

### Task-1

6/8/25

1.1 : Karan spent 150/- on books, 200/- on groceries and 90/- on transport help calculate the total expense

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.

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



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  
printf ("Total expenses incurred by Karan :  
₹", total Expenses)

Sample Input :-

(Values are already assigned in program - no prompt input)

Books = ₹ 150

groceries = ₹ 220

Transport = ₹ 90

Sample output :-

Total expenses incurred by Karan : ₹ 460

Date: 6/8/25

1.2. Write a BMI calculator. Ask the user for weight (kg) and height (cm). Then calculate and display their BMI.

Sim: To write a python program that calculator and displays the body mass Index (BMI) of a person using their weight (in kg) and height (in m)

Algorithm:

1. Start the program
2. Prompt the user input their weight in kilograms.
3. Prompt user to input their height in meter
4. Calculate BMI using the formula.  
$$\text{BMI} = \frac{\text{weight}}{\text{height}^2}$$
5. Display the calculated BMI
6. End the program.

Result: Thus, the Body mass Index of a person using their weight (kg) & height (m) are proved.

python program:

# BMI calculator

# step1 : Get input from the user

weight = float (input("Enter your weight in Kg:"))

height = float (input("Enter your height in m:"))

\* Step2 : calculate BMI

bmi = weight / (height \* height)

\* Step3 : 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

Date: 6/8/28

Ques: Try to calculate the area of scalene triangle with sides of length 8cm, 6cm, 4cm. Help write a python using Heron's formula.

Ques: To write a python program to find the area of triangle when the length of all three sides are given using Heron's formula.

Algorithm:

1. Start the program

2. Accept or assign the lengths of three sides:

a, b, & c

3. Calculate the semi-perimeter

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

4. Use Heron's formula to calculate the area

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

5. Display the area of triangle

6. End the program.

SL TECH - C.S	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	15
GN WITH DATE	15

Result: Thus, The area of triangle when the lengths of all three sides are proved by Heron's formula.

Python program:

```
import math  
# step1 : 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

$$\text{area} = \text{math.sqrt}(s * (s-a) * (s-b) * (s-c))$$

# Step 4: Display result

print("The area of triangle is:", round(area, 2),  
"square(m)")

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.