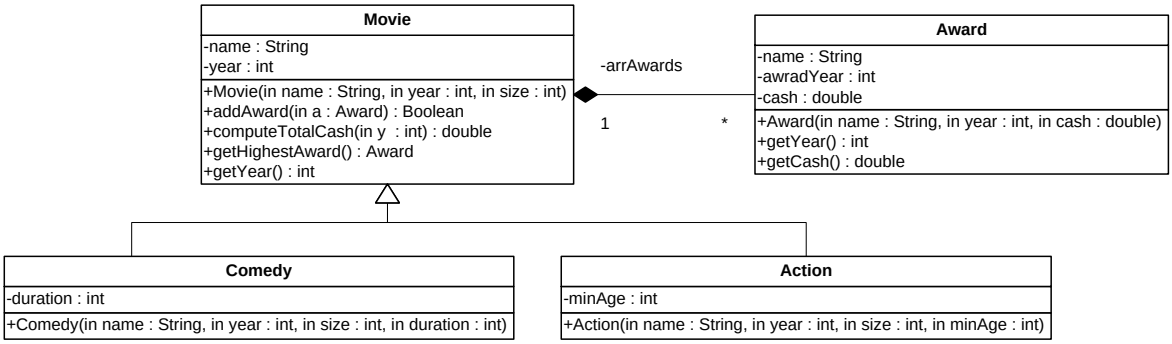
King Saud University
College of Computer and Information Sciences
Department of Computer Science
CSC113 – Computer Programming II – Midterm 1 Exam – Spring 2014

Exercise1:



Award class***:***

- Attributes:
  - ***name***: the name of the award.
  - ***awardYear:*** the year of the award.
  - ***cash:*** the amount of money obtained if the award is won.
- Methods:
  - ***Award (name: String, year: int, cash: double)***: constructor
  - ***getYear()*:** this method returns the year of the award.
  - ***getCash()*:** this method returns the cash of the award.

Movie class

- Attributes:
  - ***name***: the name of the movie.
  - ***year:*** the year of the movie.
- Methods:
  - ***Movie (name: String, year: int, size: int)***: constructor.
  - ***addAward(a: award)*:**this method adds the Award ***a*** to the Movie. It returns *true* if the Award ***a*** is successfully added. Otherwise, it returns *false*.
  - ***computeTotalCash(y: int):***this method returns the total cash of the *Awards* won by the movie in the year ***y***.
  - ***getHighestAward( ):*** this method returns the Award, won by the movie, having the highest cash.
  - ***getYear()*:** this method returns the year of the movie.

Action class:

- Attributes:
  - ***minAge***: the minimum age that a spectator should have to be allowed to watch the Action movie.
- Methods:
  - ***Action (name: String, year: int, minAge: int):*** constructor.

Comedy class:

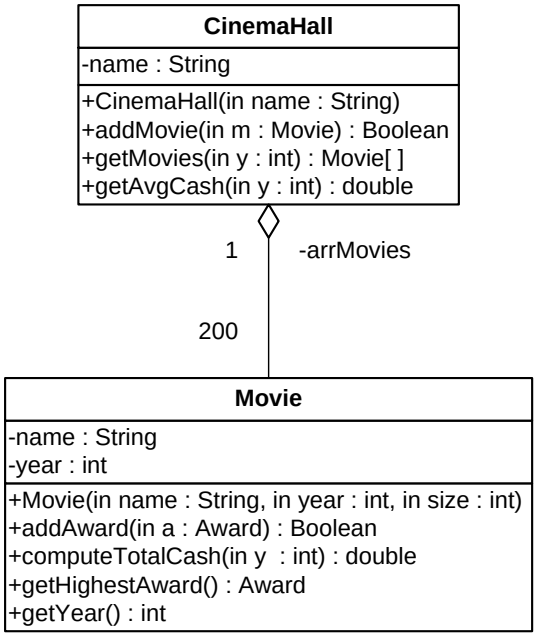
- Methods:
  - ***Comedy (name: String, year: int, duration: double):*** constructor.

QUESTION: Translate into Java code the following classes:

- ***Award*** *(do not implement the* ***getters).***
- ***Movie*** *(do not implement the* ***getYear*** *method),*
- ***Comedy.***

Exercise 2:

Let's consider the same Movie class described in exercise 1.



CinemaHall class***:***

- Attributes:
  - ***name***: the name of the cinema hall.
- Methods:
  - ***CinemaHall(name: String)***: constructor
  - ***addMovie (m: Movie*)*:***this method adds the movie ***m*** to the cinema hall. . It returns *true* if the *Movie* ***m*** is successfully added. Otherwise, it returns *false*.
  - ***getMovies(y: int):***this method returns an array containing all the movies, of the cinema hall, released in the year ***y***.
  - ***getAvgCash (y:int):***this method returns the average cash of the *Awards* won by the movie in the year ***y***.

QUESTION: Translate into Java code the class ***CinemaHall.***