# TAMOJIT DAS A/7/C1

# ASSIGNMENT 11

**Q1.**

CustomNegativeNumberException.java

```
package Q1;


/**
 *
 * @author TAMOJIT
 */
public class CustomNegativeNumberException extends Exception{


   double X;


   public CustomNegativeNumberException(double x) {
      this.X=x;
   }


   @Override
   public String toString() {
      return "NegativeNumber "+this.X+" detected."; //To change body of generated methods, choose Tools | Templates.
   }
}
```

CustomFileManager.java

```
package Q1;
```

```
import java.io.*;
import java.util.logging.Level;
import java.util.logging.Logger;

/**
 *
 * @author TAMOJIT
 */
public class CustomFileManager {
   public static void main(String[] args){
      try {
         FileReader fr=new FileReader("numbers.txt");
         BufferedReader br=new BufferedReader(fr);
         while (true){
            String s=br.readLine();
            if (s==null){
               break;
            }
            double x=Double.parseDouble(s);
            if (x<0){
               throw new CustomNegativeNumberException(x);
            }else{
               System.out.println(x);
            }
         }
      } catch (FileNotFoundException ex) {
         Logger.getLogger(CustomFileManager.class.getName()).log(Level.SEVERE, null, ex);
      } catch (IOException ex) {
         Logger.getLogger(CustomFileManager.class.getName()).log(Level.SEVERE, null, ex);
```

```
        } catch (CustomNegativeNumberException ex) {
            Logger.getLogger(CustomFileManager.class.getName()).log(Level.SEVERE, null, ex);
        }
    }

}
```

**Q2.**

Fight.java

```
package Q3;

/**
 *
 * @author TAMOJIT
 */
public class Flight implements Comparable<Flight>{
    private String depCity;
    private String daysOfWeek;
    private String flightNum;
    private String depTime;
    private String arrTime;

    public Flight(String depCity, String daysOfWeek, String flightNum, String depTime, String arrTime) {
        this.depCity = depCity;
        this.daysOfWeek = daysOfWeek;
        this.flightNum = flightNum;
        this.depTime = depTime;
        this.arrTime = arrTime;
    }
```

```
    public String getDepCity() {
        return depCity;
    }

    public String getDaysOfWeek() {
        return daysOfWeek;
    }

    public String getFlightNum() {
        return flightNum;
    }

    public String getDepTime() {
        return depTime;
    }

    public String getArrTime() {
        return arrTime;
    }




    @Override
    public int compareTo(Flight o) {
        return this.flightNum.compareTo(o.getFlightNum()); //To change body of generated methods, choose Tools | Templates.
    }
```

```
}
```

FlightManager.java

```
package Q3;

import java.io.BufferedReader;
import java.io.BufferedWriter;
import java.io.FileNotFoundException;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
import java.util.ArrayList;
import java.util.Collections;

/**
 *
 * @author TAMOJIT
 */
public class FlightManager {
   static Flight readLine(String line){
      String[] row = line.split("\\|");
      String[] timings = row[3].split("/");
      return new Flight(row[0],row[1],row[2],timings[0],timings[1]);
   }

   static String writeLine(Flight flight){
      String timings = String.join("/",flight.getDepTime(), flight.getArrTime());
      String row = String.join("/",flight.getDepCity(), flight.getDaysOfWeek(),
flight.getFlightNum(),timings);
      return row;
```

```
}

static ArrayList<Flight> sortArray(ArrayList<Flight> flights){
   Collections.sort(flights);
   return flights;
}

public static void main(String[] args) {
   ArrayList<Flight> flights = new ArrayList<Flight>();
   try {
      FileReader fr = new FileReader("2015.silkair.csv");
      BufferedReader br = new BufferedReader(fr);
      String line = br.readLine();
      while(line!=null){
         flights.add(readLine(line));
         line = br.readLine();
      }
      br.close();
      fr.close();

      sortArray(flights);

      FileWriter fw = new FileWriter("sorted.2015.silkair.csv");
      BufferedWriter bw = new BufferedWriter(fw);
      for (Flight flight: flights) {
         bw.write(writeLine(flight) + "\n");
      }
      bw.close();
      fw.close();
```

```
        } catch (FileNotFoundException e) {
            System.err.println("File not found");
        } catch (IOException e) {
            System.err.println(e);
        }


    }
}
```