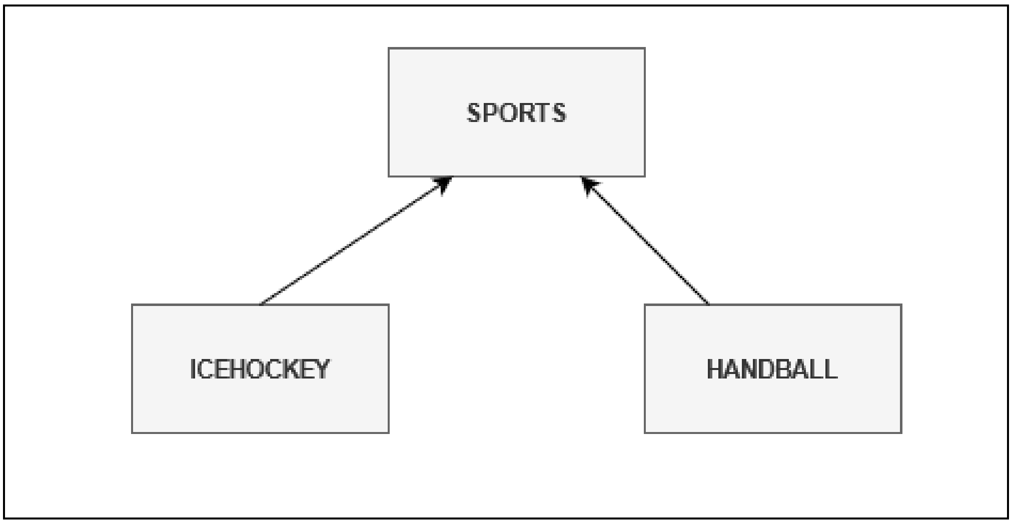
Quiz 3

Subject: Inheritance, Polymorphism
Due Date: 16.11.2023, 23:00

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

```
I   Vancouver Canucks   Dallas Stars    3:0
H   Nilufer Bld.    Guneysu 18:23
H   Guneysu IzmirBB 19:21
I   Colorado Avalanche  Vancouver Canucks   2:1
H   Goztepe IzmirBB 31:17
I   Vancouver Canucks   St. Louis Blues 3:3
I   Dallas Stars    Colorado Avalanche  2:3
I   St. Louis Blues Dallas Stars    1:4
H   IzmirBB Nilufer Bld.    25:25
I   Colorado Avalanche  St. Louis Blues 2:0
H   Nilufer Bld.    Goztepe 26:30
H   Guneysu 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.  Guneysu 3   2   0   1   64:53   4
2.  Goztepe 3   2   0   1   75:65   4
3.  IzmirBB 3   1   1   1   63:75   3
4.  Nilufer Bld.    3   0   1   2   69:78   1
```

Figure 2: handball.txt

- icehockey.txt is as shown below

```
1.  Colorado Avalanche  3   3   0   0   7:3 9
2.  Vancouver Canucks   3   1   1   1   7:5 4
3.  Dallas Stars    3   1   0   2   6:7 3
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
- Compile your code (javac *.java)
- Run your program (java Main fixtures.txt)
- Control your output data and format.

3 Grading Policy

Task	**Point**
Submitted	1
Compiled	9
Correctness of output file (handball.txt)	45
Correctness of output file (icehockey.txt)	45
Total	100