

Department of Electrical Engineering
Mid – Term Assignment Spring 2020
Date: 25/06/2020

Course Details

Course Title: Programming Fundamentals **Module:** 02
Instructor: waqas sir **Total Marks:** 50

Student Details

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Q1.	(a)	Write Python code that asks the user for two integer values, it must then add the largest number times the smallest. The output should be in the following manner. <p style="text-align: center;">Enter Number 1 : 5 Enter Number 2 : 3 Answer = 5+5+5 = 120</p>	Marks 5 CLO 1
	(b)	You are asked to make a times table program in Python where a user will enter starting value, ending value and the value to find the times table for. For example <p style="text-align: center;">Input Starting Value : 2 Input Ending Value : 4 Input Times Table : 4 4 x 2 = 8 4 x 3 = 12 4 x 4 = 16</p>	Marks 5 CLO 1
Q2.	(a)	Write programs in Python to make the following shapes using LOOPS, a) ***** ***** ***** b) * ** *** **** *****	Marks 14 CLO 1
	(a)	Write a program in Python where a user is asked for 10 numbers, each number must be shown as ODD or EVEN respectively.	Marks 3 CLO 1
Q3.	(b)	You have the following python code, draw the flow chart of the whole code <pre> nterms = int(input("How many terms? ")) n1, n2 = 0, 1 count = 0 if nterms <= 0: print("Please enter a positive integer") elif nterms == 1: print("Fibonacci sequence upto",nterms,":") </pre>	Marks 3

	<pre> print(n1) else: print("Fibonacci sequence:") while count < nterms: print(n1) nth = n1 + n2 n1 = n2 n2 = nth count += 1 </pre>	
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Q1 (a) Write Python code that asks the user for two integer values, it must then add the largest number times the smallest. The output should be in the following manner.

Enter Number 1 : 5

Enter Number 2 : 3

Answer = 5+5+5 = 120

```

public class my class
{
public static void main(string args[])
{
int x=7;
int y=4;
int sum=0, n=0, n1=0, I;
if |(y>x) {
n=x;
n1=y; }
else {
n=y;
n1=x; }
for (i=0;i<;i++)
{Sum=sum+n;1}
System.out.println(sum is = “ +sum}

```

Q1 (b) You are asked to make a times table program in Python where a user will enter starting value, ending value and the value to find the times table for. For example

Input Starting Value : 2

Input Ending Value : 4

Input Times Table : 4

4 x 2 = 8

4 x 3 = 12

4 x 4 = 16

Answer (b)

Multiplication table (from 1 to 10) in Python

```
num = 12
```

```
# To take input from the user
```

```
# num = int(input("Display multiplication table of? "))
```

```
# Iterate 10 times from i = 1 to 10
```

```
for i in range(1, 11):
```

```
    print(num, 'x', i, '=', num*i)
```

Output

12 x 1 = 12

12 x 2 = 24

12 x 3 = 36

12 x 4 = 48

12 x 5 = 60

12 x 6 = 72

12 x 7 = 84

12 x 8 = 96

12 x 9 = 108

12 x 10 = 120

Q2 (a) Write programs in Python to make the following shapes using LOOPS,

(a)

```
*****
```

```
*****
```

```
*****
```

```
rows = 3
```

```
columns = 6
```

```
for i in range (rows) :
```

```
    for j in range (columns) :
```

```
        print('*', end = " ")
```

```
    print()
```

```
    num=5
```

```
    for i in range (0,num) :
```

```
        print(end=" ")
```

```
        for j in range (0,i+1) :
```

```
            print( )
```

Q2 (b) Write programs in Python to make the following shapes using LOOPS,

Answer (b)

Python 3.x code to demonstrate star pattern

Function to demonstrate printing pattern triangle

def triangle(n):

 # number of spaces

 k = 2*n - 2

 # outer loop to handle number of rows

 for i in range(0, n):

 # inner loop to handle number spaces

 # values changing acc. to requirement

 for j in range(0, k):

 print(end=" ")

 # decrementing k after each loop

 k = k - 1

 # inner loop to handle number of columns

 # values changing acc. to outer loop

 for j in range(0, i+1):

 # printing stars

 print("* ", end="")

 # ending line after each row

 print("\n")

Driver Code

n = 5

triangle(n)

