1. **Write a python code to generate Personalized Greeting.**

name = input("Enter your name: ")

greeting = f"Hello, {name}! Hope you're having a wonderful day!"

print(greeting)

**2. Write a python program to calculate areas of any geometric figures like circle, rectangle and triangle.**

# Area of a Circle

radius = float(input("Enter the radius of the circle: "))

circle\_area = 3.14159 \* radius \* radius

print(f"Area of the circle is: {circle\_area}")

# Area of a Rectangle

length = float(input("Enter the length of the rectangle: "))

width = float(input("Enter the width of the rectangle: "))

rectangle\_area = length \* width

print(f"Area of the rectangle is: {rectangle\_area}")

# Area of a Triangle

base = float(input("Enter the base of the triangle: "))

height = float(input("Enter the height of the triangle: "))

triangle\_area = 0.5 \* base \* height

print(f"Area of the triangle is: {triangle\_area}")

**3.Develop any converter such as Rupees to dollar, temperature convertor, inch to feet etc.**

# Rupees to Dollars Converter

rupees = float(input("Enter amount in Rupees: "))

dollar\_conversion\_rate = 0.012

# Example conversion rate, 1 Rupee = 0.012 Dollars

dollars = rupees \* dollar\_conversion\_rate

print(f"{rupees} Rupees is equal to {dollars} Dollars")

# Celsius to Fahrenheit Converter

celsius = float(input("Enter temperature in Celsius: "))

fahrenheit = (celsius \* 9/5) + 32

print(f"{celsius}°C is equal to {fahrenheit}°F")

# Inches to Feet Converter

inches = float(input("Enter length in Inches: "))

feet = inches / 12

print(f"{inches} inches is equal to {feet} feet")

**4. Write a Python program to calculate the gross salary of an employee. The program should prompt the user for the basic salary (BS) and then compute the dearness allowance (DA) as 70% of BS, the travel allowance (TA) as 30% of BS, and the house rent allowance (HRA) as 10% of BS. Finally, it should calculate the gross salary as the sum of BS, DA, TA, and HRA and display the result.**

# Prompt the user for the basic salary (BS)

basic\_salary = float(input("Enter the basic salary (BS): "))

# Calculate the allowances

da = 0.70 \* basic\_salary # Dearness Allowance (DA) as 70% of BS

ta = 0.30 \* basic\_salary # Travel Allowance (TA) as 30% of BS

hra = 0.10 \* basic\_salary # House Rent Allowance (HRA) as 10% of BS

# Calculate the gross salary

gross\_salary = basic\_salary + da + ta + hra

# Display the result

print(f"Basic Salary (BS): {basic\_salary}")

print(f"Dearness Allowance (DA): {da}")

print(f"Travel Allowance (TA): {ta}")

print(f"House Rent Allowance (HRA): {hra}")

print(f"Gross Salary: {gross\_salary}")

**5. Write a Python program to calculate the simple interest based on user input. The program should prompt the user to enter the principal amount, the rate of interest, and the time period in years. It should then compute the simple interest using the formula Simple Interest=(Principal×Rate×Time) /100 and display the result.**

# Prompt the user to enter the principal amount

principal = float(input("Enter the principal amount: "))

# Prompt the user to enter the rate of interest

rate\_of\_interest = float(input("Enter the rate of interest (as a percentage): "))

# Prompt the user to enter the time period in years

time\_period = float(input("Enter the time period in years: "))

# Calculate the simple interest

simple\_interest = (principal \* rate\_of\_interest \* time\_period) / 100

# Display the result

print(f"The simple interest is: {simple\_interest}")

**6. Write a Python program to explore basic arithmetic operations. The program should prompt the user to enter two numbers and then perform addition, subtraction, multiplication, division, and modulus operations on those numbers. The results of each operation should be displayed to the user.**

# Prompt the user to enter the first number

num1 = float(input("Enter the first number: "))

# Prompt the user to enter the second number

num2 = float(input("Enter the second number: "))

# Perform addition

addition = num1 + num2

print(f"The result of addition is: {addition}")

# Perform subtraction

subtraction = num1 - num2

print(f"The result of subtraction is: {subtraction}")

# Perform multiplication

multiplication = num1 \* num2

print(f"The result of multiplication is: {multiplication}")

# Perform division

if num2 != 0:

division = num1 / num2

print(f"The result of division is: {division}")

else:

print("Division by zero is not allowed.")

# Perform modulus

if num2 != 0:

modulus = num1 % num2

print(f"The result of modulus is: {modulus}")

else:

print("Modulus by zero is not allowed.")