3D Tic-Tac-Toe Project Description Report Summary
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Synopsis

3D Tic-Tac-Toe is a 4-player game inspired by the original tic tac toe game. Additional features and rules that we have planned for the game makes it significantly different than the original. Testing is a crucial process in the development of this game, as to ensure the elimination of all errors prior to release. The following report details the requirements of 3D Tic-Tac-Toe and exemplifies the various tests developers can utilize to guarantee all requirements are met.

In total, forty-eight requirements were created for developers and testers to follow when creating 3D Tic-Tac-Toe. A majority of the requirements include testing processes that should be utilized by developers and testers to ensure that each specific requirement is met. When, all requirements are met and no errors are found when running the tests, this is signifying that the game is ready to be released by developers. The requirements are categorized into eleven categories including; functional, data, performance, dependability, maintainability/supportability, security, usability/humanity, look/feel, operational/environmental, cultural/political, and legal.

Product Use Cases

This section of our report goes over the main use cases of our application. We have a total of 12 use cases. Many of which branch out/ are related to 5 base use cases. The original use cases include logging in, logging out, playing the game, entering the in-game shop, and managing in-game settings. The included/extended use cases to the base cases include authenticating logins, connecting to public/private games, adding funds, purchasing items from the shop, as well as verifying sufficient funds when making purchases. We believe that these use cases represent how we believe user's will use all of our product's features.

Functional Requirements

The category of Functional requirements focuses on the game's ability to be utilized by consumers. Acceptance tests for this category will allow for inputs for game play. This requirement being met will allow users to get online, log in, and manipulate and interacts with the gameboard.

Data Requirements

Data requirements should be met in order for the user's data to be stored in the software. When the game is able to store large amounts of data in the system, the requirement should be satisfied, allowing users to play the game continuously while having the application keep track of current and previous moves as well as scores for each player.

Performance Requirements

Performance requirements are concerned with how quickly and accurately data is processed, directly effecting how well the game runs. Meeting these requirements will eliminate lagging in the game as well as allow the game to refresh data and to reset after completion. This is important for us since our application relies heavily on multiplayer which can be heavily impact by slow and inaccurate data between different players.

Dependability Requirements

The Dependability requirements focuses on making sure the game is reliable at all times and compatible with all future updates. Fulfilling this requirement should allow the product to be useable by users online and offline.

Maintainability Requirements

Maintenance and support requirements ensure that the game is updated, can handle large amounts of players, address reports from users, has a tutorial, can handle large amounts of transactions, and is compatible with the platforms that the game is deployed on.

Security Requirements

The Security requirements should be met in order to protect user's data from being accessed by harmful intruders and to make our product less vulnerable from being hacked. This requirement will be met when reports in our software alert developers of suspicious activity, and our product is deemed clean after being scanned by the system.

Usability and Humanity Requirements

Usability and Humanity requirements focuses on making sure that we meet all of the needs of our targeted audience. We intend for our product to be easy to use by consumers, allow users to select from multiple languages, can be used by consumers regardless of ability, allows for personal customizations, and has no offensive language.

Look and Feel Requirements

The category of Look and Feel requirements are concerned with creating a pleasing aesthetic for the consumers. We want to make sure that our product is similar to other tic tac toe themes.

Operational and Environmental Requirements

Operational and Environmental requirements focuses on consumers ability to play our game in their different environments, whether in a dark or light room, users should be able to change the brightness of the game. Some requirements in this category help fulfill other categories, such as, ensuring users can play online, that there are no errors, and that our product is compatible with the platforms that will run our game.

Cultural and Political Requirements

The Cultural and Political requirements guarantee that our product is not offensive to anyone's culture. We also want to ensure that our product follows all of the requirements of the platforms that the game is deployed on.

Legal Requirements

Legal requirements are concerned with how we handle data privacy in this game. We want to make sure that our product is complying with data privacy requirements for each country that our game is deployed in. Furthermore, we also wants to guarantee that we meet the ethical standards of game development.