Task 1: Running Python script and various expression in an Interactive interpreter key Terms covered: Introduction to python, commands, script.

1.1 Karna spent ₹ 150 on books, ₹ 220 on groceries, and ₹ 90 on transport. Help him groceries, and transport.

AIM:- To write a python program that calculates the total amount spent by karan on books, groceries, and transport.

Algorithm:-

1. Start the program.
2. Accept the amount spent on books, groceries, and transport.
3. Calculate the total expenses by summing all three amounts.
4. Display the total amount spent.
5. End the program.

✗ **Python program:-**

```
# Program to calculate total expenses of karan
# Step1 :- Assign expenses
    books = 150
    groceries = 220
    transport = 90
# Step 2 : calculate total
total - expense = books + groceries + transport
# Step 3: Display the result
Print (" total expenses incurred by karan :₹", total_expen
```

~~Sample~~ ~~output~~:

Result:- Hence the python program that calculate this is sucessfully input and output.

1.2 Write a BMI Calculator. Ask the user for weight (kg) and height (m), then calculate and display their BMI.

AIM :- To write a Python Programming that calculates and displays the Body mass Index (BMI) of a Person using their weight (in kilogram) and height (in meters).

Algorithm :-

1. Start the Program.
2. Prompt the user to Input their weight in kilograms
3. Prompt the user to Input their height in meters.
4. Calculate BMI using the formula.

$$BMI = \frac{weight}{height^2}$$

5. Display the Calculate BMI
6. End the Program.

RESULT :- Hence the Python Program that calculates to display is called sucesfully input and output

Python Program:-

BMI Calculator

Step 1:- Get Input from the user

```
weight = float (Input ("Enter your weight in kilograms :"))
height = float (Input ("Enter your height in meters :"))
```

Step 2:- Calculate BMI

```
bmi = weight / (height ** 2)
```

Step 3:- Display result

```
Print (" your Body mass Index (BMI) is :", round (bmi, 2))
```
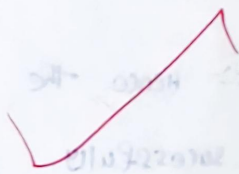
sample Input:

Enter your weight in kilograms :70
Enter your height in meters :1.75

sample output

your body mass Index (BMI) is :22.86

Python Program :

Import math

Step 1:- Assign side lengths

    a = 8
    b = 6
    c = 4

Step 2:- Calculate semi-Perimeter

    s = (a+b+c)/2

Step 3: Apply Heron's formula

    area = math.sqrt(s* (s-a)* (s-b)* (s-c))

Step 4: Display result

Print (" The area of the triangle is =" round (area, 2)," squ

Sample Input :

(Values are already assigned)

    Side a = 8cm
    Side b = 6 cm
    Side c = 4 cm

Sample output :

The area of the triangle is : 11.62 square cm.

1.3 Laya wants to calculate the area of a scalence triangle with sides of length 8 cm, 6 cm, and 4 cm. Help her write a Python program that computes the area using Heron's formula.

AIM:- To write a Python Program to find the area of a triangle when the lengths of all three sides are given, using Heron's formula.

Algorithm:-

1. Start the Program

2. Accept or assign the lengths of the three sides : a, b and c

3. Calculate the semi-perimeter.

$$S = \frac{a+b+c}{2}$$

4. Use Heron's formula to calculate the area.

$$Area = \sqrt{S(S-a)(S-b)(S-c)}$$

5. Display the area of the triangle.

6. End the Program.

VEL TECH - CSE	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	
SIGN WITH DATE	15

Result:- Hence, the Python Program to find the area of a triangle is called successfully is input and outfud.