1. Write a Python Program to Find LCM?

Ans : Here's a Python program that calculates the Least Common Multiple (LCM) of two or more numbers using a recursive approach:

Python code

def find\_gcd(x, y): # Find the greatest common divisor (GCD) using Euclid's algorithm while y: x, y = y, x % y return x def find\_lcm(numbers): # Find the LCM of two numbers using the formula: LCM(x, y) = (x \* y) / GCD(x, y) # Extend this logic for multiple numbers using recursion if len(numbers) == 2: lcm = (numbers[0] \* numbers[1]) // find\_gcd(numbers[0], numbers[1]) return lcm else: lcm = (numbers[0] \* find\_lcm(numbers[1:])) // find\_gcd(numbers[0], find\_lcm(numbers[1:])) return lcm # Take input from the user num\_count = int(input("Enter the number of elements: ")) numbers = [] for i in range(num\_count): num = int(input("Enter number " + str(i + 1) + ": ")) numbers.append(num) # Calculate the LCM lcm = find\_lcm(numbers) # Print the LCM print("The LCM of", numbers, "is", lcm)

1. Write a Python Program to Find HCF?

Ans : Here's a Python program that calculates the Highest Common Factor (HCF) of two numbers using Euclid's algorithm:

Python code

def find\_hcf(x, y): while y: x, y = y, x % y return x # Take input from the user num1 = int(input("Enter the first number: ")) num2 = int(input("Enter the second number: ")) # Calculate the HCF hcf = find\_hcf(num1, num2) # Print the HCF print("The HCF of", num1, "and", num2, "is", hcf)

1. Write a Python Program to Convert Decimal to Binary, Octal and Hexadecimal?

Ans : Here's a Python program that converts a decimal number to binary, octal, and hexadecimal representations:

python code

decimal = int(input("Enter a decimal number: ")) binary = bin(decimal) octal = oct(decimal) hexadecimal = hex(decimal) print("Binary:", binary) print("Octal:", octal) print("Hexadecimal:", hexadecimal)

1. Write a Python Program To Find ASCII value of a character?

Ans : Here's a Python program that finds the ASCII value of a character:

Python code

character = input("Enter a character: ") ascii\_value = ord(character) print("The ASCII value of", character, "is", ascii\_value)

1. Write a Python Program to Make a Simple Calculator with 4 basic mathematical operations?

Ans : Here's a Python program that implements a simple calculator with four basic mathematical operations (addition, subtraction, multiplication, and division):

Python code

def add(x, y): return x + y def subtract(x, y): return x - y def multiply(x, y): return x \* y def divide(x, y): return x / y print("Select operation:") print("1. Addition") print("2. Subtraction") print("3. Multiplication") print("4. Division") operation = input("Enter the operation number (1-4): ") if operation not in ['1', '2', '3', '4']: print("Invalid operation.") else: num1 = float(input("Enter the first number: ")) num2 = float(input("Enter the second number: ")) if operation == '1': result = add(num1, num2) operator = '+' elif operation == '2': result = subtract(num1, num2) operator = '-' elif operation == '3': result = multiply(num1, num2) operator = '\*' else: result = divide(num1, num2) operator = '/' print(num1, operator, num2, "=", result)