

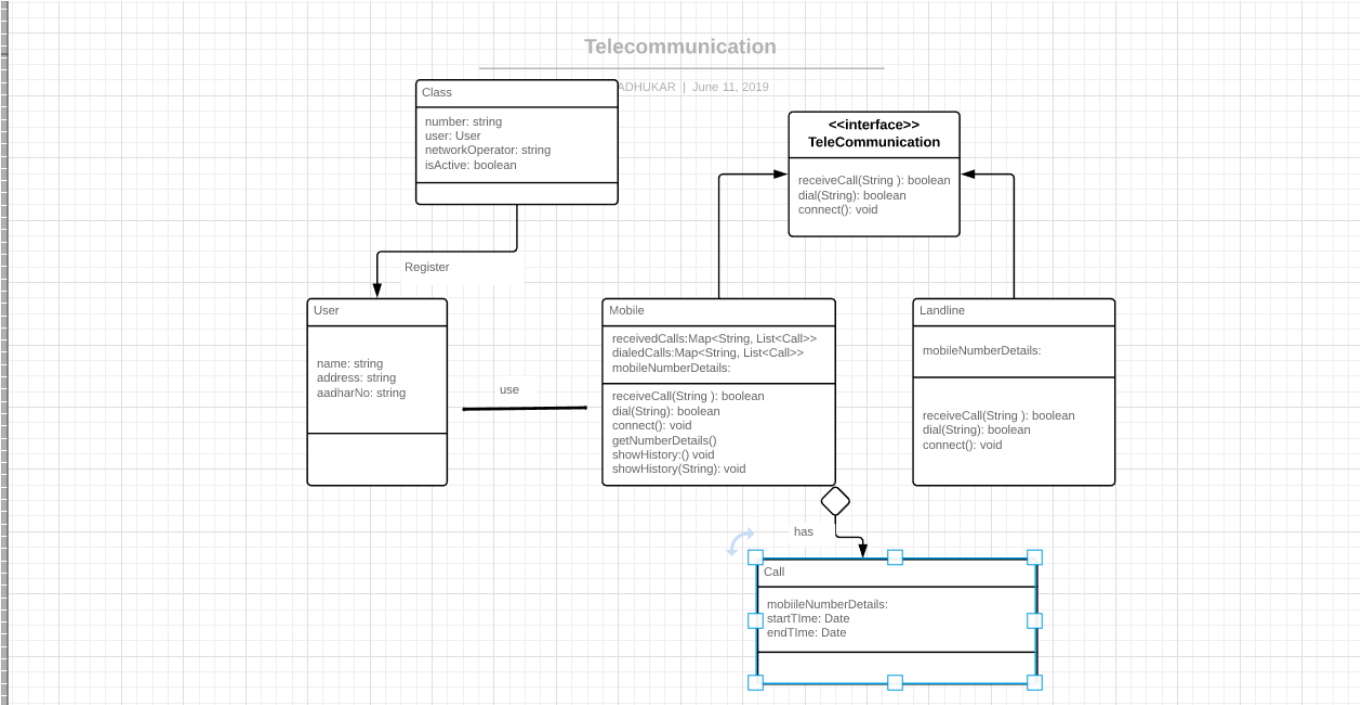
# JAVA ASSIGNMENT

## Exercise -1

Implement a system to simulate a telephone using OOPS concepts. User Should be able to use functions like : Store its properties, Dial and call, Receive calls, Cancel calls, Store and view call History.

