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

Course Details

Course Title: Programming Fundamentals   **Module:** 02

Instructor: Sir Muhammad Waqas   **Total Marks:** 50

Student Details

Name: Muhammad Salman Nasir   **Student ID:** 16664

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
			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
		    Input Starting Value : 2
		    Input Ending Value : 4
		    Input Times Table : 4
		    4 x 2 = 8
		    4 x 3 = 12
		    4 x 4 = 16
			Marks 5
			CLO 1

Q2.	(a)	Write programs in Python to make the following shapes using LOOPS,
		
		a) ******
		          ******
		          ******
		
		b) *
		       **
		       ***
		       ****
		       *****
			Marks 14
			CLO 1

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.	Marks 3 CLO 1

	(b)	You have the following python code, draw the flow chart of the whole code
		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,":")
		  print(n1)
		else:
		  print("Fibonacci sequence:")
		  while count < nterms:
		    print(n1)
		    nth = n1 + n2
		    n1 = n2
		    n2 = nth
		    count += 1
			Marks 3
			CLO 1

Answer Sheet

QNO1 :-

Port A :-

Write python code that asks the user For two integer, it must then add the largest number times. the smallest.

Solution:-

```
a = int [input ("Enter Frist Number="))

b = Int [input ["Enter 2nd Number="))
Sum = 0
IF a)b:
    For x in range (b):
        Sum = a + Sum
    point ("Answer=", sum)
else:
    For x in range (a):
        Sum = b + Sum
    Point ("Answer =" sum)
```
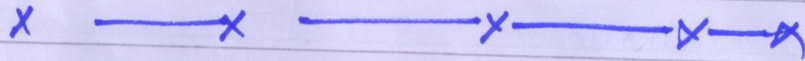
Out put:

    Enter Frist Number = 3

    Enter and Number = 5

      Aswe

      Answer = 15

Qno1:

Part b:

The Program For a time table in ~~Py~~ Python where a user will enter starting value, ending value, ending value and the value to find The time table For- are bellows:-

```
a = int (input ("Enter Frist number = "))

b = int (input ("Enter secound number = "))

c = int (input (" Enter number which You want to Find The table = "))

For i in range (a, b+1):
    print (c, "x", i, '=', c*i)
```

Out put :

First number a = 3
secound number b = 5
Table we want c = 5

$$5 \times 3 = 15$$
$$5 \times 4 = 20$$
$$5 \times 5 = 25$$

x —— x —— x —— x —— x —— x

Q-No 2:-
@ port (a):

Write program in python
to make the following shapes
using Loops:

(2) * * * * * *
     * * * * * *
     * * * * * *

Solution:-

Using For Loop

rows = 3
columns = 6

 # Solution:-

usigin using For loop

```
rows = 3
columns = 6

For i in range (rows):
    For j in range (colums):
        print ('*', end ='')
    print ()
```

Out put :

* * * * * *
* * * * * *
* * * * * *

x —— x —————— y —— x —— x —— x

QNo2:-

    part b:-

    # Q6:

Solution:

    # Using For Loop

    row = 5
For i in range (0, num):
    For j in range (0, num-j-1):
        Print (end = " ")
    For j in range (0, i+1):
        print ("*", end = " ")
    print ( )

Out Put:

X —— X ———— X——— X — X

If $u =$
If $u = \% 2 = -$

Q No 3:-

(2) Write a Program in Python where a user is asked For 10 number & each number must be show as Odd or even.

Solution:

The sequi

```
For i in range (0, 10):
    num = Int (input ("Enter
               Number = "))
    If num >= 1:
        For i in range (1, num):
            IF (num % 2) == 0:
                Print (num, "Is Even
                           Number")
                break
            else:
                Print (num, "is odd
                            Number")
```
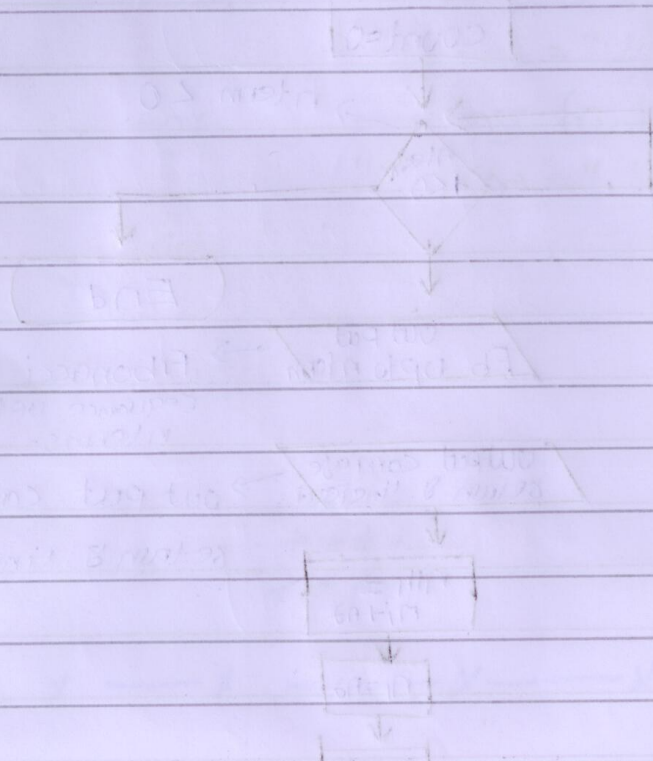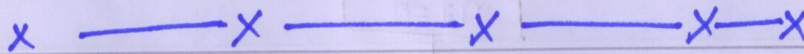
Out put :-

Enter Number = 2

2 is EVEN number

Enter Number = 5

5 is an odd Number

The program run upto
Ten time - and Take in Put
From user 10 times-

X ———→X ———→X ———→X—X

Part B:-

Flow Chart:-

Start

↓

nterms=0

↓

$n_1 = 1$

↓

$n_2 = 0$

↓

count=0

↓

→ nterm < 0

nterm < 0

→ End

↓

Output
Fb upto nterm → Fibonacci
sequence upto
nterms.

Output carriage
return & linefeed → output carriage
return & linefeed.

↓

nth =
$n_1 + n_2$

↓

$n_1 = n_2$

↓

$n_2 = nth$

↓

count
+= 1