

CSE108 – Computer Programming Lab.

Lab 1

Basic IO Operations and Expressions

28/02/2025

Part 1. (50 pts) Write a C program that implements the following mathematical equation using only variables and arithmetic operations, ensuring the correct order of operations:

$$Z = \frac{A + B \times C - D}{E} + (F \% G) - H \times I$$

Define the variables with default values as below:

A = 12, B = 4, C = 3, D = 8, E = 2, F = 17, G = 5, H = 6, I = 2

Your program should calculate and print the value of Z.

Part 2. (50 pts) A scientist is conducting an experiment where he needs to mix chemicals in a precise ratio. The required amount of each chemical is calculated based on a formula. The total weight of the final mixture (T) is the sum of three chemical weights, and the cost of the mixture (C) is calculated by multiplying each chemical's weight by its corresponding price per gram.

Write a program to compute T and C by asking the user to enter the values for:

- Weight of chemicals (W1, W2, W3),
- Price per gram of each chemical (P1, P2, P3) via console input. Then print the T and C in the console.

Your program should read these values from console input, compute T and C, and print the results in the console.