**44-542 Object Oriented Programming**

Lab Exam3

* Import/Open the given Java project and rename it to your last name (Ex: BandiPracticeLabExam03)
* You have to write the source code only in the place of throw new UnsupportedOperationException("Not supported yet."); in the .java files
* Do NOT change any code in the test folder.

Package: mappings (all Java files go in this package)

Class **Person**:

Attributes

**private String name;//represents the full name**

Methods and Constructors

* One-argument constructor to initialize **name**.
* A getter for **name**.
* **public String toString():**returns a String which contains person’s name. For example, a sample return string of a Person with **name** = “Bruce Brown” is given as follows:

Bruce Brown

Class **Movie**:

Attributes

**private String revenue;//revenue of the movie**

**private Person director;//director of the movie**

**private String movieReleasedYear;//release year of the movie**

Methods and Constructors

* One three-argument constructor, with arguments in the same order as the attributes listed above.
* A getter for each attribute.

Class **MovieMapping**:

implements **Iterable**

Attributes

**private HashMap<Person,LinkedList<Movie>> actorsActed;**

Methods and Constructors

* One no-arg constructor that initializes **actorsActed** to a new empty HashMap.
* A getter for **actorsActed.**
* **public void addMovie(Person person, Movie movie):**

This method adds a new entry to the actorsActed. The first parameter is the key for entry. Second parameter should be appended to the linked list value of the person in hashMap.

**Hint**: If movies associated to the person is null then add the person with new LinkedList<> to the hashMap.

* **public int findNumberOfActors (String directorName,String releasedYear,String revenue):** This method returns the number of actors who have acted with the directorName, releasedYear and revenue.
* **public Set<String> findRevenuesMadeByDirector(String directorName):** This method returns set of all the revenues directed by given director. (You can return either TreeSet or HashSet.)
* **public List<Person> findActorsActed(String revenue, String releasedYear):** This method returns list of actors acted for a revenue in given year.
* **public Iterator iterator():** returns an iterator over **actorsActed.**
* **public int size():** returns size of the hashMap.

Class **MovieDriver:**

* Follow the instructions provided in the **MovieDriver.java** class

**Sample Input and Output**

* Input file is provided in the root folder
* Test cases are provided in the test folder. Do NOT change this file.
* Ensure you run the test file and check whether you tested 100% of the test cases correctly.