Lab Test 3

Check Your Lab Test Environment

- Check whether your computer is working well.
- Print “Hello World!” in the IntelliJ IDEA Community version.
- Please check the path of the *.java files for the submission.

Announcement

- Cheating (including googling) is forbidden during the test. There will be a strong penalty if you're caught cheating.
- You can leave after you submit the codes, but there is a lab session after the test that cover the midterm exam scope.

Fantasy Football Premier League

- Fantasy football is a game in which you build your own squad from the pool of real players in a football league (English Premier League in this case). Your score is determined by the players' performances in the real world.
- Your goal is to implement the player database for the Fantasy Premier League.

Fantasy Football Roster Example

Forwards

Player	Team	Points	Cost	Player	Team	Points	Cost
Agüero	Man City	62	£12.1	Gray	Watford	18	£5.7
Aubameyang	Arsenal	59	£11.1	Rodriguez	Burnley	19	£5.7
Kane	Spurs	55	£10.8	Cutrone	Wolves	15	£5.7
Firmino	Liverpool	52	£9.6	Murray	Brighton	11	£5.6
Jesus	Man City	30	£9.5	Adams	Southampton	16	£5.5
Lacazette	Arsenal	20	£9.3	Kodjia	Aston Villa	1	£5.4
Vardy	Leicester	74	£9.2	Solanke	Bournemouth	15	£5.4
Lukaku	Man Utd	0	£8.5	McGoldrick	Sheffield Utd	11	£5.4
Rashford	Man Utd	56	£8.4	Drmic	Norwich	10	£5.4
Callum Wilson	Bournemouth	51	£8.0	Carroll	Newcastle	4	£5.4
Abraham	Chelsea	61	£7.8	Vydra	Burnley	6	£5.3
Haller	West Ham	41	£7.4	Origi	Liverpool	19	£5.3
Jiménez	Wolves	43	£7.2	Muto	Newcastle	5	£5.3
Arnautovic	West Ham	0	£7.0	Srbeny	Norwich	4	£5.3

Fantasy Football

- Things to note:
  - We want to group all these players by their home teams.
  - We want to make the data access as fast as possible using HashMap.
  - You can assume that there are no two players whose teams and names are the same.
  - There will be no queries for teams and players not in the “roster.txt” file.

Fantasy Football

- Write `initializeDB(String filepath)` function in `FantasyFootballDB` class that reads the input roster file and fills up the database with players and their teams.
- It takes “roster.txt” as input.
  - Each line in the file contains name, team, score, and cost.
  - Each of the above information is listed in “name,team,score,cost” order, and separated by a comma.

Fantasy Football

- Write public methods `printPlayerInfo(String teamName, String playerName)` and `printTeamInfo(String teamName)` in `FantasyFootballDB` class.
- `printPlayerInfo` method takes in the team name and the player name and outputs the score and the price information of that player.
    - Example output message: “score: 12, price: 45.7”
- `printTeamInfo` method takes in the team name and outputs the sum of all the scores of the players in that team and the sum of all the prices of the players in that team.
    - Example output message: “score: 645, price: 1342.43”