JAVA PROGRAMMING LAB

BASIC PROGRAMS   Date: 29.07.2020

R Narayan

19BCE0758

1. ## Write a java Program to check whether given string is palindrome or not.

    Code:

```java
//19BCE0758
//R Narayan

import java.util.Scanner;

class CheckPalindrome {
    public static void main(String args[]) {
        String str;
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter a string:");
        str = sc.nextLine();

        int n = str.length();
        int flag = 1;
        for (int i = n - 1; i >= 0; i--) {
            if (str.charAt(i) != str.charAt(n - i - 1)) {
                flag = 0;
            }
        }
        if (flag == 0) {
            System.out.println("Not a Palindrome");
        } else {
            System.out.println("Palindrome");
        }

    }
}
```

    Output

2. Write a java program to sort the names in descending order.

Code:

```java
//19BCE0758
//R Narayan

import java.util.Scanner;

public class SortNames {
    public static void main(String[] args) {
        int n;
        String temp;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter number of names you want to enter:");
        n = s.nextInt();
        String names[] = new String[n];
        Scanner s1 = new Scanner(System.in);
        System.out.println("Enter all the names:");
        for (int i = 0; i < n; i++) {
            names[i] = s1.nextLine();
        }
        for (int i = 0; i < n; i++) {
            for (int j = i + 1; j < n; j++) {
                if (names[i].compareTo(names[j]) > 0) {
                    temp = names[i];
                    names[i] = names[j];
                    names[j] = temp;
                }
            }
        }
        System.out.println("Sorted Names");
        for (int i = 0; i < n - 1; i++) {
            System.out.println(names[i]);
        }
        System.out.print(names[n - 1]);
    }
}
```

Output:

```
Command Prompt

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>javac SortNames.java

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>java SortNames
Enter number of names you want to enter:3
Enter all the names:
abe
kdf
bec
Sorted Names
kdf
bec
abe
C:\Users\Narayan\Desktop\JAVA LAB\Day 3>
```

3. Write a Java program to sort a string array in ascending order.

Input the string : hello world welcome to vit

Expected Output :cdeeehillllmoooorttvww

Code:

```java
//19BCE0758
//R Narayan

import java.util.Scanner;

class SortString {
    public static void main(String args[]) {
        String str;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a string:");
        str = sc.nextLine();
        int n = str.length();
        char[] ar = str.toCharArray();
        for (int i = 0; i < n - 1; i++) {
            for (int j = 0; j < n - i - 1; j++) {
                if ((int) ar[j] < (int) ar[j + 1]) {
                    char temp = ar[j];
                    ar[j] = ar[j + 1];
                    ar[j + 1] = temp;
                }
            }
        }
        System.out.println("String in Descending order");
        for (int i = 0; i < n; i++) {
            System.out.print(ar[i]);
        }
    }
}
```

Output:

```
Command Prompt

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>javac SortString.java

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>java SortString
Enter a string:
Exception in thread "main" java.util.NoSuchElementException: No line found
        at java.base/java.util.Scanner.nextLine(Scanner.java:1651)
        at SortString.main(SortString.java:8)

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>javac SortString.java

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>java SortString
Enter a string:
hello world welcome  to vit
String in Ascending order
    cdeeehilllllmoooorttvww
C:\Users\Narayan\Desktop\JAVA LAB\Day 3>
```

4. Write a java Program to check whether the given two strings are anagram or not.

```java
//19BCE0758
//R Narayan

import java.util.Scanner;

class CheckAnagram {
    public static void main(String args[]) {
        String str1, str2;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a string:");
        str1 = sc.nextLine();
        System.out.println("Enter Second String");
        str2 = sc.nextLine();
        int n1 = str1.length();
        int n2 = str2.length();
        if (n1 == n2) {
            int flag = 1;
            char[] ar1 = str1.toCharArray();
            char[] ar2 = str2.toCharArray();
            for (int i = 0; i < n1 - 1; i++) {
                for (int j = 0; j < n1 - i - 1; j++) {
                    if ((int) ar1[j] < (int) ar1[j + 1]) {
                        char temp = ar1[j];
                        ar1[j] = ar1[j + 1];
                        ar1[j + 1] = temp;
                    }
                    if ((int) ar2[j] < (int) ar2[j + 1]) {
                        char temp = ar2[j];
                        ar2[j] = ar2[j + 1];
                        ar2[j + 1] = temp;
                    }
                }
            }
            for (int i = 0; i < n1; i++) {
                if (ar1[i] != ar2[i]) {
                    flag = 0;
                }
            }
            if (flag == 1) {
                System.out.println("Anagrams");
            } else {
                System.out.println("Not Anagram");
            }
        } else {
            System.out.println("Not Anagram");
        }
    }
}
```

Output:


```
C:\Users\Narayan\Desktop\JAVA LAB\Day 3>javac CheckAnagram.java

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>java CheckAnagram
Enter a string:
narayan
Enter Second String
nnryaaa
Anagrams

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>java CheckAnagram
Enter a string:
abc
Enter Second String
fee
Not Anagram

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>java CheckAnagram
Enter a string:
qww
Enter Second String
f
Not Anagram

C:\Users\Narayan\Desktop\JAVA LAB\Day 3>
```