



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2021/2022**

COURSE NAME : DOTNET PROGRAMMING
COURSE CODE : BIE 33103
PROGRAMME CODE : BIP
EXAMINATION DATE : JANUARY / FEBRUARY 2022
DURATION : 3 HOURS
INSTRUCTIONS : 1. ANSWER ALL QUESTIONS
2. THIS FINAL EXAMINATION
IS CONDUCTED ONLINE
AND CLOSE BOOK

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THIS QUESTION PAPER CONSISTS OF SIX (6) PAGES

Q1

Array is a data structure that stores a fixed-size sequential collection of elements with similar data type. Write console C# code segment to produce following statements.

- (a) Using for loop to read 6 integer numbers entered by user and store within int[] numbers. (6 marks)
- (b) Find the largest entered number from Q1(a). (4 marks)
- (c) Find the occurrence of the largest entered number from Q1(a). (4 marks)
- (d) Assume that **Figure Q1** is the output displayed, write a code segment to display the numbers in array (line 8), the largest number (line 9) and the occurrence count of the largest number (line 10). (6 marks)

```
1   Enter 6 integer numbers
2   Enter a number: 2
3   Enter a number: 3
4   Enter a number: 7
5   Enter a number: 2
6   Enter a number: 7
7   Enter a number: 5
8   The array is 2 3 7 2 7 5
9   The largest number is 7
10  The occurrence count of the largest number
```

FIGURE Q1

A red rectangular stamp with the word "TERBUKA" written in bold, uppercase letters. The stamp is slightly tilted and has a distressed, ink-like appearance.

Q2 (a) According to **Figure Q2(a)**, answer all questions.

```
using System;
using System.Threading;

namespace ThreadProgram1
{
    class Program
    {
        public static void ThreadMethod()
        {
            for (int i = 1; i <= 7; i++)
            {
                Console.WriteLine("ThreadProcess: {0}", i);
                Thread.Sleep(1000);
            }
        }
        static void Main(string[] args)
        {
            Thread t = new Thread(new ThreadStart(ThreadMethod));
            t.Start();

            for (int i = 1; i <= 3; i++)
            {
                Console.WriteLine("Main thread: Do some work.");
                Thread.Sleep(1000);
            }
            t.Join();
            Console.ReadKey();
        }
    }
}
```

FIGURE Q2(a)

- (i) Explain what is the `Thread.Join()`. (1 mark)
- (ii) Explain what is the `Thread.Sleep(1000)` does in `Main()` and `ThreadMethod()`. (2 marks)
- (iii) Write an output based on the code program in **Figure Q2(a)**. (5 marks)

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- (b) Explain the process executes in the C# code program as shown in **Figure Q2(b)**.

```
1  using System;
2  using System.Threading;
3
4  namespace ThreadProgram2
5  {
6      class Program
7      {
8          static void Main(string[] args)
9          {
10             bool stopped = false;
11             Thread t = new Thread(new ThreadStart(() =>
12             {
13                 while (!stopped)
14                 {
15                     Console.WriteLine("Running...");
16                     Thread.Sleep(1000);
17                 }
18             }));
19             t.Start();
20             Console.WriteLine("Press any key to exit");
21             Console.ReadKey();
22             stopped = true;
23             t.Join();
24         }
25     }
26 }
```

FIGURE Q2(b)

(6 marks)

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- Q3 (a)** Write a C# code segment to save the information entered in a ‘Sign up now’ form in **Figure Q3**. Assume that a database table in **Table Q3(a)** has been created.