## Class Diagram

```
[sourceFile->JavaAssignment1.java]
```



## Interfaces

```
Telecommunication
```

## Classes

```
Mobile
Call
User
PhoneNumber
```

## Relationships

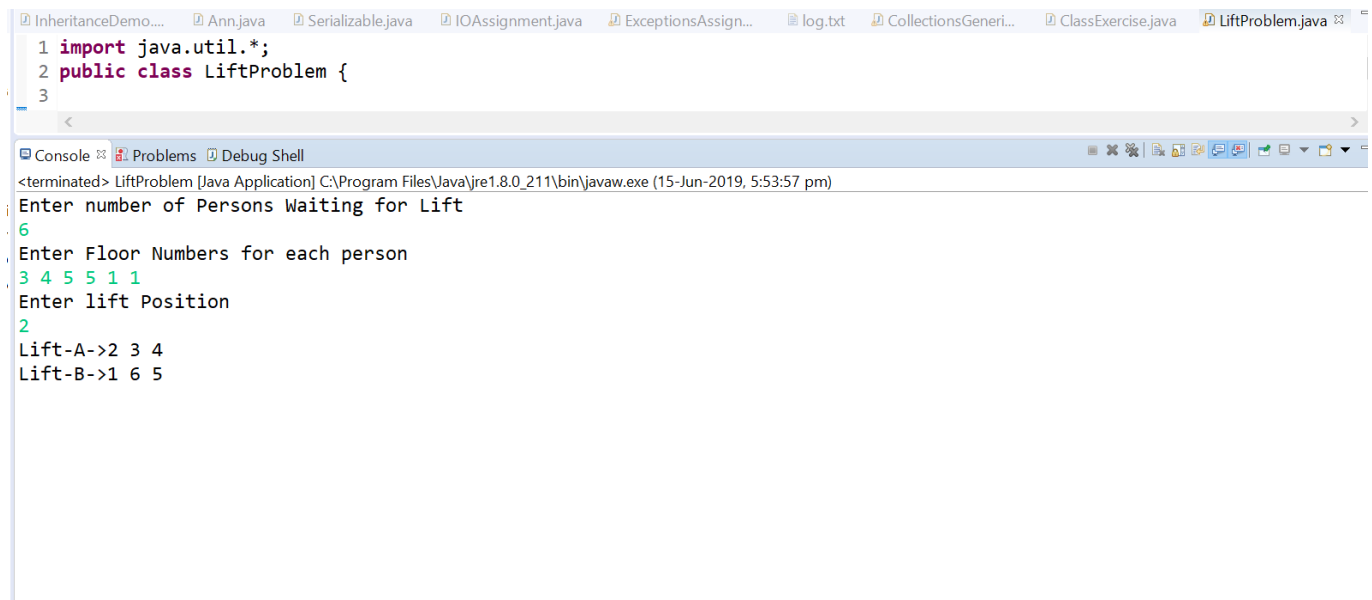
```
Mobile implements Telecommunication interface
User "uses" mobile
mobile "have" calls(one-to-many)
PhoneNumber "Assigns" to a User (many-to-one)
```

## Exercise-2

1. Implement a lift system. There are 2 lifts (A, B) and 5 floors ( 1 – 5) The user should give preference of UP/DOWN and floor No.Assume all users enter at same floor, x are given initially at the time of each request.

- 1.The users must be divided equally if possible among each lift.
- 2.Each user must travel minimal to get to their location
3. Output: List of users for Lift A and B. Order of exit from lift for each

