**ADITYA AMIN**

**ASSIGN : 02**

1. Write a Python program to convert kilometers to miles?

# Conversion factor for kilometers to miles

CONVERSION\_FACTOR = 0.621371

# Get user input for kilometers

kilometers = float(input("Enter kilometers: "))

# Convert kilometers to miles

miles = kilometers \* CONVERSION\_FACTOR

# Display the result

print(f"{kilometers} kilometers is equal to {miles} miles.")

1. Write a Python program to convert Celsius to Fahrenheit?

# Get user input for Celsius

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

# Convert Celsius to Fahrenheit

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

# Display the result

print(f"{celsius} degrees Celsius is equal to {fahrenheit} degrees Fahrenheit.")

1. Write a Python program to display calendar?

import calendar

# Get user input for month and year

year = int(input("Enter year: "))

month = int(input("Enter month (1-12): "))

# Generate calendar for specified month and year

cal = calendar.monthcalendar(year, month)

# Display the calendar

print(calendar.month\_name[month], year)

print("Mo Tu We Th Fr Sa Su")

for week in cal:

for day in week:

if day == 0:

print(" ", end=" ")

else:

print(f"{day:2d} ", end=" ")

print()

1. Write a Python program to solve quadratic equation?

import math

# Get user input for coefficients

a = float(input("Enter coefficient a: "))

b = float(input("Enter coefficient b: "))

c = float(input("Enter coefficient c: "))

# Calculate discriminant

discriminant = b\*\*2 - 4\*a\*c

# Check if discriminant is positive, negative, or zero

if discriminant > 0:

# Two real and distinct roots

root1 = (-b + math.sqrt(discriminant)) / (2\*a)

root2 = (-b - math.sqrt(discriminant)) / (2\*a)

print("Two real and distinct roots:")

print(f"Root 1: {root1}")

print(f"Root 2: {root2}")

elif discriminant == 0:

# One real root (repeated)

root = -b / (2\*a)

print("One real root (repeated):")

print(f"Root: {root}")

else:

# Two complex roots

realPart = -b / (2\*a)

imaginaryPart = math.sqrt(abs(discriminant)) / (2\*a)

print("Two complex roots:")

print(f"Root 1: {realPart} + {imaginaryPart}i")

print(f"Root 2: {realPart} - {imaginaryPart}i")

1. Write a Python program to swap two variables without temp variable?

# Get user input for variables

a = int(input("Enter value for variable a: "))

b = int(input("Enter value for variable b: "))

# Print initial values

print("Before swapping:")

print(f"a = {a}")

print(f"b = {b}")

# Swap variables without temp variable

a = a + b

b = a - b

a = a - b

# Print swapped values

print("After swapping:")

print(f"a = {a}")

print(f"b = {b}")