Output

```
*
* *
* * *
* * * *
* * * * *
```

Q3 (a) Write a program in Python where a user is asked for 10 numbers, each number must be shown as ODD or EVEN respectively.

```
numbers = (1, 2, 3, 4, 5, 6, 7, 8, 9)

count_odd = 0

count_even = 0

for x in numbers:

    if not x % 2:

        count_even+=1

    else:

        count_odd+=1

print ("Number of even numbers :",count_even)

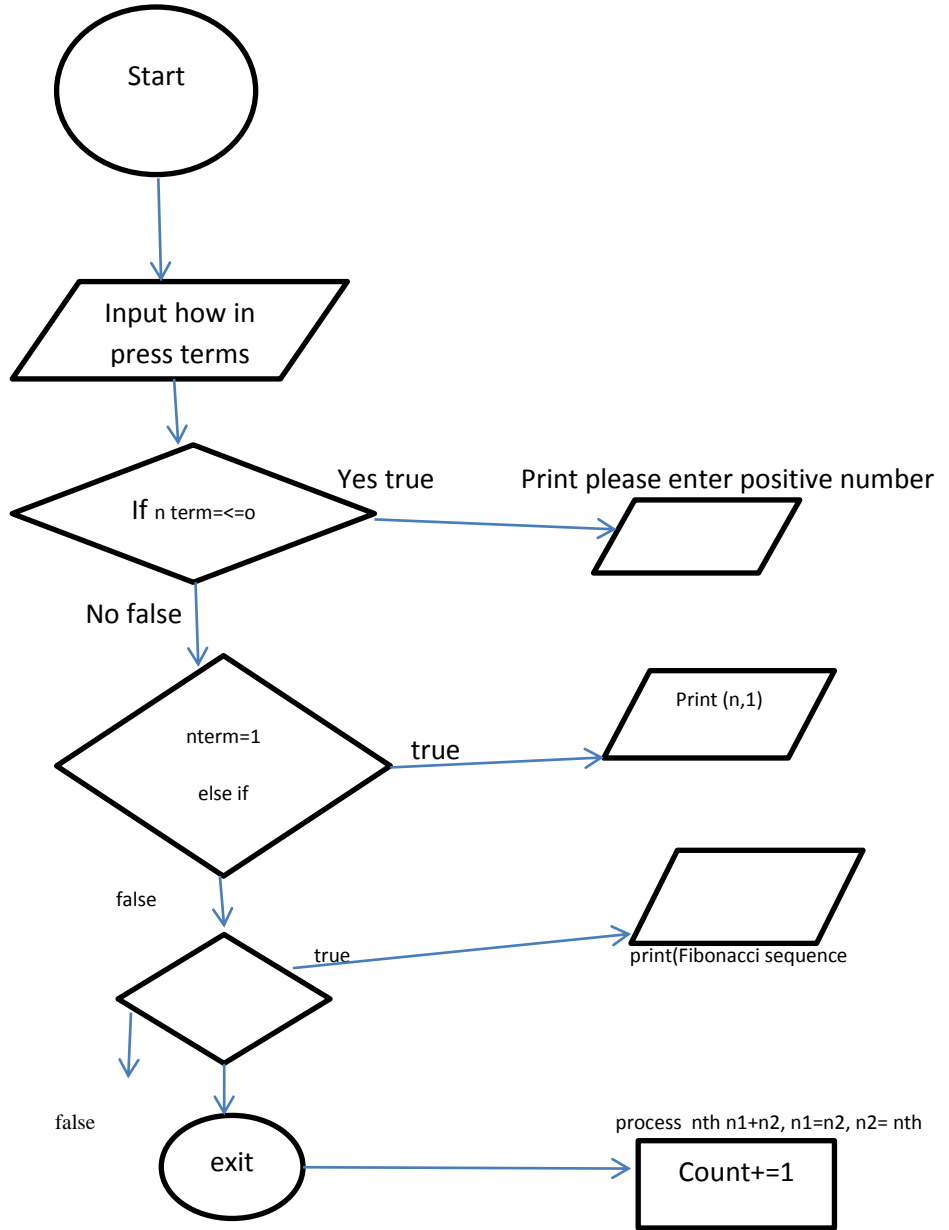
Print ("Number of odd numbers :",count_odd)
```

Output

Number of even numbers : 4

Number of odd numbers : 5

Q3 (b) flowchart



p