## SAMPLEOUTPUT()

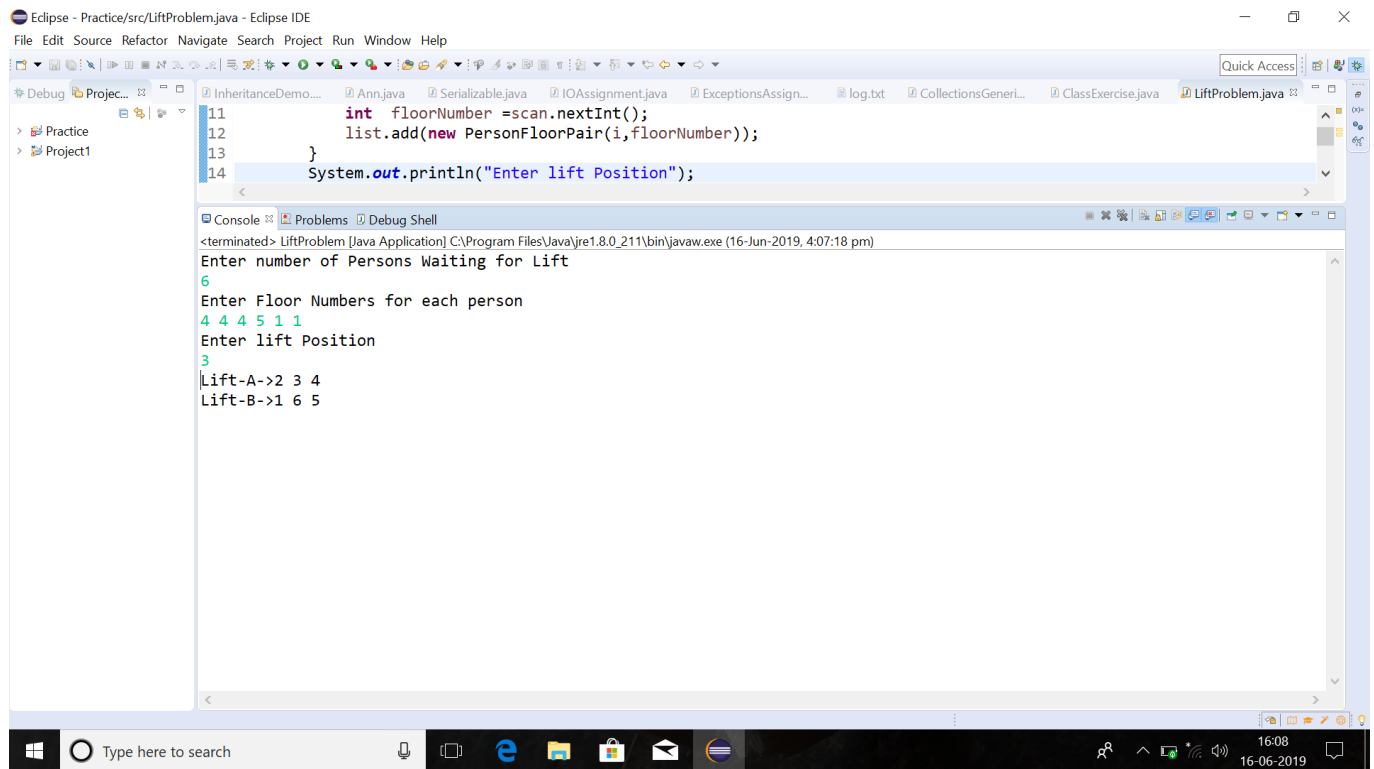


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1 import java.util.*;
2 public class LiftProblem {
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```
<terminated> LiftProblem [Java Application] C:\Program Files\Java\jre1.8.0_211\bin\javaw.exe (15-Jun-2019, 5:53:57 pm)
Enter number of Persons Waiting for Lift
6
Enter Floor Numbers for each person
3 4 5 5 1 1
Enter lift Position
2
Lift-A->2 3 4
Lift-B->1 6 5
```

[source->LiftProblem.java]

One Edge-Case (more members going up)



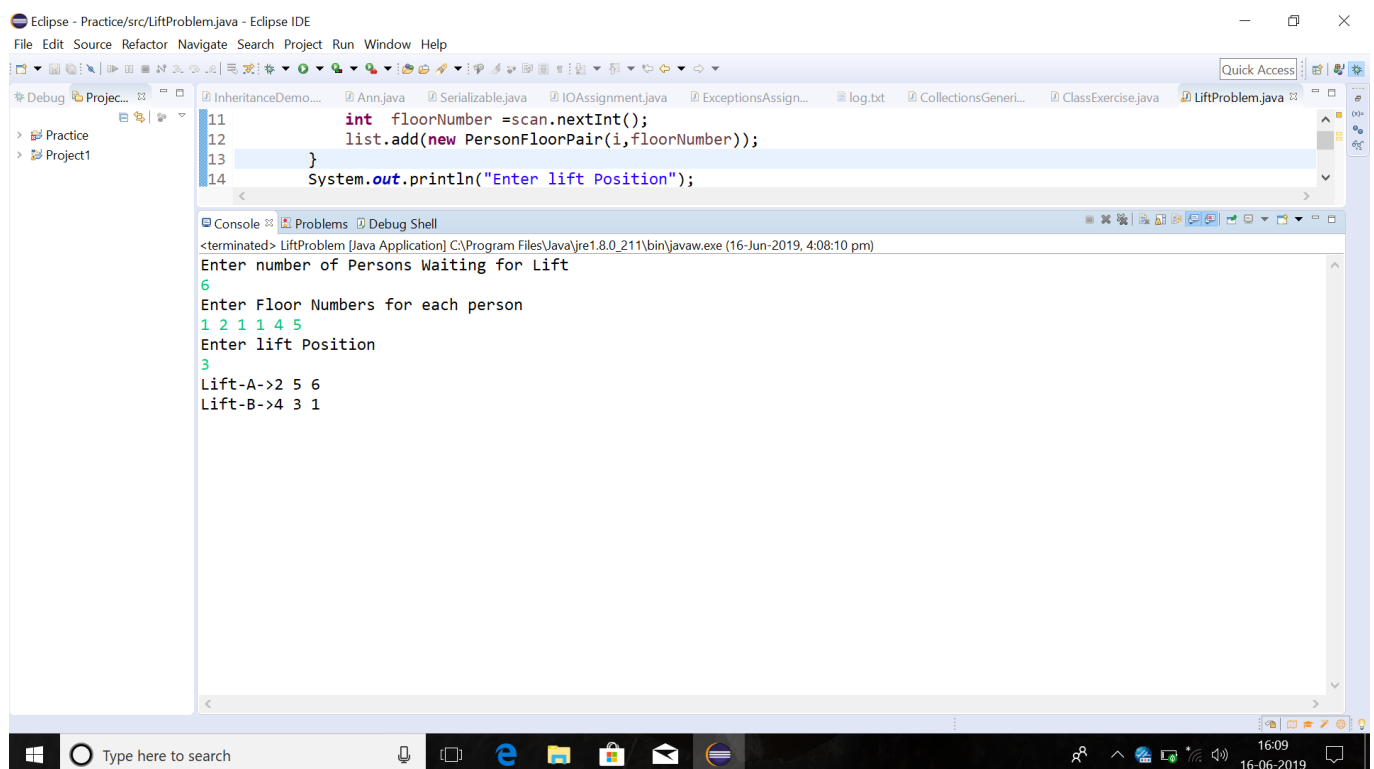
The screenshot shows the Eclipse IDE with the file `LiftProblem.java` open. The code in the editor is as follows:

```
11     int floorNumber = scan.nextInt();
12     list.add(new PersonFloorPair(i, floorNumber));
13 }
14 System.out.println("Enter lift Position");
```

The console output shows the program's execution:

```
<terminated> LiftProblem [Java Application] C:\Program Files\Java\jre1.8.0_211\bin\javaw.exe (16-Jun-2019, 4:07:18 pm)
Enter number of Persons Waiting for Lift
6
Enter Floor Numbers for each person
4 4 4 5 1 1
Enter lift Position
3
Lift-A->2 3 4
Lift-B->1 6 5
```

## Second-Edge case(more members going down)



The screenshot shows the Eclipse IDE with the file `LiftProblem.java` open. The code in the editor is the same as in the first screenshot:

```
11     int floorNumber = scan.nextInt();
12     list.add(new PersonFloorPair(i, floorNumber));
13 }
14 System.out.println("Enter lift Position");
```

The console output shows the program's execution for a second edge case:

```
<terminated> LiftProblem [Java Application] C:\Program Files\Java\jre1.8.0_211\bin\javaw.exe (16-Jun-2019, 4:08:10 pm)
Enter number of Persons Waiting for Lift
6
Enter Floor Numbers for each person
1 2 1 1 4 5
Enter lift Position
3
Lift-A->2 5 6
Lift-B->4 3 1
```