**LAB 1 : INTRODUCTION TO DATA STRUCTURE AND ALGORITHMS (pt.2)**

1. Write a program to imitate the calculator. Use *switch case* statement.

Sample output :

|  |
| --- |
| Enter an operator (+,-,\*,/) : +  Enter two operands : 10 20  10 + 20 = 30 |

1. Write a program to produce the following pattern. Use nested loops.

Sample output:

|  |
| --- |
| 1  1 2  1 2 3  1 2 3 4  1 2 3 4 5 |

1. A class of five students took a quiz. Write a program that will prompt the user to enter five student’s marks and calculate the average quiz marks. Use while loops to prompt all the five marks.

Sample output:

Enter mark: 56

Enter mark: 88

Enter mark: 95

Enter mark: 45

Enter mark: 78

Mark average is: 72

1. Prompt user to key in five integer values and store the values in an array. Pass the array to a function name *Sum( )* that will calculate and display the sum of all the elements.

Sample output:

Enter five numbers and the program will calculate sum of the numbers.

Enter number 1: 1

Enter number 2: 6  
Enter number 3: 4

Enter number 4: 3

Enter number 5: 3

You have entered : 1, 6, 4, 3, 3

Sum of the numbers entered is : 17

**Submission question**

Create a *struct* called *employee*. Members of the struct will be *first\_name* type *string*, *last\_name* type *string*, *emp\_num* type *string*, and *age* type int. Create an instance of the structure called *record* to access the members of type *employee*.

Sample output:

First name : Megan

Last name : Bright

Employee number : x001

Age : 23

Hello Megan Bright

Your employee number x001

You are 23 years old