JAVA ASSIGNMENT 5 SOLUTIONS

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1) Program to read two Strings & Concatenate the Strings.

Code:-

MyClass.java

```java
import java.util.Scanner;
2 usages
public class MyClass {
    1 usage
    String concatinateStrings(String myString1, String myString2){
        String tempString = "";

//        tempString=tempString.concat(myString1);
//        tempString=tempString.concat(myString2);

                        //or
        tempString = myString1 + myString2;
        return tempString;
    }

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter First String : ");
        String myString1 = scanner.nextLine();
        System.out.print("Enter Second String : ");
        String myString2 = scanner.nextLine();

        MyClass obj = new MyClass();
        String concatedString = obj.concatinateStrings(myString1,myString2);
        System.out.println(concatedString);

    }
}

```

Output:-

MyClass

```
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe"
Enter First String : My Name is :
Enter Second String : Vishal Gupta
My Name is : Vishal Gupta

Process finished with exit code 0
```

2) Program to check if the Substring is present in the given String.

Code:-

```java
public class MyClass {
    2 usages
    boolean isSubStringPresent(String subString, String myString){

        return myString.contains(subString);
    }

    public static void main(String[] args) {

        MyClass obj = new MyClass();

        String myString = "My name is Vishal Gupta";
        String subString = "Vishal";
        String subString2 = "Aman";

        System.out.println(obj.isSubStringPresent(subString,myString));
        System.out.println(obj.isSubStringPresent(subString2,myString));
    }
}
```

Output:-

```
MyClass
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe"
true
false

Process finished with exit code 0
```

3) Program to Accepts Two Strings & Compare them.

Code:-

```
MyClass.java
2 usages
public class MyClass {
    3 usages
    boolean ComapreTwoString(String myString1, String myString2){
        if(myString1.length()!=myString2.length())
            return false;
        else {
            for (int i = 0; i < myString1.length(); i++) {
                if (myString1.toCharArray()[i] != myString2.toCharArray()[i]) {
                    return false;
                }
            }
            return true;
        }
    }

    public static void main(String[] args) {
        MyClass obj = new MyClass();

        System.out.println(obj.ComapreTwoString("Vishal Gupta","Vishal Gupta"));
        System.out.println(obj.ComapreTwoString("Vishal Gupta","Vishal"));
        System.out.println(obj.ComapreTwoString("Vishal Gupta","Vishal Kumar"));
    }
}
```

Output:-

```
MyClass
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe"
true
false
false

Process finished with exit code 0
```

4) Program to Find the Length of a String without using the Built-in Function.

Code:-

```
MyClass.java
2 usages
public class MyClass {
    4 usages
    Integer findLengthOfString(String myString){

        int count=0;
        for(Character ch:myString.toCharArray()){
            count++;
        }

        return count;
    }

    public static void main(String[] args) {
        MyClass obj = new MyClass();
        System.out.println("length of string \"Hello World\" is : " + obj.findLengthOfString( myString: "Hello World"));
        System.out.println("length of string \"Hello\" is : " + obj.findLengthOfString( myString: "Hello"));
        System.out.println("length of string \"\" is : " + obj.findLengthOfString( myString: ""));
        System.out.println("length of string \" \" is : " + obj.findLengthOfString( myString: " "));
    }
}
```

Output:-

```
MyClass
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe"
length of string "Hello World" is : 11
length of string "Hello" is : 5
length of string "" is : 0
length of string " " is : 1

Process finished with exit code 0
```

5) Program to Check if a String is a Palindrome without using the Built-in Function.

Code:-

```
MyClass.java
2 usages
public class MyClass {

    4 usages
    boolean isStringPalindrome(String myString){
        String tempString="";
        for(int i=myString.length()-1;i>=0;i--){
            tempString+=myString.toCharArray()[i];
        }

        if(tempString.equals(myString)){
            return true;
        }
        else{
            return false;
        }
    }

    public static void main(String[] args) {
        MyClass obj = new MyClass();
        System.out.println("\"Vishal\" is palindrome : " + obj.isStringPalindrome( myString: "Vishal"));
        System.out.println("\"radar\" is palindrome : " + obj.isStringPalindrome( myString: "radar"));
        System.out.println("\"Radar\" is palindrome : " + obj.isStringPalindrome( myString: "Radar"));
        System.out.println("\"madam\" is palindrome : " + obj.isStringPalindrome( myString: "madam"));
    }
}
```

Output:-

```
MyClass
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe" "
"Vishal" is palindrome : false
"radar" is palindrome : true
"Radar" is palindrome : false
"madam" is palindrome : true

Process finished with exit code 0
```

6) Program to Replace all the Characters by Lowercase.

