# CSE1007-Java Programming

## Fall Semester 2021-22

## DA-2

1. Write the following two methods under an interface **Number**

   // Return the reverse of an integer, i.e. reverse(456) returns 654

   **public static int** reverse(**int** number)

   // Return true if number is palindrome

   **public static boolean** isPalindrome(**int** number)

   Use the **reverse** method to implement **isPalindrome**. A number is a palindrome if its reversal is the same as itself. Write a test program to implement the interface **Number** and prompts the user to enter an integer and reports whether the integer is a palindrome.

2. Write a method to implement the binary search. Use a package that has the class sort with a method **void** bubble_sort**(double[] array**) to perform a bubble sort

   **public void** search(**double**[] array)

   Write a test program that prompts the user to enter n numbers, and a search element. Invokes this method to return the position of the search element.

3. Write a program that has a class Factor with a method **boolean isFactor(int n, in m)** that checks if n is a factor of m. Write another class Divisibleby2 that derives Factor class. Override the **isFactor(n,m)** method to find it is divisible by 2 or not. Write another class Divisibleby3 that derives Factor class. Override the **isFactor(n,m)** method to find it is divisible by 3 or not. Write a test method that creates object for 2 classes. Get a number **n** from the user and check whether it is divisible by 6.