4/8/25

Task: 1. Running python script and various expressions in an interactive interperpreter Key Terms Covered: Introduction to Python, Commands, Script. Tags - Easy,

1.1 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 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 amount spent.
5. End the program.

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

Result: Hence the Python Program to find that to Calculate this is successfully input & output

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

(values are already assigned in the program - no manual input required)

Books = ₹150

Groceries = ₹220

Transport = ₹90

Sample output.

Total expenses incurred by Karan: ₹460

11/8/25

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 program that calculates and displays the Body mass Index (BMI) of a person using their weight (in kilograms) and height (in meters).

Algorithm:-

1. Start the program that calculates
2. Prompt the user to input their weight in kilogram.
3. Prompt the user to input their height in meters.
4. Calculate BMI using formula.

$$BMI = \frac{Weight}{(Height)^2}$$

5. Display the calculated BMI.
6. End the program.

Result: Hence, the python that calculate to display is called successfully input 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 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),"square cm")
```

Sample Input:

(values are already assigned)

Side a = 8cm

Side b = 6cm

side c = 4cm

Sample output:

The area of the triangle is: 11.62 square cm.

3 Laya wants to calculate the area of scalene triangle with sides of lengths 8cm, 6cm, and 4cm. 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	15/1/5

Result: Hence, the Python program to find the area of a triangle is successfully implemented output & ces input.