Task no :- 1

Date : 5/08/25

Runniq python script and various expressions in an interactive interpreter Key terms covered Introduction to python, commands, script

11. karan Spent ₹150 on books, ₹220 on groceries, and ₹90 On transport Help him calculate the total expenses

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

Algorithm :-

Start the program

Accept the amount spent on books, groceries & transport.

Calculate the total expensis by summing all three amounts.

Display the total amount spent

End the program.

Result :- Thus, total amount spent by karan on books, groceries, and transport are proved.

Python program:

```
# Program to calculate total expenses of karan
# Step 1: 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_expense
```

Sample Input:

Books = ₹ 150

Groceries = ₹ 220

Transport = ₹ 90

Sample output:

Total expenses incurred by karan: ₹ 460

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 = Calculator 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.

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

Aim:- To write a python program that calculates and displays the Body mass index (BMI) of a person using their weight and height.

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 calculated BMI

6) End the program.

Result:- Thus, the body mass index of a person allowing their weight (kg) & height (m) are proved

Python program:-

```python
import math

#Step 1: Assign side lengths
a = 8
b = 6
c = 4

#Step 2: Calculate Semi-perimeter
a = (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, 27. "square cm")
```

Sample Input:-

side a = 8 cm

side b = 6 cm

side c = 4 cm

Sample Output:-

The area of the triangle is : 11.62839904 cm

13 Laya wants to calculate the area of a scalene triangle with sides of length 8 cm, 6 cm and 4 cm.

Aim:- To write a python program to find the area of a triangle when the lengths of all the three sides are given, using Heron's Formula.

Algorithm:-

1) Start the program

2) Accept or assaign the lengths of 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

Result:- Thus, the area of triangle when the length of all the all three scales are proved by Heron's therom formula.