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

class LaFood
{
    public static void main(String [] args) throws IOException
    {
        //welcomes user
        System.out.println("*** Welcome to the La Food Restaurant Simulator ***\n");

        //prompts user to enter the name of the file and reads it in
        System.out.println("Please enter the name of the data file: ");
        Scanner cin=new Scanner(System.in);
        String file=cin.next();
        System.out.print("\n");

        //creates a scanner
        Scanner info;
        info=new Scanner(new FileReader(file));

        Queue q=new QueueLL();

        char command='x';
        double totalPeople=0;
        double totalMinutes=0;

        //runs this loop while the commmand is not the end of the program
        while(command!='Q')
        {
            //reads in what the command is
            command=info.next().charAt(0);

            //if the command is that a party arrives
            if(command=='A')
            {
                //creates party and puts them in the queue
                Party p=new Party(info);
                q.enqueue(p);
                System.out.println("Please wait at the bar, ");
                System.out.println("  party"+p.getName()+" of "+p.getPeople()+"
people. (time="+p.getArrival()+")");
            }

            //if the command is that a table is ready
            if(command=='T')
            {
                //seats party and takes them out of the queue
                int time=info.nextInt();
                Party p=(Party)q.dequeue();
                System.out.println("Table for"+p.getName()+"! (time="+time+")");
```

```
                //calculates total people and total minutes to use for average
                int partySize=p.getPeople();
                totalPeople=totalPeople+partySize;
                int toa=p.getArrival();
                totalMinutes=totalMinutes+partySize*(time-toa);
            }
        }

        System.out.println("** Simulation Terminated **\n");

        //calculates average wait time
        double avg=0;
        avg=totalMinutes/totalPeople;
        System.out.println("The average waiting time was: "+avg);

        //dequeues parties that were never sat and prints them out
        System.out.println("The following parties were never seated:");
        while(!q.isEmpty())
            { ((Party)q.dequeue()).print(); }

        System.out.println("\nHave a nice meal!");
    }
}
```

```java
import java.util.*;
/** @author sam */

class Party
{
    //data members
    int timeArrival;
    int people;
    String name;
    int timeWaiting;

    //methods

    //constructor
    /** @param a The arrival time
        @param p The number of people
        @param n The name of the party
        @param w The time the table becomes available **/
    public Party(int a,int p,String n,int w)
    {
        timeArrival=a;
        people=p;
        name=n;
        timeWaiting=w;
    }

    public Party(Scanner info)
    {
        timeArrival=info.nextInt();
        people=info.nextInt();
        name=info.nextLine();
    }

    //observers
    public String getName()
        { return name; }

    public int getPeople()
        { return people; }

    public int getArrival()
        { return timeArrival; }

    public int getWaiting()
        { return timeWaiting; }

    public void print()
    {
        System.out.println("  party"+name+" of "+people+" people.");
    }
}
```

```
*** Welcome to the La Food Restaurant Simulator ***

Please enter the name of the data file:
data.txt

Please wait at the bar,
  party Merlin of 3 people. (time=3)
Please wait at the bar,
  party Arthur Pendragon of 2 people. (time=8)
Table for Merlin! (time=10)
Please wait at the bar,
  party Sir Lancelot of 2 people. (time=12)
Table for Arthur Pendragon! (time=15)
Please wait at the bar,
  party The Green Knight of 3 people. (time=17)
Table for Sir Lancelot! (time=20)
** Simulation Terminated **

The average waiting time was: 7.285714285714286
The following parties were never seated:
  party The Green Knight of 3 people.

Have a nice meal!
```