Sports Simulator

1. Check out the project called "132Spring13LabWeek03".
2. Study the Athlete class to see what it is and what the API looks like. (Do any of the names look familiar?)
3. Write a class called "OffenseComparator" that implements the Comparator interface so that we can compare two Athletes based on their **Offensive** skill levels.
4. Write a class called "DefenseComparator" that implements the Comparator interface so that we can compare two Athletes based on their **Defensive** skill levels.
5. Study the abstract class called "SportsTeam". Think about what an extension of this class would have to look like. Notice how the checkEligibility method works.
6. Edit the "FootballTeam" class (which extends SportsTeam) as follows:
    a) Implement the method initializeRoster (which was declared as abstract in the superclass). It should fill up the roster with athletes. Note that the roster has already been instantiated in the superclass constructor. The number of athletes you put on the roster should be determined by the constant ROSTER_SIZE.
    b) Write an *initialization block* that accomplishes the following:
        - Initialize the offensiveStarters so that it contains a team consisting of the players on the roster who have the highest offensive skill level. Hint: Use Collections.sort and one of your Comparators. (The size of a team is determined by the constant TEAM_SIZE).
        - Initialize the defensiveStarters in a similar way using the other Comparator.
    c) Write a constructor that takes the team name as a parameter. It only needs to set the teamName, since the roster is taken care of by your initialization block.
7. Try running the main method in the Simulator class!
8. Override the checkEligibility method. Your method should call the superclass version of checkEligibility to first make sure the players are skillful enough. For football teams, the ENTIRE TEAM is also ineligible if there is a player on the team named "Vilma".

If you have extra time:

9. GET CREATIVE! Improve the playGame method of the FootballTeam class so that it actually does something interesting, somehow taking into account the skill levels of the players on the four starting lineups.