Lab 1 - Draft 3: *PartyUp!*

Joshua Renn, Elijah Joaquim, Jon Fisher, Keyton Lanier, Jaylen Davis
CS 411W
Professor Thomas Valva
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I. Introduction

Many modern video games emphasize teamwork and cooperative gameplay, typically through online matchmaking. Many games, however, lack built-in features to help players find suitable teammates. While online matchmaking can successfully pair a player up with other players, it is usually done randomly or fails to properly match people up given a player's skill level or role in the video game. This issue can create a significant challenge for players who might struggle to find reliable partners for cooperative experiences. For example, *Marvel Rivals* is a competitive multiplayer video game that involves two teams of six players, each player choosing a hero or villain to fulfill a role on their team. While *Marvel Rivals* has a matchmaking system that considers player skill level, many players still take issue with their pairing, such as some players not filling roles required to succeed. Another issue that players might face with randomized matchmaking is the potential to have their teammates being toxic or not taking the game seriously, hindering the rest of the team and ruining the match and overall experience. While social media or gaming forums exist that can be used to find compatible teammates, they rely on others to be active on the forums around the same time, which is not always a reliable alternative to native matchmaking.

PartyUp! is a website that will combat this issue with finding compatible teammates. It is a dedicated platform designed to help players connect with others through a structured filtering and search system. Users can create or join parties based on their own preferences, in a way that is easy and efficient to use. The goal of *PartyUp!* is to provide a solution to an underlying

problem with online matchmaking found in video games to make them more enjoyable for everyone.

II. *PartyUp!* Description

PartyUp! is a website created to help players find compatible teammates for online multiplayer games. Many games that emphasize teamwork often leave players to rely on random matchmaking, which can result in unbalanced teams, uncooperative or inexperienced teammates, and negative experiences. Similarly, even though some games do have in game player search features for multiplayer, they are often largely used by unskilled or unexperienced players, and skilled players may not find what they want from these systems. *PartyUp!* is a solution that provides a structured platform where players can either create or join parties that meet their specific needs. Through filters such as game, platform, region, language, rank, and role, players can easily connect with others who share their goals and playstyle. The objective of *PartyUp!* is to improve the overall gaming experience by giving players more control over who they play with, ensuring teams are more organized, enjoyable, and reliable.

A. Key Features and Capabilities

PartyUp! allows individuals who are playing team games to find others playing the same game. The key innovation of *PartyUp!* is that it is an app dedicated to helping gamers find groups for their games that meet their needs. It'll do this by providing filters for individuals that are looking for groups by game, region/language, and other filters that may be specific to that game such as rank, role, and platform. Additionally, to help build an active community of users,

there will be community pages that can be used to create guides and community posts by users that other users can interact with.

B. Major Components

Because the product will be a browser-based service, the hardware requirements for users is any device that has a web browser. To build the product, hardware required is our development hardware and server hardware. The software components are the IDE and browser, as well as a Windows operating system. The product is a web application that will be created using server-side PHP and JavaScript, a MySQL Database, and a React-based frontend UI.

The software components of the application will be the ability to register user accounts, the party creation system that will allow users to find party members to play with, as well as sorting and filtering system to allow users to look for other players on the same game, platform, and region they are in.

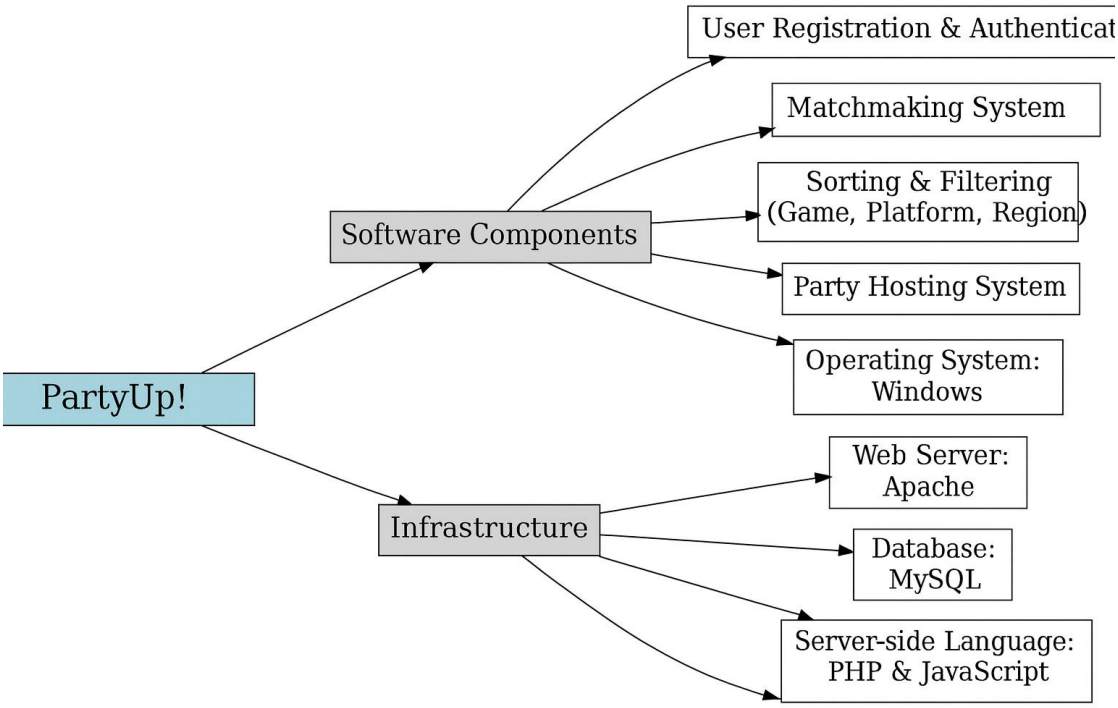

Figure 1: Major Functional Components Diagram

III. Use Case and End User

Alex is a 20-year-old college student who enjoys playing team-based games like *Marvel Rivals* and *Rainbow Six Siege* in the evenings. When using in-game matchmaking, Alex often ends up with unbalanced teams, uncooperative teammates, or toxic players, which ruins the experience. He doesn't always have friends online to play with, so finding a reliable group can be frustrating.

With *PartyUp!*, Alex can log in and quickly search for or create a party that fits his needs. By filtering for players on the same platform, in the same region, and who are interested in specific roles, he can ensure that his team is balanced and aligned with his goals. Instead of relying on luck in random matchmaking or waiting for replies on social media forums, Alex can instantly connect with players who are ready to play and share his playstyle.

PartyUp! gives users like Alex a safe, efficient, and enjoyable way to meet teammates, accomplish in-game objectives, and get the most out of their gaming time.

IV. Glossary

Matchmaking: The process of pairing players together in multiplayer games

Party: Players grouped together before matchmaking

Platform: The hardware you play a game on, such as, *PlayStation*, *Xbox*, PC, and *Nintendo Switch*

Toxic: A mean or otherwise very unpleasant player or behavior