CS 528 Final Project Proposal

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ABSTRACT

In this proposal, we describe our final project proposal of a n Android App, PlayerPooling.

Keywords

Android, Location Service, Web Service.

1. INTRODUCTION

Our team is a group of 2 people: Zishan Qin and Xinjie Hao, both are Computer Science second year student in WPI.

Board games are popular among WPI students. However, a fun game usually needs many people to join together, sometimes it's not convenient to find enough players. Our Android app-PlayerPooling, targets to solve this problem by pooling the people who have the common interests and let the game holder find players efficiently.

2. Related Work

2.1 Commercial apps and difference with PlayerPooling

There are some commercial apps can be used to solve this problem. Find My Friends! is a app that locate friends in real-time and chat with them. It can help you detecting the potential players to join the game, but the limitations is it confines the scope for soliciting to your friends, not all possible players, so it reduce the possibility to find target players quickly.

Another kind of apps can be used to solve the problems are those chatting apps, such as Wechat[1] and WhatsApp, it has the same problem with Find My Friends![2]. Additionally, by browsing your friends list, you have no idea where your friends are right now. It doesn't help you find nearby friends to join the game.

3. Methodology

3.1 Summary

We define the functions in our App into several categories [3], which are shown in Table 1.

Table 1. Functions of PlayerPooling

Login/Logout	User creat a profile if first time login; Login to be online; Logout to be offline
Create Board Game	A host of the game can issue the request to open one game
Browse Current Opening Games	The players can probe the opening games based on location
Join One Game	A player can request to join a interested game
Handshake built up	The holder admit the request from potential players and update the current game state
Achivement System	System record the each game state; users can give their peers remarks for later evaluation

3.2 Mock-ups Design

We design some mock-ups for the visualization. In the inital step of the app, we need to log in to the System to be online and make you visible to players. So the mock-ups for the Login/ Register are like the Figure 1.

Figure 1. Login/Register Mock-up
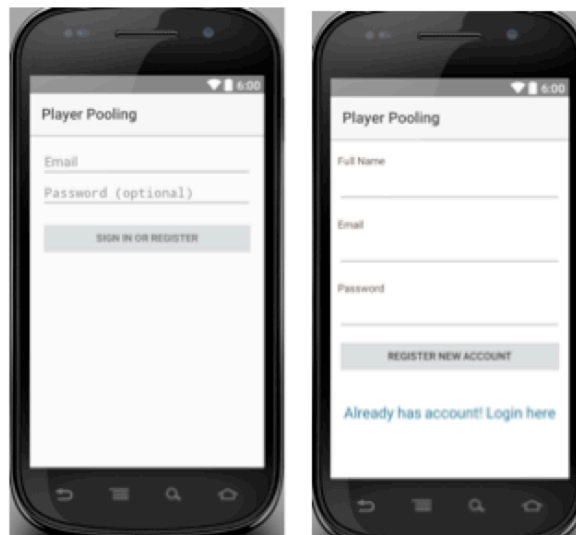
After being online, the host may want to create a game to propagate to other potential players, so he may create a game activity and make it visible to other players.

After those activities created, potential players may want to browse current opening games and select a activity to join. The

mock-ups for players to browse the activities and sending join request to hose are designed as Figure-2

Figure 2. Browse/Join Mock-up

After the request sent, the host and the player may set up a communication. The host may see the accepted players location in a real-time map, like the Figure 3 shows. Finally the host collect enough players and may begin the game.

Figure 3. Current players in real-time map
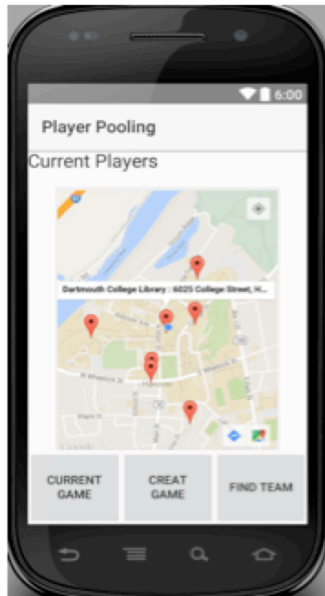
When the game finalize, the system should update the records for each player to contribute to the achievement system. Then the players can evaluate each other's performance for future reference.

4. Methodology

The project is a six-week project, we have many fancy features which we want to add to the app. Considering the trade-off between the time and performance, we decide to finish the basic functions we mentioned in this proposal and augmented the final product if time permits.

We will design and implement our project in the following timeline table, Table2.

Table 2. Project Timeline

Sub-tasks	Time
• Requirements collection • Project proposal • Design the MVC architecture	week 9
• Login/Logout • Issue create game request • Server database build up	week 10
• Respond and join game • Handshake between issuer and responder	week 11
• Test the functions using localhost • Deploy the project on Web Service(like Amazon Web Service) for multiple-users access and test	week 12
• Prepare presentation and wrap up final paper	week 13

5. Reference and Citations

[1] Longlong, Wu, and Yang Xiaoju. "A Research on the Services of University Mobile Library Based on the Wechat Public Platform [J]." Research on Library Science 18 (2013): 013.

[2] Longlong, Wu, and Yang Xiaoju. "A Research on the Services of University Mobile Library Based on the Wechat Public Platform [J]." Research on Library Science 18 (2013): 013.

[3] Al Mutawa, Noora, Ibrahim Baggili, and Andrew Marrington. "Forensic analysis of social networking applications on mobile devices." Digital Investigation 9 (2012): S24-S33.