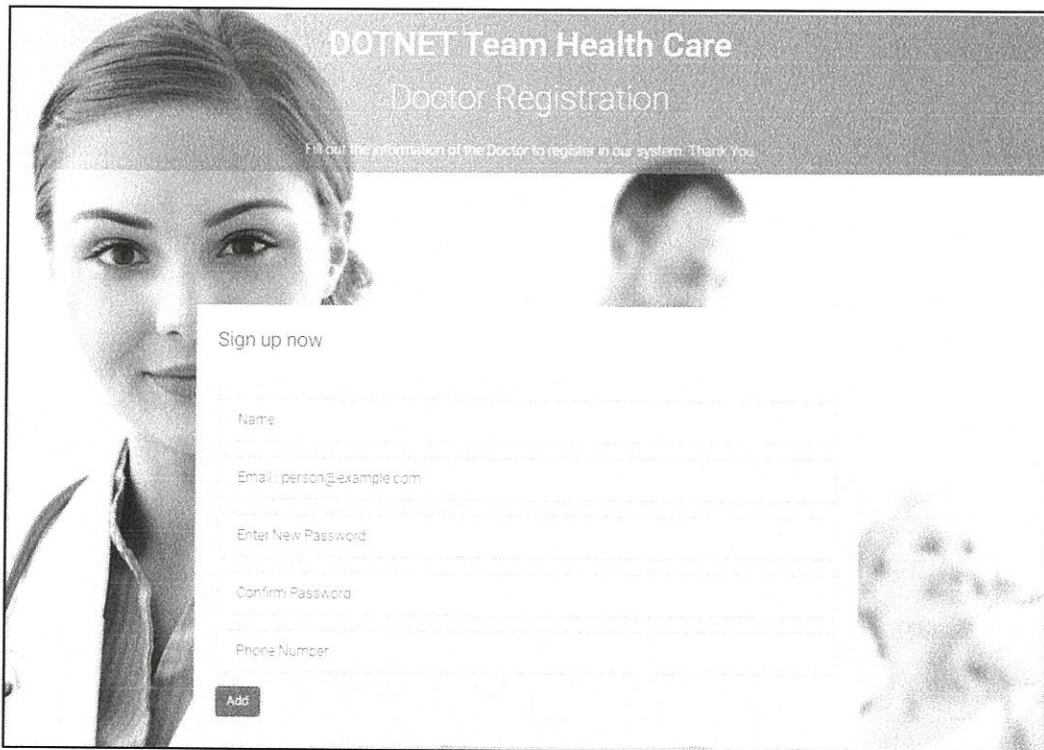


FIGURE Q3

TABLE Q3(a): Register database table

ColumnName	Data Type
name	varchar (50)
email	varchar (50)
password	varchar (50)
phone	varchar (50)

(20 marks)

- (b)** Based on the answer in **Q3(a)**, write C# code segment which will check the availability of email address entered by a user from the database. If the entered email address has already existed in the database, it will show “This Email Already exist, kindly choose a different one!”. Otherwise, it will show “Available email address”. Consider the information in **Table Q3(b)**.

TABLE Q3(b): Control properties

Control	Properties
Textbox	ID = "txtEmail" AutoPostBack = "True" OnTextChanged = "txtEmail_TextChanged"
Label	ID = "lblEmailErrorMsg"

(10 marks)

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Q4

By using a table element, write ASP code segment within `<form>` `</form>` to produce **Figure Q4**. Consider the following information:

- List for candidates are Ahmad, Ali, Eugene and Siva.
- List for houses are Blue, Red, Green and Yellow.
- Use `ValidationExpression="\w+([-+.']\w+)*@\w+([-.\w+)*\.\w+([-.\w+)*"` to validate email address pattern.

PRESIDENT ELECTION 2021	
President Election Form: Choose your president	
Candidate:	<input type="text" value="Ahmad"/> Please choose a candidate!
House:	<input type="radio"/> Blue
	<input type="radio"/> Red
	<input type="radio"/> Green
	<input type="radio"/> Yellow
Class:	<input type="text"/> Enter your class (5-10)
Phone Number:	<input type="text"/> Enter phone number
Email:	<input type="text"/> Enter Email Invalid Email
<input type="button" value="Submit"/>	

FIGURE Q4

(15 marks)

- END OF QUESTIONS -

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