Institute of Engineering & Management
Department of Computer Science & Engineering
Object Oriented Programming (IT) Labfor 3rd year 5th semester 2018
Code: CS594D

Date: 18/10/18

WEEK-11

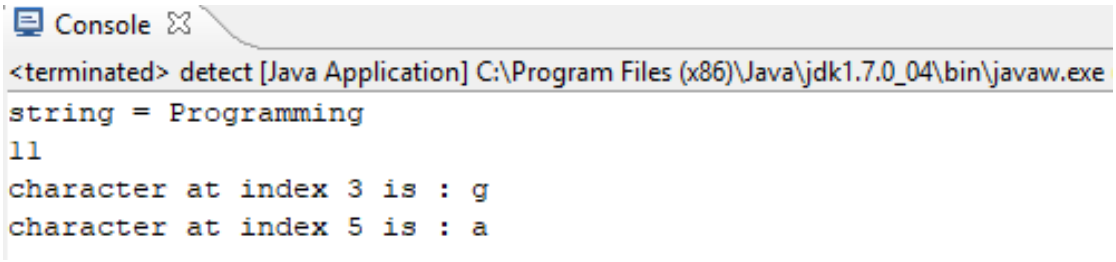
Assignment-1

Problem Statement: Write a java code to detect the mth character of a given string.

Source code:

```
classTeststring
{
    public static void main(String args[])
    {
         String str="Programming" ;
        System.out.println("string = " + str);
        intlen=str.length();
        System.out.println(len);
        chara_char = str.charAt(3);
        System.out.println("character at index 3 is : "+a_char);
        charar_char = str.charAt(5);
        System.out.println("character at index 5 is : "+ar_char);
    }
}
```

Screen-Shot:



Assignment-2

Problem Statement: Write a java program to sort n number of strings in lexicographic order.

Source code:

```
import java.util.Scanner;
public class detect
{
  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-1); 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("Names in Sorted Order:");
            for (int i = 0; i < n ; i++)
             System.out.println(names[i]);
      }
}
```

Screen-Shot:

```
<terminated> detect [Java Application] C:\Program Files (x86)\Java\jdk1.7.0_04\bin\javaw.exe
Enter number of names you want to enter: 4
Enter all the names:
ranajit
arnab
ankur
arunava
Names in Sorted Order:
ankur
arnab
arunava
ranajit
```

Assignment-3

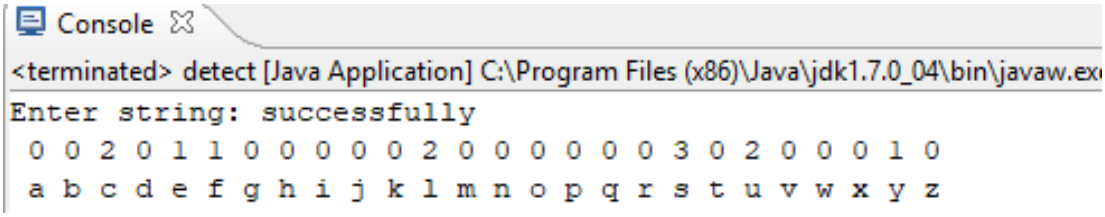
Problem Statement: Write a JAVA program to generate a histogram of a given string .

Source code:

```
import java.util.Scanner;
public class histogram
{
  public static void main(String[] args)
  {
        Scanner kb = new Scanner(System.in);
        final int LETTERS_IN_ALPHABET = 26;
        int[] letterCounter = new int[LETTERS_IN_ALPHABET];
```

```
            System.out.print("Enter string: ");
            String string = kb.nextLine();
            for(int i = 0; i <string.length(); i++)
            {
                  char letterThere = string.charAt(i);
                  int placeInLetterCtr = whereInLetterCtr(letterThere);
                  letterCounter[placeInLetterCtr]++;
            }
            printNumbers(letterCounter);
            printLetters();
      }
      public static int whereInLetterCtr(char letter)
      {
            int i =0 ;
            for(char comparisonLetter = 'a'; comparisonLetter<= 'z';
comparisonLetter++)
            {
                  if(letter == comparisonLetter)
                  {
                        return i;
                  }
                  i++;
            }
            return i;
      }
      public static void printNumbers(int[] array)
      {
            for(int i=0; i<array.length; i++)
            {
                  System.out.print(" "+array[i]);
            }
            System.out.println();
      }
      public static void printLetters()
      {
            for(char letter ='a'; letter <='z'; letter++)
            {
                  System.out.print(" "+letter);
            }
      }
}
```

Screen-Shot:



