

Enock Yared

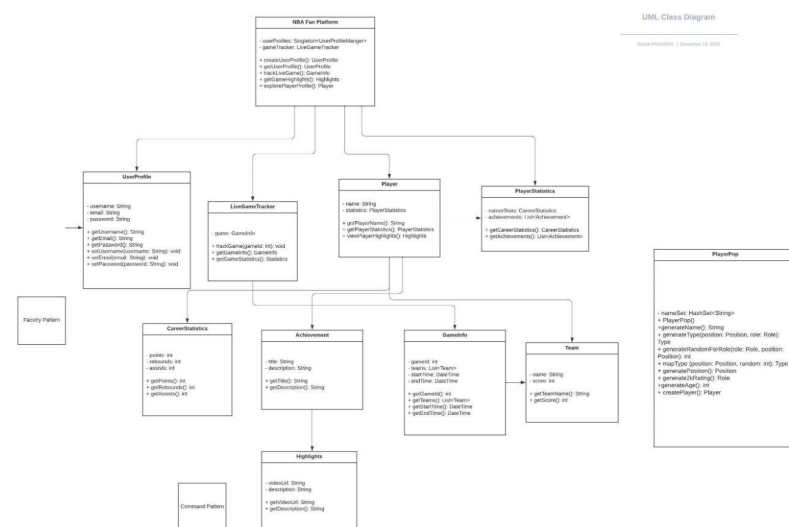
NBA Simulator

## Final Project Report

### Final State of System:

The final state of my system isn't exactly where I would like it to be. I have implemented a multi-season NBA season generator. It begins by reading a list of team rosters from the NBA and then listing the full rosters of every team in a user-friendly command line screen. Then they can select a team and follow how they do overall throughout the season and have specific box scores against each opponent. It then chooses random teams to place them into a playoff bracket and then the champion is selected through a series of semi-finals quarter-finals then finals. There is then an option to go through another season. This is not what I fully intended to implement. I wanted the playoffs to be based on their season stats and the option to make a fake league and run simulations through fake players and fake player types similar to the game NBA2k. I began implementing the autogeneration and got players to be populated but couldn't quite get it down before the deadline.

### Final Class Diagram and Composition Statement:



**Third-Party code vs. Original code Statement:**

My original code includes all files except for my File Reader and any Rating, Player Type, or Role you see. Those come from online sources such as NBA 2k Ratings, Basketball Reference, and even ESPN. This is because they are very extensive and huge arrays that would take months to fully tailor to the actual player types. Instead, I used real game info that already had that data and simply formatted it to my liking. The File Reader idea I had scraped from a YouTube video which I have provided the link below as well as other online sources

Player Type Links:

[https://docs.google.com/spreadsheets/d/17c7YiZPCUfjkOy5\\_Pde4o3U\\_HQ8bJ-5s0502P5hxwvE/edit?copiedFromTrash#gid=0](https://docs.google.com/spreadsheets/d/17c7YiZPCUfjkOy5_Pde4o3U_HQ8bJ-5s0502P5hxwvE/edit?copiedFromTrash#gid=0)

File Reader Idea:

[https://www.youtube.com/watch?v=M\\_5o4Ixb-8U](https://www.youtube.com/watch?v=M_5o4Ixb-8U)

<https://www.programiz.com/java-programming/filereader>

NBA Rosters/Info:

<https://www.espn.com/nba/players>

<https://www.basketball-reference.com/>

**Statement on the OOAD process for your overall Semester Project:**

One significant challenge I encountered during the analysis and design of our Object-Oriented (OO) semester project was not knowing exactly what I wanted from the project. At the beginning of the project, I had an unclear vision and frequently changed my expectations. This ambiguity made it challenging to establish a stable foundation for my design.

As I delved into the design phase, I realized that ensuring the system's scalability and performance was a critical concern. I needed to design my object-oriented system in a way that could handle a growing user base and a large volume of data efficiently.

Another challenge I faced was managing dependencies within my object-oriented system. As my project grew in complexity, I encountered issues related to tight coupling between classes and modules. This led to difficulties in maintaining and extending the codebase.