**44-542 Object-Oriented Programming**

**Lab13: Sets and Maps Lab**

**Objective: Covers the usage of Exception handling, Inheritance, Interfaces, abstract classes, Sets and Maps**

**NOTE:**

* Do not hard code any values.
* Go through the API provided for all Interfaces, classes details.
* Check the sample output to know how the results need to be printed.
* Read every instruction carefully and follow them strictly.
* Do not change the name of the attributes, and methods given in API.
* You need not generate Javadoc for this project.
* @author annotation must contain your full name for all the classes in this project.
* Use @override annotation for every relevant method in all the classes of your project.

**How to View Javadoc**:

Go to “Javadoc” -> “index.html” to access the javadocs.

**Steps for Project Creation:**

1. Create a project and name it as ***Lastname*\_Lab13SetsAndMaps** where Lastname is your last name.
2. Create a package and name it as **hospital**.
3. Define the classes given in the API provided to you.
4. Create a driver class based on the comments provided to you in **HospitalDriver.java** file.
5. Check the sample output to know the proper appearance of your output.

The input file **input.txt** is provided to you, use the same file to read the data.

**Sample Output:**

|  |
| --- |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Patient Details:  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  HospitalName: SSM Health | St. Francis Hospital, HospitalAddress: 2016 South Main Street, Maryville, MO 64468  First Name: Harry  Last Name: Potter  Insurance ID: 11112  Age: 11  Gender: M  Bill Amount Generated before Insurance deduction:75.39  Insurance Company Name: Lewermark Insurance, Insurance Coverage: 500.0  Insurance Plan Name: Preferred provider organizations (PPOs) plan  Amount to be paid by after insurance deduction: 60.312000000000005  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  HospitalName: SSM Health | St. Francis Hospital, HospitalAddress: 2016 South Main Street, Maryville, MO 64468  First Name: Marry  Last Name: Jane  Insurance ID: 22222  Age: 13  Gender: F  Bill Amount Generated before Insurance deduction:110.0  Insurance Company Name: Lewermark Insurance, Insurance Coverage: 1500.0  Insurance Plan Name: Point-of-service (POS) plan  Amount to be paid by after insurance deduction: 88.0  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  HospitalName: SSM Health | St. Francis Hospital, HospitalAddress: 2016 South Main Street, Maryville, MO 64468  First Name: John  Last Name: Graham  Insurance ID: 9999  Age: 23  Gender: M  Bill Amount Generated before Insurance deduction:50.39  Insurance Company Name: Lewermark Insurance, Insurance Coverage: 700.0  Insurance Plan Name: Health maintenance organizations (HMOs) plan  Amount to be paid by after insurance deduction: 37.792500000000004  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  HospitalName: SSM Health | St. Francis Hospital, HospitalAddress: 2016 South Main Street, Maryville, MO 64468  First Name: Ben  Last Name: Shomber  Insurance ID: 4455  Age: 15  Gender: M  Bill Amount Generated before Insurance deduction:43.24  Insurance Company Name: Conseco, Insurance Coverage: 700.0  Insurance Plan Name: Health maintenance organizations (HMOs) plan  Amount to be paid by after insurance deduction: 34.592000000000006  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  HospitalName: SSM Health | St. Francis Hospital, HospitalAddress: 2016 South Main Street, Maryville, MO 64468  First Name: Charlie  Last Name: Whouri  Insurance ID: 6055  Age: 30  Gender: F  Bill Amount Generated before Insurance deduction:43.24  Insurance Company Name: Conseco, Insurance Coverage: 650.0  Insurance Plan Name: Health maintenance organizations (HMOs) plan  Amount to be paid by after insurance deduction: 32.43  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Patients assigned to doctor "Lisa DiStefano":  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  [First Name: Ben  Last Name: Shomber  Insurance ID: 4455  Age: 15  Gender: M, First Name: Marry  Last Name: Jane  Insurance ID: 22222  Age: 13  Gender: F, First Name: Harry  Last Name: Potter  Insurance ID: 11112  Age: 11  Gender: M] |

**Submit you solution by following the steps below:**

* Save your files in NetBeans.
* Zip your entire Project. (It should be called **Lastname\_Lab13SetsAndMaps**.**zip** where Last name is your last name.)
* Submit the Zip file to the **Lab13SetsAndMaps** dropbox.
* Download the Zip file which you have submitted.
* Look into the Zip file and verify the class files are updated. If not resave your project in NetBeans and resubmit.