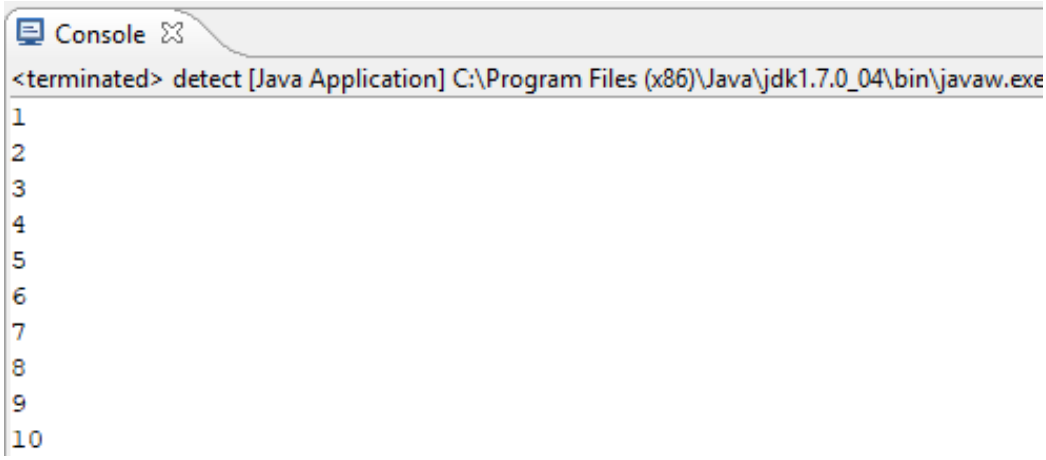
Assignment-4

Problem Statement: Write a java program to print odd and even numbers using two separate threads (First thread is created by Thread class and the Second thread is created by Runnable interface).

Source code:

```
class Odd extends Thread
{
  public void run()
  {
        for(int i=1;i<10;i=i+2)
        {
              System.out.println(i);
              try {Thread.sleep(1000);}
              catch(Exception e){}
        }
   }
}
class Even implements Runnable
{
  public void run()
  {
        for(int i=2;i<=10;i=i+2)
        {
              System.out.println(i);
              try {Thread.sleep(1000);}
              catch(Exception e){}
        }
   }
}
class detect
{
  public static void main(String args[])
  {
        Odd obj1 = new Odd();
        Runnable obj2= new Even();
        Thread t = new Thread(obj2);
        obj1.start();
        try {Thread.sleep(10);}
        catch(Exception e){}
        t.start();
  }
}
```

Screen-Shot:



Assignment-5

Problem Statement: write a java code to demonstrate the use of the following methods.

1. currentThread()
2. getname()
3. setname()

Source code:

```
class Test extends Thread
{
  public void run()
  {
        System.out.println("Thread started\nCurrent thread = " +
Thread.currentThread());
   }
}
class detect
{
  public static void main(String args[])
  {
        Test obj1 = new Test();
        Test obj2 = new Test();
        Test obj3 = new Test();
        System.out.println("Name of thread1 = " + obj1.getName());
        System.out.println("Name of thread2 = " + obj2.getName());
        System.out.println("Name of thread3 = " + obj3.getName());
        System.out.println("\nAfter setting name,the name of the threads are
:");
        obj1.setName("Music");
        obj2.setName("Cinema");
        obj3.setName("Game");
        System.out.println("Name of thread1 = " + obj1.getName());
        System.out.println("Name of thread2 = " + obj2.getName());
        System.out.println("Name of thread3 = " + obj3.getName());
        System.out.print("\n");
        obj1.start();
        obj2.start();
        obj3.start();
  }
}
```

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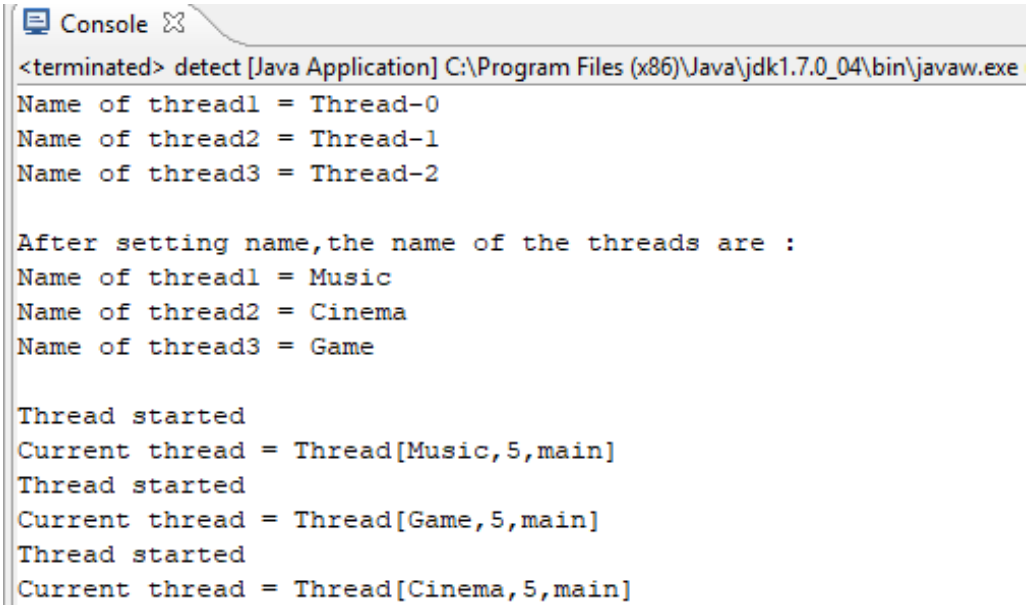
Screen-Shot:


Console
<terminated> detect [Java Application] C:\Program Files (x86)\Java\jdk1.7.0_04\bin\javaw.exe
Name of thread1 = Thread-0
Name of thread2 = Thread-1
Name of thread3 = Thread-2
After setting name,the name of the threads are :
Name of thread1 = Music
Name of thread2 = Cinema
Name of thread3 = Game
Thread started
Current thread = Thread[Music,5,main]
Thread started
Current thread = Thread[Game,5,main]
Thread started
Current thread = Thread[Cinema,5,main]