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 takes the final grade of a student and returns the corresponding letter grade using the following marking scheme:

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

2. (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
```

3. (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.

4. (20 marks) Write a program that asks the user to input an integer **N,** and determines the sum and product of its digits and prints them out.

Example:
N = 524
The sum of digits is: 11
The product of digits is: 40

5. (20 marks) Write a program that reads an integer N from the user then displays the product of all odd numbers smaller than or equal to N (if N is even, it should not be included in the product).

Example:
Please enter a positive number: 7
The product of all odd numbers smaller than or equal to 7 is 1*3*5*7 = 105

Example:
Please enter a positive number: 6
The product of all odd numbers smaller than or equal to 6 is 1*3*5 = 15