



SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

Higher National Diploma in Information Technology

First year, Year, First Semester Examination – 2023

HNDIT1012 : Visual Application Programming

Instructions for candidates:

Answer five questions only.

All questions carry equal marks.

No. of questions : 6

No. of pages : 4

Time : 3 hours

Question 01

[20 Marks]

- i. Define the following terms (6 marks)
 - a. Computer Program
 - b. Source Code
 - c. EXE File
- ii. Give three examples for programming languages (3 marks)
- iii. What is the difference between Compiler and Interpreter (4 marks)
- iv. What does IDE stands for? (2 marks)
- v. Define the term CLR (2 marks)
- vi. State whether the following statements are True or False (3 marks)
 - a. C# source code file ends with .cs extension
 - b. In C# you have to declare a variable in the program before you use it to store data
 - c. You can declare multiple variables of different data types within one declaration

Question 02

[20 Marks]

- i. Mentions the components you can use in a GUI to perform following tasks (6 marks)
 - a. For displaying static text to user
 - b. For selecting multiple options independently.
 - c. For triggering actions at specified intervals
- ii. Following interface has been created to collect student preferences for SLIATE courses.

- State four components that are needed to create the above GUI (04 marks)
- Write the code for clear button to clear all text boxes (03 marks)
- Write the code for the exit button (03 marks)
- Write the code segment to obtain the gender choice in to a variable (04 marks)

Question 03

[20 Marks]

- Write the syntax of if-else statement (2 marks)
- What are the limitations of switch statement when compared with if-else statement? (4 marks)
- The menu below shows the following drinks with their corresponding prices:

Espresso:	Rs. 250 per cup
Latte:	Rs.350 per cup
Cappuccino:	Rs.300 per cup
Americano:	Rs 275 per cup
Mocha:	Rs. 400 per cup

Using switch statement write the code for the txtQuantity_TextChanged() event to calculate the sub total (8 marks)

- iv. Write a C# program to find the maximum number among three numbers entered by the user. Assume the numbers are stored in three variables: num1, num2, and num3. Use appropriate logic to determine the maximum number and display it to the user. (6 marks)

Question 04

int counter = 0;
while (true) {
Console.WriteLine (i);
} [20 Marks]

- State two differences between while loop and Do while loop (4 marks)
- What is an infinite loop? (2 marks)
- Write the output of following programs (9 marks)

a.

```
for (int i=0;i<=30;i+=5){
    Console.WriteLine (i);
}
```

b.

```
int counter = 0;

do
{
    Console.WriteLine("Counter: " + counter);
    counter++;

    if (counter == 5)
    {
        break;
    }

} while (true);
```

c.

```
int i=10;
while (i<10){
    Console.WriteLine (i);
    i++;
}
```

- iv. Write a program to display summation of even numbers between 0 and 100 (5 marks)

Question 05**[20 Marks]**

- i. What is an array (2 marks)
- ii. The following array "vowels" store vowels of English alphabet

a	e	i	o
---	---	---	---

- a. What is the length of the array? (2 marks)
 - b. How to get the letter 'i' (2 marks)
 - c. What is the index of the letter 'e' (2 marks)
 - d. How to replace letter 'o' with 'u' (2 marks)
- iii. "Dataset class is a disconnected architecture in .NET Framework" Explain (4 marks)
- iv. State whether the following statements are **True** or **False** with related to datasets in C# (6 marks)
 - a. Dataset enables to store data from multiple tables and multiple sources
 - b. We can create a relationship between the tables in a DataSet
 - c. The first record in a dataset has a position property of one

Question 06**[20 Marks]**

- i. Mention three methods available in the Graphic class (3 marks)
- ii. The following code snippet is used to open a file dialog box

```
(1) OpenFileDialog fileDialog = new OpenFileDialog();  
(2) fileDialog.Filter = "txt files (*.txt)|*.txt|All files (*.*)|*.*";  
(3) fileDialog.FilterIndex = 0;  
(4) fileDialog.InitialDirectory = @"C:\asp c#";  
(5) fileDialog.ShowDialog();  
(6) if (fileDialog.ShowDialog() == DialogResult.OK){  
(7)   txtFile.Text = fileDialog.FileName;  
(8)   string readBuffer =  
System.IO.File.ReadAllText(fileDialog.FileName);  
}
```

- a. By default which type of files will be displayed in the dialog box? (2 marks)
 - b. What is the purpose of @ sign in line 4 (3 marks)
 - c. In this code snippet ReadAllText method is used to read the content of the text file.
What are the other two methods we can use to read content of a file? (4 marks)
- iii. List two types of comments used in C# (2 marks)
- iv. How can you increase the readability of a program? (6 marks)