

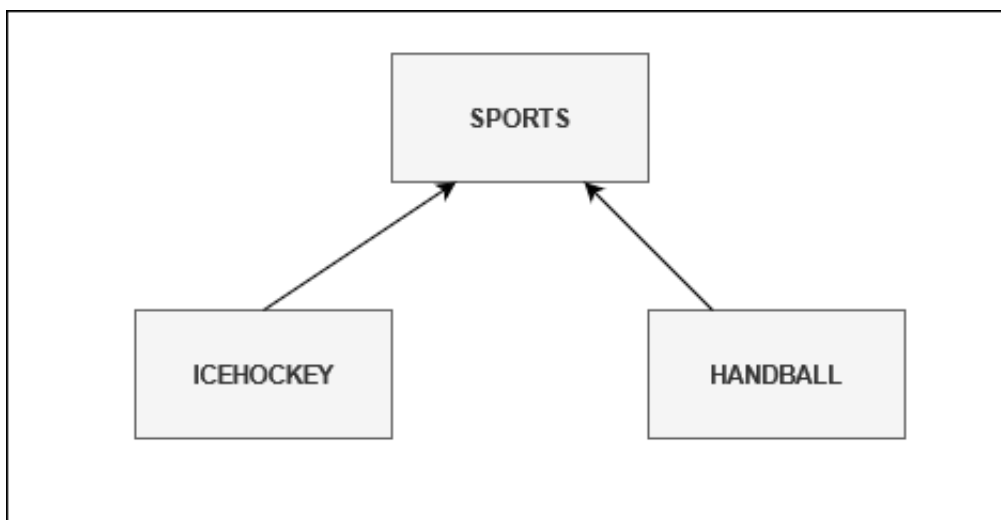
## Quiz 3

**Subject:** Inheritance, Polymorphism

**Due Date:** 17.04.2021, 11:59

### 1 Problem

Write an object oriented program that creates the standing tables from the given all matches result separately of the Ice Hockey and Handball sports.



#### 1.1 Information about the sports

- In Ice Hockey, in which three points are awarded to the team winning a match, with no points awarded to the losing team. If the game is drawn, each team receives one point.
- In Handball, in which two points are awarded to the team winning a match, with no points awarded to the losing team. If the game is drawn, each team receives one point.
- If two or more teams are on the same number of points. The number of goals scored against a team is subtracted from the number of goals it has scored itself. The bigger the goal difference, the better.

#### 1.2 Restrictions

- You must implement your codes by using inheritance and polymorphism.
- There are 4 teams in each sport type.
- The initial scores of the 4 teams in each sport type are zero.
- Since each group has 4 teams separately, there will be 6 match totally in each group. Therefore, there are 12 match (fixed 12 lines) totally in fixtures.txt

### 1.3 Sample Input and Outputs

- Sample input file named as fixtures.txt:

[First letter of sport]tab[name of first club]tab[name of second club]tab[match result]newline

```
1 I Vancouver Canucks Dallas Stars 3:0
2 H Nilufer Bld. Guneyssu 18:23
3 H Guneyssu IzmirBB 19:21
4 I Colorado Avalanche Vancouver Canucks 2:1
5 H Goztepe IzmirBB 31:17
6 I Vancouver Canucks St. Louis Blues 3:3
7 I Dallas Stars Colorado Avalanche 2:3
8 I St. Louis Blues Dallas Stars 1:4
9 H IzmirBB Nilufer Bld. 25:25
10 I Colorado Avalanche St. Louis Blues 2:0
11 H Nilufer Bld. Goztepe 26:30
12 H Guneyssu Goztepe 22:14
```

Figure 1: Sample fixtures.txt

- Sample output files.

[ranking.]tab[name of club]tab[number of played matches]tab[number of matches won]tab[match with an even score or tie]tab[number of matches loss]tab[number of sets For:the number of sets Against]tab[total points]newline

- handball.txt is as shown below:

```
1 1. Guneyssu 3 2 0 1 64:53 4
2 2. Goztepe 3 2 0 1 75:65 4
3 3. IzmirBB 3 1 1 1 63:75 3
4 4. Nilufer Bld. 3 0 1 2 69:78 1
```

Figure 2: handball.txt

- icehockey.txt is as shown below

```
1 1. Colorado Avalanche 3 3 0 0 7:3 9
2 2. Vancouver Canucks 3 1 1 1 7:5 4
3 3. Dallas Stars 3 1 0 2 6:7 3
4 4. St. Louis Blues 3 0 1 2 4:9 1
```

Figure 3: icehockey.txt

- You are expected to write the output of your program to a text file named type\_of\_sport.txt for each type of sport. (for example: icehockey.txt, handball.txt.)
- The explanation of the standing table columns for each sport types are as follows:
  - First column defines the ranking
  - Second column defines the club name
  - Third column defines the number of played matches

- Fourth column defines the number of matches won
- Fifth column defines the number of times a team has finished a match with an even score or tie
- Sixth column defines the number of matches loss
- Seventh column defines the number of sets For : the number of sets Against
- Eighth column defines the total number of points earned

## 2 How to run your program

The input file is going to be given as program argument. In order to test your program, you should follow the following steps:

- Upload your java files to your server account (dev.cs.hacettepe.edu.tr)
- Compile your code (javac \*.java)
- Run your program (java Main fixtures.txt)
- Control your output data and format.

**P.S. Output files (handball.txt, icehockey.txt) will be evaluated automatically. So, please be careful about the format of output files and be sure that they are exactly same with the output files as we have shared.**

## 3 Grading Policy

Task	Point
OO Design (Inheritance, polymorphism)	20
Correctness of output file (handball.txt)	40
Correctness of output file (icehockey.txt)	40
Total	100

## 4 Important Notes

- Test your program on “dev.cs.hacettepe.edu.tr” before submission. Please test your code before submitting it. The submissions which can not compile will not be evaluated.
- **You will submit your work to the Codepost platform. If you can’t submit to the Codepost, then you will submit your work to the Department’s submission system (submit.cs.hacettepe.edu.tr) as shown below. If you submit to the Codepost, please don’t submit to the Department’s submission system again.** Do not submit any file via e-mail. Other type of submissions especially by e-mail WILL NOT BE ACCEPTED.
- **Submission Format:** File hierarchy must be zipped before submitted (Not .rar, only .zip files are supported by the system)

- <studentid>.zip
  - src (Main.java, \*.java)

- Save all work until the quiz is graded.
- Do not miss the deadline. Submission will be end at 17/04/2021 11:59, the system will be open until 11:59. The problem about submission after 11:59 will not be considered.