

Assignment 1 - Introduction to Programming with C++

Deadline: September 27 by 11:55pm

Type: Individual Assignment

Weight: 4%

Submission instructions:

- Create a cpp file for each question
- Compress the files using zip or other tools
- Submit the zip file on Moodle
- Do not submit executable files
- All submissions must be done through Moodle

Questions:

1. (20 marks) Write a program that asks the user to enter two integers and prints the sum, difference, product, and division of these numbers. Here is an example of the execution of the program:

Enter the first number: 10

Enter the second number: 5

The results are:

Sum: 15

Difference: 5

Product: 50

Division: 2

2. (20 marks) Write a program that takes the final grade of a student and returns the corresponding letter grade using the following marking scheme:

- A+ grade ≥ 90
- A 85 \leq grade < 90
- A- 80 \leq grade < 85
- B+ 75 \leq grade < 80
- B 70 \leq grade < 75
- C+ 65 \leq grade < 70
- C 60 \leq grade < 65
- C- 55 \leq grade < 60
- D+ 50 \leq grade < 55
- D 45 \leq grade < 50
- D- 40 \leq grade < 45
- F grade < 40

- 3. (20 marks)** Write a program that converts the temperatures 1 to 20 from Celsius to Fahrenheit and Kelvin. The output should look like this:

Celsius	Fahrenheit	Kelvin
1	33.8	274.15
2	35.6	275.15
3	37.4	276.15
4	38.2	277.15

This continues until 20

- 4. (20 marks)** Write a program that takes an integer as input and returns whether it is a prime number or not.
- 5. (20 marks)** Write a program that takes three integers and outputs them in a descending order, i.e., for the largest to the smallest number. For example, if the user enters 45, 100, 30, the program should output 100, 45, 30.