Programming Project 1 Documentation

Jade Pearl

CMSC 215 Intermediate Programming

Professor Romerl Elizes

University of Maryland Global Campus

UML Class Diagrams

|  |
| --- |
| **Height** |
| -feet : int  -inches : int |
| +Height(int feet, int inches)  +toInches() : int  +toString() : String |

|  |
| --- |
| **Player** |
| -name : String  -height : Height  -age : int |
| +Player(String name, Height height, int age)  +getName() : String  +getHeight() : Height  +getAge() : Int  +toString() : String |

|  |
| --- |
| **Project1** |
|  |
| + main(String[] args) : void |

Test Plan

I plan on doing three scenarios, one where the user chooses not to enter a player where the program will then not store any players. Then, I will have a scenario where one player is entered, that will test if all of the constructors are working correctly. Lastly, I will have the user input multiple players into the program to be loaded into the ArrayList and ensure that the getters of the Player class, toInches method of the Height class, and the toString method of both classes function properly. If there was only one player that was input into the program, it would be hard to recognize if the program was properly comparing the height and ages of each player because no real comparisons had to be made. The first scenario where the user enters no player helps make the user aware that they cannot enter nothing because nothing would be output. By entering multiple players into the program, everything should be tested and all bases covered.

Reflection

This project taught me how to use the ArrayList class. I have not used this class before doing this project and aside from reading about it in the textbook, I was not sure how to properly implement it in this case. This project was also a huge help in reviving my knowledge in programming with Java and how the ability to create the separate classes in Java. I had been used to C++ so returning to Java after a few years really helped thanks to this project. I have a deeper understanding of classes and the construction and use of immutable classes. I also had to remember how to do certain iterations through a loop for the ArrayList. In the program I had used a for loop as follows to iterate through the ArrayList: for (Player p : players) which iterates through each player object in the ArrayList and allows the program to evaluate each element in the list.