1) Create a small calculator which performs operations such as Addition, Subtraction, Multiplication and Division using class.

  Calculator inputs :> ‘a’, ‘b’ and ‘type of operation’

  Datatype :> ‘a’ = double, ‘b’ = double, ‘type of operation’ = string.

class Calculator:

def \_\_init\_\_(self, a: float, b: float, operation: str):

self.a = a

self.b = b

self.operation = operation.lower() # Ensures case insensitivity

def calculate(self):

if self.operation == "addition":

return self.addition()

elif self.operation == "subtraction":

return self.subtraction()

elif self.operation == "multiplication":

return self.multiplication()

elif self.operation == "division":

return self.division()

else:

return "Invalid operation. Please choose Addition, Subtraction, Multiplication, or Division."

def addition(self):

return self.a + self.b

def subtraction(self):

return self.a - self.b

def multiplication(self):

return self.a \* self.b

def division(self):

if self.b != 0:

return self.a / self.b

else:

return "Error: Division by zero is not allowed."

# Example usage

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

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

operation = input("Enter the type of operation (Addition, Subtraction, Multiplication, Division): ")

calculator = Calculator(a, b, operation)

result = calculator.calculate()

print(f"Result: {result}")