The GAMING ROOM

# CS 230 Software Design Template

Version 1.0

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## Document Revision History

| Version | Date | Author | Comments |
| --- | --- | --- | --- |
| 1.0 | 02/03/2023 | Shatae Evans | Added revisions to such software document to include executive summary, system architecture, domain model, design constraints. I also added some recommendations to conclude this document. |

## Executive Summary

*The Gaming Room project aims to develop a multi-platform web-based game on the current Android-only game* ***Draw it or lose it.*** *The objective of this game is for multiple teams to play four rounds each in a minute. Images are pulled from the image library and the team guesses until the time runs out. If no answer is given, then each member of the opposing team may answer until the 15 seconds have elapsed.*

## Constraints

*Requirements as follows:*

* *The game and team names must be unique to allow users to check whether a name is in use when choosing a team name*
* *Only one instance of the game can exist at any time.*
* *Each team should have multiple players options*
* *Must run proficiently on multiple platforms*

## System Architecture

Entities create relationships between games, teams, and player classes. This means that inheriting or receiving all information from the entity. In a UML this can be indicated with inheritance. This also makes the entity a super class. Now looking at their relationship, we can see that the team and its’ players are of the “has a” type. Games have teams, and game services has games. When using UML, we call it Aggregation (HAS-A). If a user has an “a’ type it then means that it is an instance of one class, and it has a reference to an instance of another class. Looking at this chart, we can now see that the Game Service has a Player reference.

Domain Model:

This model will be used for a map of the design model for the game system. Described on this UML which is known as a Unified Modeling Language this forms a connection between the players and team throughout the game. The arrow points to know n classes that will inherit an attribute from a class. The arrow pointing to the Singleton Tester is the Program Driver which is used to test the code. The line with the numbers gives oof the connection within the classes. When you have lines, this describes a connection with each class and who they go with. This diagram will later be introduced with final conduction of the project.

***GAMING ROOM***

Diagram

Description automatically generated

## Evaluation

Based on my previous experiences, I evaluated the features, strength, and weaknesses of each operating system platform (Linux, Mac, and Windows) and other mobile devices. I considered the requirements listed below and articulated the results for each. Here is a table below on how each must work together for the customers situation holistically.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Development Requirements | Linux | Mac | Windows | Mobile |
| Client side | It requires a lot of expertise and time. Linux data is required to use the operating system. Maximum cost for Linux users. | Mac is on the expensive side. Yow will spend an average amount of time skill. The terminal commands are quite workable. | Windows is particularly higher priced. Fairly easy to use maneuver through. Minimal knowledge is demanded. | Quite flexible to developers or any client that needs to access any updates. |
| Server Side | Cost efficient. Command shell for easy server configuration and accessibility | They have flexible commands and have easy to use user interface. Access and configurability are outstanding easy to use as well. | Server side is high priced, and user is friendly with GUI. Command prompt is present. | The description is absolute in added devices. The descriptions od specifications differ from each user. Rather difficult to execute than any other devices. |
| Development Operations | A language consisting of a frontend and HTML, CSS, and Java Script libraries that support the other languages. Systems such PHP and Python. | Some development operations are PyCharm, GitHub, and Visual Studio. These languages include CSS and JavaScript. | Languages include HTML, JavaScript, and CSS. Has libraries to reinforce front end languages. Operational tools include PyCharm, Eclipse, and command prompt. | Languages that include HTML, JavaScript, CSS. Other programing languages C++ AMD Python for IDE’s. |

**Recommendations**

Address the following:

* What impact do these technical requirements have on a development team? Consider whether multiple development teams may be needed.
* Are there licensing costs related to the development tools?

* 1. **Security**: With windows it does come with a security software although I would recommend additional protection from another security system to protect user data. Some of these features include encryption and authorization. All these feature work to ensure the user’s information is always kept secure.
  2. **Memory:** In the Draw it or Lose It game Windows comes with a nice feature called storage sense. This feature allows you to keep everything together in the memory space. I wanted to say that Linux also can manage physical and virtual memory that is used in a more efficient way, which ensures a better running system.
  3. **Storage**: Another feature with the storage sense is that this allows you to examine and control files on the drive. It also keeps up with how much memory it has and how much it has left. This feature allows you to enlarge and control ample amount of data.
  4. **Operating Systems Architects**: This operating system allows you to take amore graphical approach. You can play games, download, and run software, and so much more. The Linux operating system is an open program that is powerful, secure and you can count on its performance.
  5. **Systems & Networks**: This network allows games with multiplayers platform to connect and involves a split database. To keep communication open between multiple platforms, the distributed system is recommended. This allows opposite components to share data within a network.
  6. ***Operating Platform****: Windows I think is the most suitable operating system to allow The Game Room to function, and it’s best to use so you wont run into problems with IDEs.* This operating system is an open program that is powerful, secure and you can count on its performance.