrayScore(100) to hold the value of ID and Score respectively. Figure 1.0 show the example output of this function. (13 marks)
VISUAL BASIC .NET

e) Write a validation function in button Search ID to ensure the number of item in IdListBox and ScoreListBox are the same. If the number of item for both list box are not equivalent, the Label 6 will retrieve the message “Length not match”. Figure 1.2 show the output. (5 marks)

f) Write an exit function to button Exit. (2 marks)