

Task No: 1.1

Date: 6-8-25

Aim:- To write a python program that calculates the total 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:- The program was successfully executed and the total amount spent by karan was calculated and displayed as expected.

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)

Input :

Books = ₹ 150

groceries = ₹ 220

transport = ₹ 90

Output :-

Total expenses incurred by karan = ₹ 460

Task No:- 1.2

Date : 6-8-25

Aim:- To write a python program that calculates and display the body mass index (BMI) of a person using their weight (in kilograms) 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 the BMI using the formula.
$$\text{BMI} = \frac{\text{weight}}{\text{height}}$$
5. Display the calculated BMI.
6. End the program.

Result:-

The program was successfully executed and the total body mass index of a person was calculated and displayed as expected.

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))
```

Input:

Enter your weight in kilograms : 70

Enter your height in meters : 1.75

Output:

Your Body Mass Index (BMI) is : 22.86

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

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

Step 4: Display result

```
print("The area of the triangle is:", round(area, 2), "square cm")
```

Input:

Side a = 8 cm

Side b = 6 cm

Side c = 4 cm

Output:

The area of the triangle: 11.62 sq cm

Task No : 1.3

Date : 6-8-25

Aim: To write python program to find the area of 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
4. Use heron's formula to calculate the area:
$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$
5. Display the area of the triangle
6. End the program

VEL TECH - CSE	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	15
SIGN WITH DATE	5/18

Result:-

The program was successfully executed and the area of the triangle using Heron's formula was calculated and displayed as expected.