Assignment 2

1. Write a Java Program that checks if a given substring exists within a specified string. (For example, for the input string "hello world"; and the substring "world", the method should return true.)
2. Write a Java Program that replaces all occurrences of a specified substring within a given string with another substring. (For example, for the input string "the quick brown fox jumps over the lazy dog", replace "the" with "a", resulting in "a quick brown fox jumps over a lazy dog")
3. Write a Java method to find the longest common substring that appears in every row of a 2D array of strings and convert that to Upper case and print the entire string. For example, given the input:

   Input:
   Str= [{"flower", "flow", "flight"}, {"dog", "racecar", "car"}, {"interview", "interrupt", "integrate", "interval"}]

   Output:
   Str = [{"FLower", "FLow", "FLight"}, {"dog", "racecar", "car"}, {"INTErview", "INTErrupt", "INTEgrate", "INTErval"}]
   Note: (The longest common substring for the first row is "fl", for the second row there is
   none, and for the third row is "inter").

4. Write a Java recursive method to find the maximum element in an integer array.
Sample input:
Enter size of array: 5
Enter array elements: 56 43 22 67 41
Sample output:
67

5. Write a Java recursive method to reverse a given string.
Sample input:
Enter the string: I am good
Sample output:
doog ma I