

# LAB ASSESMENT 3

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## Q1) How to print duplicate characters form the string

```
package com.lab3.regex;

import java.util.regex.*; // importing required librar

class DuplicateCharector {

    public static void main(String[] args) {

        String str="Joe waited for the train. The train was late.";

        //Defining a regular Expression to match any character more than once

        String p = "(.)(?=.*\\1)";

        //Converting a string to lower case for the manipulation

        str=str.toLowerCase();

        //creating pattern Object and matcher Object

        Pattern pattern = Pattern.compile(p);

        Matcher matcher = pattern.matcher(str);

        System.out.println("Below are the \"Duplicate charector\":\n");

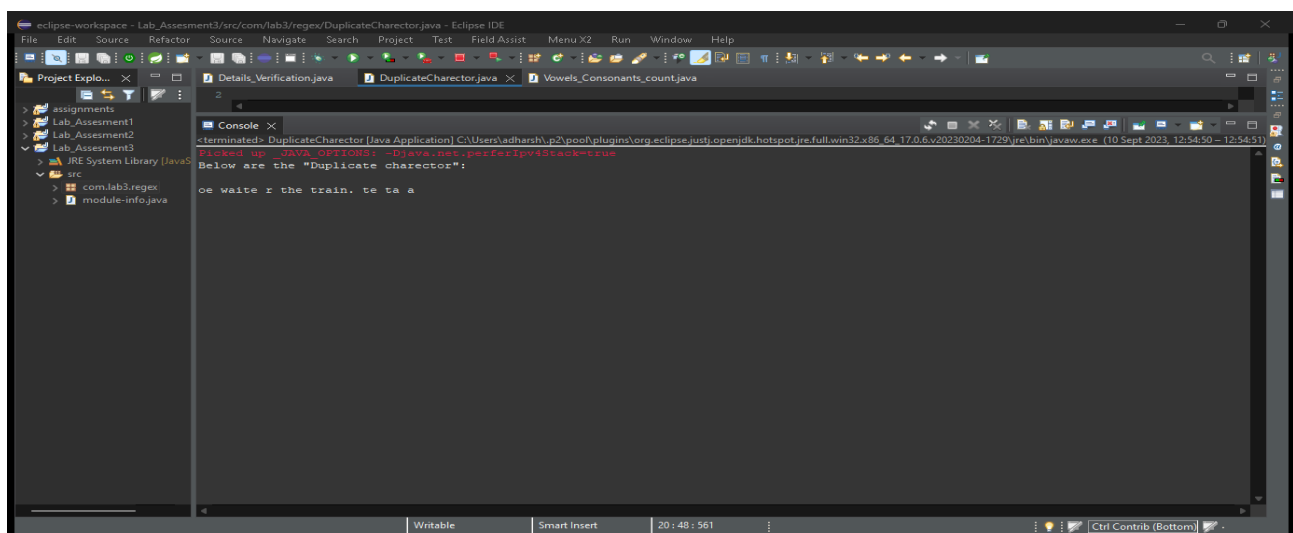
        while(matcher.find())

            System.out.print(matcher.group());

    }

}
```

Output:



