Programming Paradigms Laboratory

B.Tech.

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Faculty	Engineering & Technology
Programme	B. Tech. in Computer Science and Engineering
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Name of the Laboratory	Programming Paradigms Laboratory
Laboratory Code	19CSL217A

Laboratory 5

Title of the Laboratory Exercise: Strings

- Questions

  - Develop an application that inputs a line of text and a search character and uses String method indexOf to determine the number of occurrences of the character in the text.
  - Develop a Java program to reads a five-letter word from the user and produces every possible three-letter string that can be derived from the letters of that word. For example, the three-letter words produced from the word “bathe” include “ate,” “bat,” “bet,” “tab,” “hat,” “the” and “tea.”

- Calculations/Computations/Algorithms

```
package lab5b;
import java.util.Scanner;
public class Lab5b {

    public static void main(String[] args) {
      char search;
      int count=0,i,current=0;
      Scanner obj=new Scanner(System.in);
      System.out.println("Enter the string");
      String a=obj.next();
      System.out.println("enter the charater");
      search=obj.next().charAt(0);
      while(a.indexOf(search,current)!=-1)
      {
          current=a.indexOf(search,current);
          current++;
          count++;
      }
      System.out.println("The String has appered "+count+" times");
    }

}
```

Fig1.1 Represents the java program String method indexOf to determine the number of occurrences of the character in the text

```java
package lab5a;
import java.util.Scanner;
public class Lab5a {
    public static void main(String[] args) {
        String a;
        Scanner obj=new Scanner(System.in);
        System.out.println("Enter the String");
        a=obj.next();
        for(int i=0;i<a.length();i++)
        {
            for(int j=1;j<a.length();j++)
            {
                for(int k=2;k<a.length();k++)
                {
                    if(a.charAt(i)!=a.charAt(j)||a.charAt(i)!=a.charAt(k))
                    {
                        if(a.charAt(i)!=a.charAt(j)&&a.charAt(i)!=a.charAt(k))
                        {
                            if(a.charAt(i)!=a.charAt(j)&&a.charAt(j)!=a.charAt(k))
                            {
                                System.out.print(a.charAt(i));
                                System.out.print(a.charAt(j));
                                System.out.println(a.charAt(k));
                            }
                        }
                    }
                }
            }
        }
    }
}
```

Fig2.1 Represents the java program to reads a five-letter word from the user and produces every possible three-letter string that can be derived from the letters of that word.

- Presentation of Results

```
Enter the string
computero
enter the charater
o
The String has appered 2 times
BUILD SUCCESSFUL (total time: 16 seconds)
```

Fig1.2 Represents the output of the java program String method indexOf to determine the number of occurrences of the character in the text

```
Enter the String
bathe
bat
bah
bae
bth
bte
bht
bhe
bet
beh
ath
ate
aht
ahe
aet
aeh
tah
tae
the
teh
hat
hae
hte
het
eat
eah
eth
eht
BUILD SUCCESSFUL (total time: 4 seconds)
```

Fig2.2 Represents the output of java program to reads a five-letter word from the user and produces every possible three-letter string that can be derived from the letters of that word.

- Conclusions

We have learned how to do some operations on the strings that is String method indexOf to determine the number of occurrences of the character in the text and also reads a five-letter word from the user and produces every possible three-letter string.

- Limitations of Experiments and Results

To do the String operations the java packages should be imported for the Strings to do some tasks.