Group assignment 4: Refined OO model

Þróun hugbúnaðar
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1 Introduction

In this document there's the class diagram for group F2a. Group members are: Einar Helgi Þrastarson (personal ID number: 110287-2919), Hannes Pétur Eggertsson (240889-2939) and Sigurður Birkir Sigurðsson (120589-2539). Our project is to build an user interface for a fantasy football game. In our class diagram we felt it made sense to split the classes into two categories, back-end classes and front-end classes. Then, in a third diagram there's another diagram that shows the connections between the back-end and We will all present this document on Wednesday, March ?th 2015.

1.1 Notation

In our class diagrams we use the following notation:

- − means a private variable or method (not directly accessable by other classed).
- \+ means a public variable or method (directly accessable by other classes).

Each class in the diagram has four sections shown below:

The class' name.
Short description of the class.
The class' variables and their type listed on the format: −/+ `type1 variable1` −/+ `anotherClass variable2`
The class' methods listed on the format: −/+ `type1 method1(type variable,...)` −/+ `type2 method2(...)`

If the class wasn't created by us it is filled with red. Classes are then interconnected using 3 types of arrows:

Class A —*uses*→ Class B

Class A —*extends*→ Class B

Class A —*implements*→ Class B

In most cases we can tell how many classes 'Class A' and 'Class B' will be associated with, this is shown by placing an arrow at the beginning and end of an arrow, e.g.

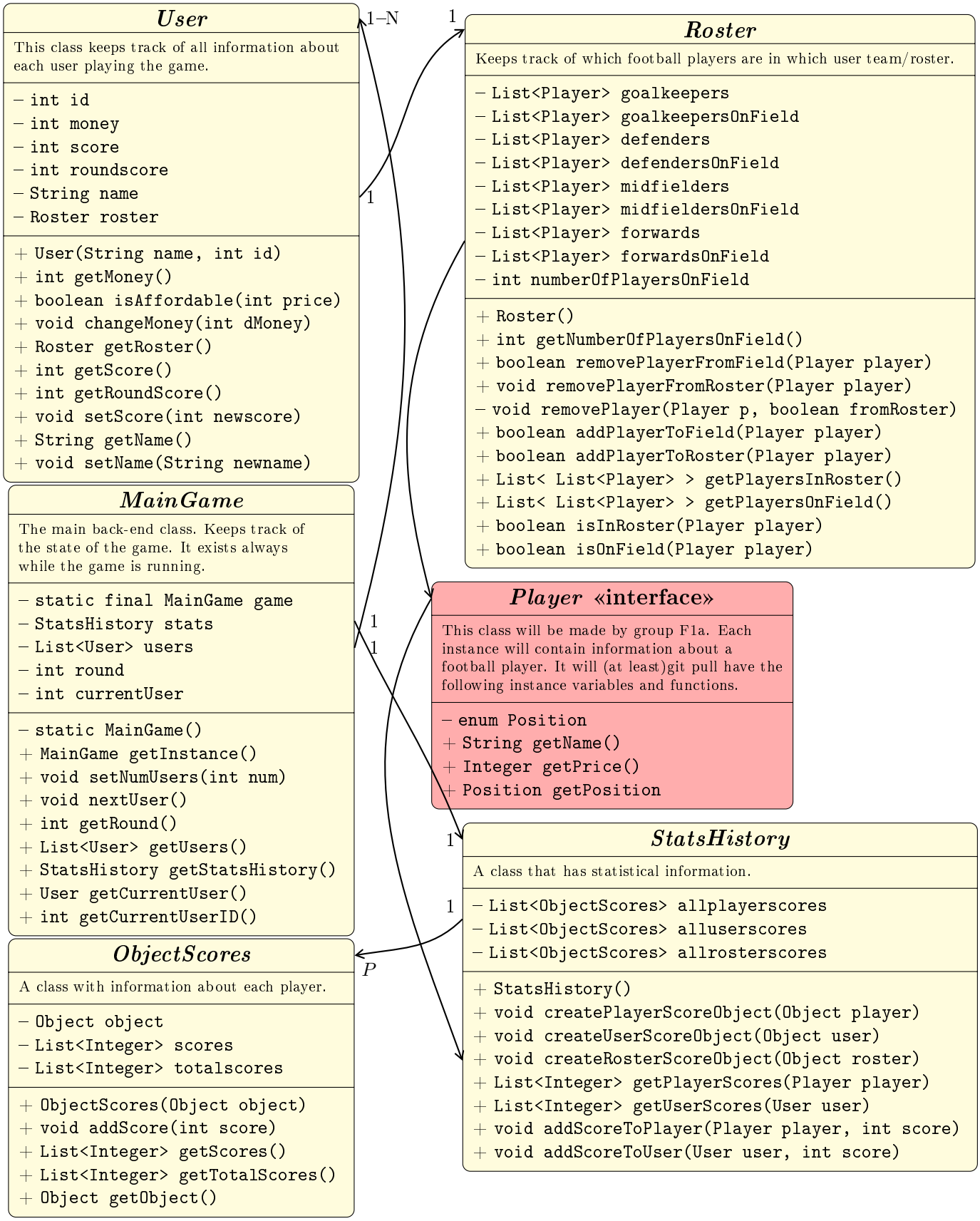
Class A —1 *uses* 0–10→ Class B

if each instance of 'Class A' will use 'Class B' in a range of 0 to 10 instances.

2 Class diagram

We decided to split our class diagram into two figures: **Back-end classes** and **Front-end classes**. The back-end classes take care of storing and keeping track of all information as the game is running. The front-end classes take care of displaying the information to the users playing the game as well as handling their input.

2.1 Back-end classes



N is er number of total users in the current game and P is the total amount of football players in the game.

2.2 Front-end classes

Main

The main front-end class. It is initialized at the start of the game and runs until the game is terminated.

- static final Main instance
- JFrame frame
- JPanel right
- JPanel change
- MainGame game

- static Main()
+ static Main getInstance()
+ void startGame()
+ void restartFrame()
+ void setPanelAsMarket()
+ void setPanelAsScore()
+ void setPanelAsRoster()
+ void setPanelAsLeague()
+ void setPanelAsFieldViewer()
+ Dimension returnSizeForPanel()
+ static void main(String[] args)

Start Panel

Desc.

- JPanel center
- JTextField field
- List<String> names
- int numEmpty
- JButton startGame
- JButton addPlayer

+ StartPanel()
+ addPlayerHandler()
+ void changeCenter()

2.3 Connections between front-end and back-end classes

3 Sequence diagrams