Code:-

```
MyClass.java
2 usages
public class MyClass {
    3 usages
    String allLowerCase(String myString){
        char[] myCharArray = myString.toCharArray();
        for(int i=0;i<myCharArray.length;i++){
            if(myCharArray[i]>='A' && myCharArray[i]<=90){
                myCharArray[i] = (char)((int)myCharArray[i]+32);
            }
        }
        myString="";
        for(int i=0;i< myCharArray.length;i++){
            myString += myCharArray[i];
        }


        return myString;
    }

    public static void main(String[] args) {
        MyClass obj = new MyClass();

        System.out.println("Lowering alphabets of String \"VisHal GUpta\" : " + obj.allLowerCase( myString: "VishHal GUpta"));
        System.out.println("Lowering alphabets of String \"HELlo wORLd\" : " + obj.allLowerCase( myString: "HELlo wORLd"));
        System.out.println("Lowering alphabets of String \"UpER CAse\" : " + obj.allLowerCase( myString: "UpER CAse"));
    }
}
```

Output:-

```
MyClass
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe"
Lowering alphabets of String "VisHal GUpta" : vishhal gupta
Lowering alphabets of String "HELlo wORLd" : hello world
Lowering alphabets of String "UpER CAse" : uper case

Process finished with exit code 0
```

7) Program to Replace Lowercase Characters by Uppercase & Vice-Versa.

Code:-

MyClass.java

```
2 usages
public class MyClass {
    2 usages
    String lowerToUpperAndViceVersa(String myString){
        String tempStr = "";

        for (Character ch:myString.toCharArray()) {
            if(ch>='A' && ch<='Z'){
                tempStr = tempStr + (char)((int)ch + 32);
            } else if(ch>='a' && ch<='z'){
                tempStr = tempStr + (char)((int)ch - 32);
            }
            else{
                tempStr = tempStr+ch;
            }
        }

        return tempStr;
    }

    public static void main(String[] args) {
        MyClass obj = new MyClass();
        System.out.println("LowerToUpper and Vice Versa of String \"ViSHal GuPTa\" : " + obj.lowerToUpperAndViceVersa( myString: "ViSHal GuPTa"));
        System.out.println("LowerToUpper and Vice Versa of String \"HEllo WorlD\" : " + obj.lowerToUpperAndViceVersa( myString: "HEllo WorlD"));
    }
}
```

Output:-

```
MyClass
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe" "-javaagent
LowerToUpper and Vice Versa of String "ViSHal GuPTa" : vIshAL gUptA
LowerToUpper and Vice Versa of String "HEllo WorlD" : heLLO wORLd

Process finished with exit code 0
```

8) Program to Count the Number of Vowels & Consonants in a Sentence.

Code:-

MyClass.java

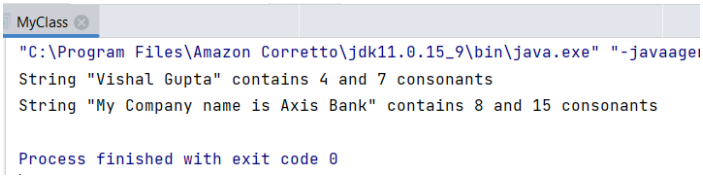
```
2 usages
public class MyClass {
    2 usages
    int[] countVariablesCosonant(String myString){
        int vowelCount=0;
        int consonantCount=0;

        for(char ch:myString.toLowerCase().toCharArray()){
            if(ch=='a'|| ch=='e' || ch=='i'|| ch=='o' || ch=='u'){
                vowelCount +=1;
            } else if (ch>='a' && ch<='z') {
                consonantCount += 1;
            }
        }

        return new int[]{vowelCount, consonantCount};
    }

    public static void main(String[] args) {
        MyClass obj = new MyClass();
        int[] vc1 = obj.countVariablesCosonant( myString: "Vishal Gupta");
        int[] vc2 = obj.countVariablesCosonant( myString: "My Company name is Axis Bank");
        System.out.println("String \"Vishal Gupta\" contains " + vc1[0]+ " and " + vc1[1] +" consonants");
        System.out.println("String \"My Company name is Axis Bank\" contains " + vc2[0]+ " and " + vc2[1] +" consonants");
    }
}
```

Output:-


MyClass
"C:\Program Files\Amazon Corretto\jdk11.0.15_9\bin\java.exe" "-javaagen
String "Vishal Gupta" contains 4 and 7 consonants
String "My Company name is Axis Bank" contains 8 and 15 consonants
Process finished with exit code 0