Assignment-2
(WT)

1. Write a java program to compare two strings lexicographically (without using library function).

2. Write a program to implement counting sort (with input in the range 0 to 20 and input can be repeated multiple times)

3. Write a program to sort strings (without using library function).

4. Find the smallest n such that $\Sigma i = i_2$ where $1 \le i \le n$ is too large to be represented as an int.

5. Let us define a couple of sets of integers, and let Java compute the set-theoretical operations (union, intersection and complement). We first fix our universe, which will consist of the 11 elements, Universe = {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}, A and B will be entered by users.

a. Only array can be used as data structure

b. Using any efficient data-structure available in Java

c. Compare the time to compute the operations

6. Write a `ConsoleProgram` that reads in a number from the user and then displays the Hailstone sequence for that number (Pick some positive integer and call it n. If n is even, divide it by two. If n is odd, multiply it by three and add one. Continue this process until n is equal to one)