## Q2) How do you count number of vowels and consonants in a given string?

```
package com.lab3.regex;

// importing required libraries
import java.util.regex.*;

public class Vowels_Consonants_count {

    public static void main(String[] args) {

        int vowelcount=0, contcount=0;

        String str = "Joe waited for the train. The train was late.";

        // converting string to lower case
        str=str.toLowerCase();

        String p1 = "[aeiou]*"; // pattern for vowels
        String p2 = "[^aeiou ^\\W]*"; // pattern for consonants

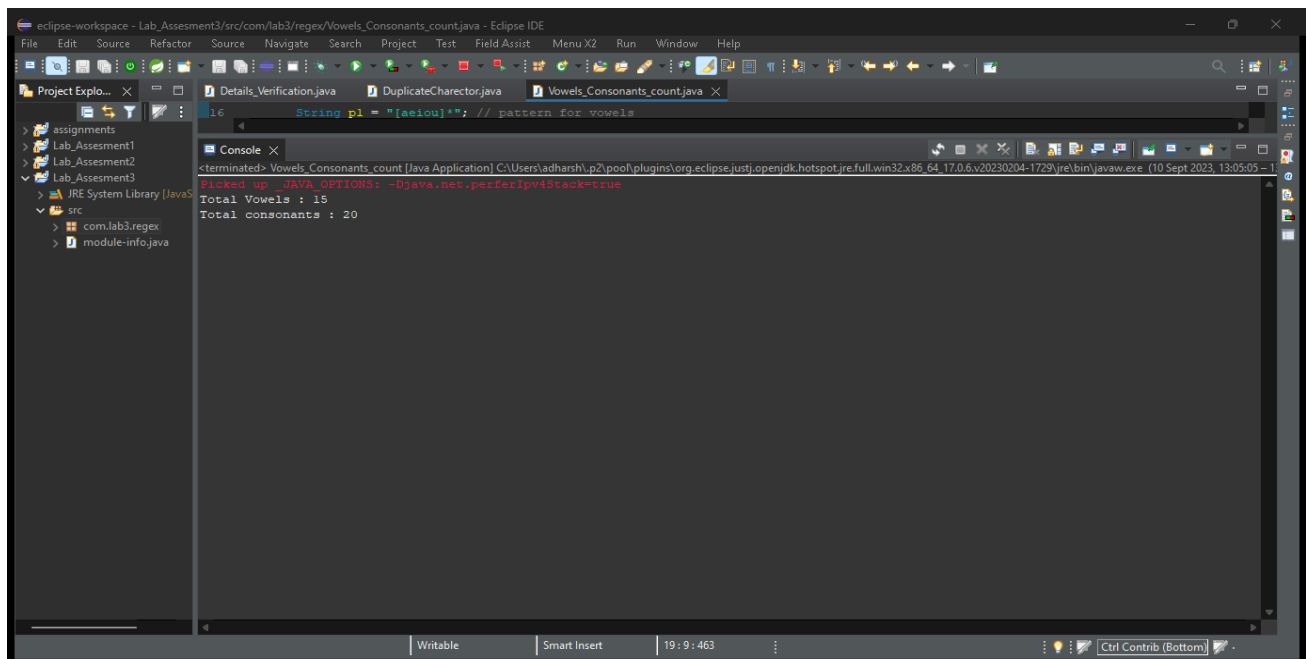

        Pattern pattern1 = Pattern.compile(p1);
        Matcher matcher1 = pattern1.matcher(str);
        Pattern pattern2 = Pattern.compile(p2);
        Matcher matcher2 = pattern2.matcher(str);
        while(matcher1.find())
        {
            vowelcount+=matcher1.group().length(); // counting vowels
        }
        while(matcher2.find())
        {
            contcount+=matcher2.group().length(); // counting consonants
        }


        System.out.println("Total Vowels : "+vowelcount);
        System.out.println("Total consonants : "+contcount);

    }

}
```

Output:



**Q2) Read employee information with id no, name, mobile number, mail id**

**Verify:**

- **Id number must consist of 5 digits**
- **Name consists of only alphabets**
- **Mobile number consists of 10 digits**
- **Mail id must be in mail id format**

**After validating input give the message record submitted, else invalid information**

```
package com.lab3.regex;
```

```
//importing required libraries
```

```
import java.util.*;
```

```
import java.util.regex.*;
```

```
public class Details_Verification {
```

```
    public static void main(String[] args) {
```

```
        String idno, name, mobile, mailid;
```

```
        Scanner input = new Scanner(System.in);
```

```

// Asking user input

System.out.print("Id no :");

idno = input.next();

System.out.print("name :");

name = input.next();

System.out.print("mob no :");

mobile = input.next();

System.out.print("mail id :");

mailid = input.next();


// defining patterns for each case

String id_pattern = "(?<!\d)\d{5}(?!\\d)";

String name_pattern = "[a-zA-z]+";

String number_pattern = "(?<!\d)\d{10}(?!\\d)";

String mail_pattern = "[a-zA-Z0-9]+\@[gmail\\.\\.com]*[yahoo\\.\\.com]*";


// Compiling patterns

Pattern p1 = Pattern.compile(id_pattern);

Pattern p2 = Pattern.compile(name_pattern);

Pattern p3 = Pattern.compile(number_pattern);

Pattern p4 = Pattern.compile(mail_pattern);


// matching patterns with user input

Matcher m1 = p1.matcher(idno);

Matcher m2 = p2.matcher(name);

Matcher m3 = p3.matcher(mobile);

Matcher m4 = p4.matcher(mailid);


if(m1.find() && m2.find() && m3.find() && m4.find() )

    System.out.println("RECORED SUBMITTED.....");

```

```

else

        System.out.println("INVALID INFORMATION.....!");

    input.close();

}

}

```

Output:

