**AI LAB#1**

**21F-9148**

**BCS-6B**

**TASK#1:**

num = int(input("Enter a number: "))  
  
# condition to check whether a number is divisible by 5 or not  
if num % 5 == 0:  
 print("Input number is factor of 5")  
else:  
 print("Input number is not a factor of 5")

A screen shot of a computer

Description automatically generated

**TASK#2:**

numbers = [] # Initializing empty list  
  
for i in range(10): # Input from a user  
 num = int(input("Enter an integer: "))  
 numbers.append(num)  
  
# To check whether numbers in given list are even or odd  
for num in numbers:  
 if num % 2 == 0:  
 print("%d is even." % num)  
 else:  
 print("%d is odd." % num)

A computer screen shot of a black screen

Description automatically generated

poem = """  
In realms of code where circuits gleam,  
\tA dance of minds, a digital dream.  
Silicon whispers, circuits hum,  
\tIn the heart of algorithms, futures drum.  
  
Lines of logic weave tales untold,  
\tIn the binary language, stories unfold.  
Bits and bytes, a cosmic art,  
\tArtificial minds, a symphony's start.  
"""  
  
print(poem)

A screenshot of a computer program

Description automatically generated

**TASK#4:**

def calculate\_area(length, width):  
 # Calculate the area of a rectangle.  
 area = length \* width  
 return area  
  
  
def calculate\_volume(length, width, height):  
 # Calculate the volume of a rectangle.  
 volume = length \* width \* height  
 return volume  
  
  
length = float(input("Enter the length of the rectangle: "))  
width = float(input("Enter the width of the rectangle: "))  
height = float(input("Enter the height of the rectangle: "))  
  
area = calculate\_area(length, width)  
volume = calculate\_volume(length, width, height)  
  
print("Area of the rectangle:", area)  
print("Volume of the rectangle:", volume)  
  
print("Cleaning Starts...")

A screen shot of a computer

Description automatically generated

**TASK#5:**

def add\_function(num1, num2):  
 return num1+num2  
  
  
def sub\_function(num1, num2):  
 return num1-num2  
  
  
def square\_function(num1, num2):  
 sq1 = num1\*\*2  
 sq2 = num2\*\*2  
 return sq1, sq2  
  
  
def cube\_function(num1, num2):  
 cube1 = num1\*\*3  
 cube2 = num2\*\*3  
 return cube1, cube2  
  
  
number1 = int(input("Enter a first number : "))  
number2 = int(input("Enter a second number : "))  
operator = input("Enter an operator : ")  
  
# Using if-else statements to perform operations  
if operator == '+':  
 numbers\_sum = add\_function(number1, number2)  
 print(f"{number1} + {number2} =", numbers\_sum)  
elif operator == '-':  
 numbers\_sub = sub\_function(number1, number2)  
 print(f"{number1} - {number2} =", numbers\_sub)  
elif operator == 's':  
 sq1, sq2 = square\_function(number1, number2)  
 print(f"square of {number1} =", sq1)  
 print(f"square of {number2} =", sq2)  
elif operator == 'c':  
 cube1, cube2 = cube\_function(number1, number2)  
 print(f"cube of {number1} =", cube1)  
 print(f"cube of {number2} =", cube2)  
else:  
 print("Invalid operator (+, -, s, or c).")

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Description automatically generated