**Module 01: Critical Thinking Assignment: Creating Python Programs**

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CSC500-1: Principles of Programming

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**Module 01: Critical Thinking Assignment: Creating Python Programs**

**Part 1**:  
Write a Python program to find the addition and subtraction of two numbers. Ask a user to input two numbers (num1 and num2). Given those two values, add them together, and display the total  
Subtract the two values to find the output, and display it.

**START**

// Set the variables

SET num1 to 0

SET num2 to 0

SET sum to 0

SET difference to 0

// Ask the user for two numbers

DISPLAY "Enter your first number: "

GET num1 from the user

DISPLAY "Enter your second number: "

GET num2 from the user

// Perform the addition steps here

SET sum = num1 + num2

DISPLAY "The sum of the two numbers is: ", sum

// Perform the subtraction steps here

SET difference = num1 – num2

DISPLAY "The difference between the two numbers is: ", difference

**END**

**Part 2:**

Write a Python program to find the multiplication and division of two numbers.

Ask the user to input two numbers (num1 and num2). Given those two numbers, multiply them

together to find the output. Also, divide num1/num2 to find the output.

**Start**

// Set variables

SET num1 to 0

SET num2 to 0

SET product to 0

SET quotient to 0

// Ask the user for two numbers

DISPLAY "Enter your first number: "

GET num1 from the user

DISPLAY "Enter your second number: "

GET num2 from the user

//Perform the Multiplication steps

SET product to num1 \* num2

DISPLAY num1 “ \* ” num2 “ = ”, product

//Perform the Division steps, use conditions for this

**IF** num2 is not equal to 0, **THEN**

SETquotient to num1/num2

DISPLAY “the quotient of the two numbers is: ”, quotient

**ELSE**

Display “Error: dividing by zero is not allowed.... nope ”

**ENDIF**

**END**

**Part III:**

I put the code together in a while loop to make it simplified, effective, and efficient.

**Source Code**

*"""  
Student Name: Saravenus Khon -Date: 03/29/2025 -- Assignment: Creating Python Programs  
"""*while True:  
  
 print("\n Please select Option 1 or 2:")  
 print("Option 1: Add and Subtract a pair of numbers")  
 print("Option 2: Multiply and Divide a pair of numbers")  
  
 choice = input("Please Select 1 or 2: ").strip()  
  
 *# Validate input to accept only "1" or "2"* if choice not in ["1", "2"]:  
 print("Invalid choice, please enter 1 or 2.")  
 continue *# Restart the loop if the user input is not 1 or 2  
  
 # Prompt the user for two numbers:* num1 = float(input("Enter your first number: "))  
 num2 = float(input("Enter your second number: "))  
  
 *# Perform Addition and Subtraction here* if choice == "1":  
 sum = num1 + num2  
 difference = num1 - num2  
 print("\n Option 1 (Part 1) : Addition and Subtraction for the noobs.. J/K!")  
 print(f"{num1} + {num2} = {sum}")  
 print(f"{num1} - {num2} = {difference}")  
  
 *# Perform Multiplication and Division here* else:  
 product = num1 \* num2  
 quotient = num1 / num2 if num2 != 0 else "Undefined (division by zero not allowed!! )"  
  
 print("\n Option 2 (Part 2 ): Multiplication and Division! the fun stuff")  
 print(f"{num1} × {num2} = {product}")  
 print(f"{num1} ÷ {num2} = {quotient}")  
  
 *# Ask if the user wants to keep playing* retry = input("\n Want to try another set of numbers? [Yes or No]: ").strip().lower()  
 if retry != "yes":  
 print("Thanks for playing!")  
 break *# Exit the loop*

**Screen shots**

A screenshot of a computer program

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.