Assignment 5 on Session5: Collections

Problem Statement1:

Write a simple Timer that can periodically print a timeout message.

Solution:

```
import java.awt.Toolkit;
import java.util.Timer;
import java.util.TimerTask;

import java.util.Date;
import java.util.Timer;
import java.util.TimerTask;

public class TimerTimeout extends TimerTask
{
  @Override
  public void run()
  {
    System.out.println("Timer task started at:"+new Date());
    completeTask();
    System.out.println("Timer task finished at:"+new Date());
  }
  private void completeTask()
  {
    try
    {
      //assuming it takes 20 secs to complete the task
      Thread.sleep(20000);
      }catch (InterruptedException e)
```

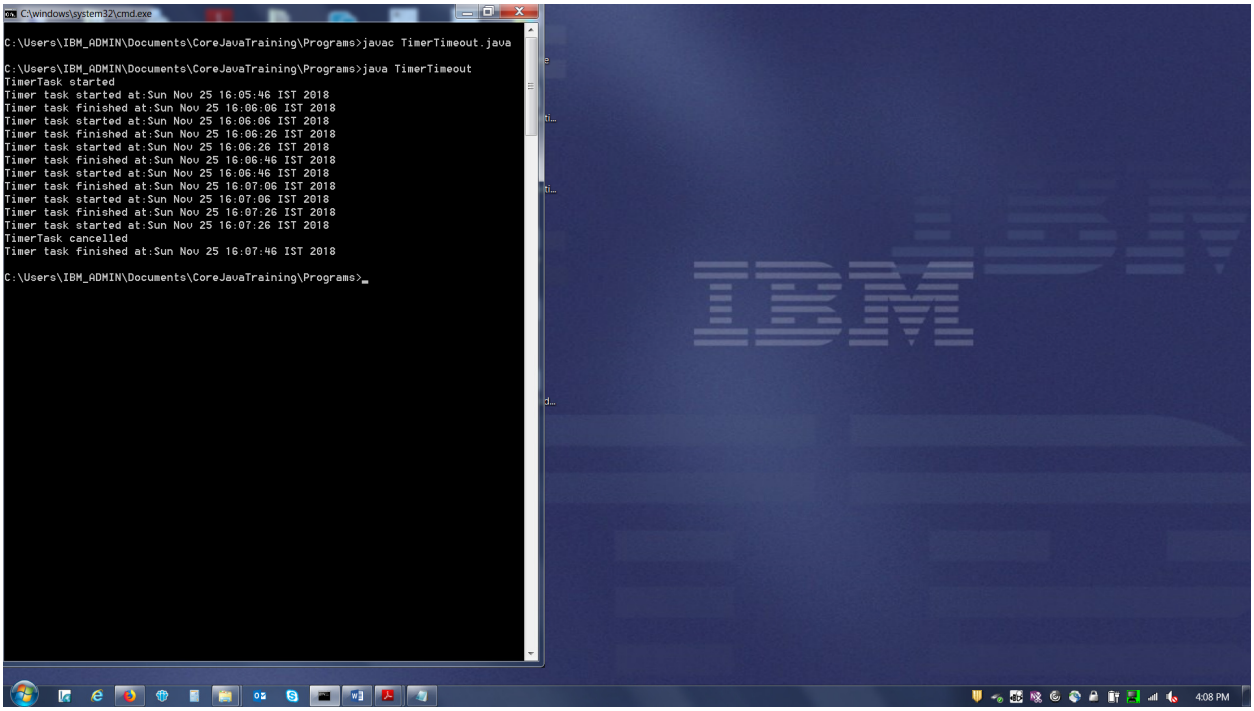
```
 {
   e.printStackTrace();
 }
}
public static void main(String args[])
{
 TimerTask timerTask = new TimerTimeout();
 //running timer task as daemon thread
 Timer timer = new Timer(true);
 timer.scheduleAtFixedRate(timerTask, 0, 10*1000);
 System.out.println("TimerTask started");
 //cancel after sometime
 try
 {
   Thread.sleep(120000);
 }catch (InterruptedException e)
 {
   e.printStackTrace();
 }
 timer.cancel();
 System.out.println("TimerTask cancelled");
 try
 {
   Thread.sleep(30000);
 }catch (InterruptedException e)
 {
   e.printStackTrace();
 }
```

```
    }
}
```

Explanation of the code:

This program start and finish the time at the regular interval and print the messages accordingly.

Result flow & Screen shot:



Problem Statement2:

Write a program to build any collection containing duplicates. Create its copy with all duplicates removed.

Solution:

```
import java.util.ArrayList;

import java.util.HashSet;

import java.util.List;

import java.util.Set;


public class CollDup

{

  public static void main( String[] args )

  {

    List<String> list = new ArrayList<String>();

    list.add("JAVA");

    list.add("JAVASCRIPT");

    list.add("SPRING");

    list.add("JAVA");

    list.add("ANGULAR");

    System.out.println("The items in List are:");

    for (String temp : list)

    {

      System.out.println(temp);

    }

    System.out.println("\n======== ");

    Set<String> set = new HashSet<String>(list);

    System.out.println("\nSet collections removes the duplicates and the items in set are now:");

    for (String temp : set)
```

```
    {
      System.out.println(temp);
    }
  }
}
```

Explanation of the code:

This program removes the duplicate strings.

Result flow and screen shot: