Lab: Basics of Python:

Input Demo:

Input() function is To read input from keyboard

Demo 1:

a=input ("message for input……like enter a number")
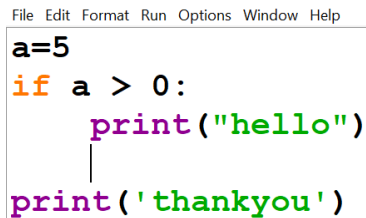
```
>>> a=input('enter value')
enter value 20
>>> a
20
```

If Else Demo Syntax

If <condition>:

<gap of 4 spaces> statements

Demo 2:

```
File  Edit  Format  Run  Options  Window  Help
a=5
if a > 0:
    print("hello")

print('thankyou')
```

Demo 3:

```
a=20
b=30

if a > b:
    print(a, " is greater than ",b)
else:
    print(b, " is greater than ",a)
```

Demo 4:

We use "and " , "or" to join two conditions see examples below:

```
b=3
a=-5
if a > 0 and a < b :
    print("hello")
    print(a)
```

Demo 5:

Check two conditions in if statement:

```
b=3
a=-5
if a > 0 and a < b :
    print("hello")
elif a <0 or a==b:
    print("hi")
```

We can also join two conditions using or:

Demo 6:

Looping in Python:

While Loop Demo: the initial value of b=3

```
while b < 5:
    print("b is smaller")
    b=b+1
```

```
b is smaller
b is smaller
```

Write following Programs:

1: Write a python program to input two numbers and if their sum is equal to 10 and their multiplication is less than 20, print the text string "incorrect."

2: Write a python program for finding area and circumference of a circle.

3: Write a python program for calculating simple and compound interest.

4: Write a python program to convert temperature from degree centigrade to Fahrenheit.

5: Write a python program to calculate average of three numbers.

6: Write a python program to calculate sum of 6 subjects and find percentage obtained.

7: Write a python program to print swapping of two numbers without using third variable.

8: Write a python program to find gross salary (GS).

    [Given: DA = (10*BS)/100, TA = (12*BS)/100,

        GS = BS+TA+DA   ]

9: Write a python program to find greatest in 3 numbers.

10: Write a python program to find whether a given no. is even or odd.

11: If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.

12: The length & breadth of a rectangle and radius of a circle are input through the keyboard. Write an algorithm to calculate the area & perimeter of the rectangle, and the area & circumference of the circle.

13: A cashier has currency notes of denominations 10, 50 and 100. If the amount to be withdrawn is input through the keyboard in tens, hundreds or thousands, find the total number of currency notes of each denomination the cashier will have to give to the withdrawer.

14: If the total selling price of 15 items and the total profit earned on them is input through the keyboard, write a python program to find the cost price of one item.

15: If a five-digit number is input through the keyboard, write a python program to print a new number by adding one to each of it digits. For example if the number that is input is 12391 then the output should be displayed as 23402. [If digit is 9 it should be converted into 0].

16. Write a program that asks the user to input 10 integers, and then prints the largest odd number that was entered. If no odd number was entered, it should print a message to that effect.

17. Write a program to prints the integer cube root, if it exists, of an integer. If the input is not a perfect cube, it prints a message "the number is not perfect cube" otherwise it prints "the number is perfect cube".

18. Write a program to print all even numbers between 1 to 100.

19. Write a program to print all odd number between 1 to 100.

20. Write a program to find HCF (GCD) of two numbers.

21. Write a program to find LCM of two numbers.