Team 5 (Network Game Matchmaking)

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## Preface

(Describe the purpose of this document, its expected readership and its version history, including a rationale for the creation of a new version and a summary of the changes made in each version.)

| Version | Date | Changes |
| --- | --- | --- |
| 1.0 | 03/15/2024 | Initial Version |
|  |  |  |
|  |  |  |

### Purpose

This document serves as a comprehensive guide for the development and understanding of the software project titled "Networked Game Matchmaking"

### Audience

The intended audience of this document includes project stakeholders, developers, testers, and anyone involved in the project lifecycle.

## Introduction

(Introduce the software project, its goals, and the problem it aims to solve)

### Project Overview

“Networked Game Matchmaking” is a networked game matchmaking system designed to bring multiple players into a game. It aims for a gaming platform in which three or more users are able to register for an account, join a game lobby, and play games through an automatic matchmaking system. Players are also able to join both new and ongoing games as well as exit them. They are able to interact with one another through the chat throughout the game’s progression. Any misconduct or use of profane language results in the player being banned.

### Project Goals

* Being able to connect multiple players
* Have a working multiplayer game.
* Players can join and leave the game whenever.

## Glossary

(Define key terms and acronyms used throughout the document, unless they are commonly known to each possible stakeholder (e.g., “Cell phone”) AND used with their common meaning. Do not expect your stakeholders to be experts. If in doubt, define a term.)

* **Matchmaking**: A system that connects players together
* **Lobby**: An interface that a player sees before playing the game.
* **Bans**: A way of preventing players from accessing the game.
* **Connection**: How a person accesses the system
* **Chat**: A way of players being able to communicate through messages.
* **Profanity**: Offensive words that aren’t allowed
* **User**: the person using our system,

## User Requirements and Use Cases

(Outline what the system must do from the user's perspective. User stories need to use the format discussed in class and on our slides. Use cases provide detailed scenarios of system interactions.)

### User Stories

(A collection of user stories that apply to the project.)

1. As a registered user, I want to log in securely so that I cannot be held responsible for someone else’s actions.
2. As a game player, I want to be able to add my friends so that I can have fun hanging out with friends while playing a game.
3. As a game player I want to be able to play an interesting game and fun game so that I’m not bored.
4. As a game player I want to play a game with good servers so that I can enjoy the game without lag.
5. As a game player I want to be able to message other players so that I can make friends and communicate with other players.
6. As a parent I want the game chat to be safe so that children aren’t exposed to inappropriate language.
7. As a game player I want to play against other players because I like competition.
8. As a game player I want a leaderboard so that I can see how I'm doing against other people.
9. As an administrator I want to be able to ban players so that I can properly moderate the game.
10. As an administrator I want to be able to set the profanity filter so that I can add any bannable words that weren't in the list.

### Use Case: Adding a New Product

| Identifier | UC-2 Add new Product to Inventory |
| --- | --- |
| Purpose | Update inventory with new product name and quantity |
| Requirements | User Story #2 |
| Development Risks | None |
| Pre-conditions | Inventory manager is logged in and on inventory management page |
| Post-conditions | New product is added to inventory |

***Table 1: Typical Course of Action (Logging in, playing, finishing, and leaving )***

| ***Seq#*** | ***Actor’s Action*** | ***System’s Response*** |
| --- | --- | --- |
| ***1*** | ***User enters the website as a guest*** |  |
| ***2*** |  | ***Sends the user into the waiting room, then into an open game*** |
| ***3*** | ***User plays the game*** |  |
| ***4*** |  | ***Manages user interactions with other players through the game*** |
| ***5*** | ***User finishes and exits the game.*** |  |
| ***6*** |  | ***Brings user to lobby*** |
| ***7*** |  |  |

***Table 2: Alternate Course of Action***

| ***Seq#*** | ***Actor’s Action*** | ***System’s Response*** |
| --- | --- | --- |
| ***1*** | ***The user logs in using their account.*** |  |
| ***2*** |  | ***Sends the user into the waiting room*** |
| ***3*** | ***User plays the game*** |  |
| ***4*** | ***User exits the game mid-game.*** |  |
| ***5*** |  | ***Clears their game progress*** |
| ***6*** |  | ***Game lobby opens a slot for a new player to join*** |

***Table 3: Exceptional Course of Action***

| ***Seq#*** | ***Actor’s Action*** | ***System’s Response*** |
| --- | --- | --- |
| ***1*** | ***The user logs in using their account.*** |  |
| ***2*** |  | ***Sends the user into the waiting room*** |
| ***3*** | ***User plays the game*** |  |
| ***4*** | ***User has a connection error*** |  |
| ***5*** |  |  |
| ***6*** |  |  |