Deliverable 4: Project Report

App name

**Dungeons and Ladders**

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Executive summary

Dungeons and Ladders is an app that aims to create a platform for mutual boardgame enthusiasts to meet and play a game together. It does this through a lobby system common in many esports and video games: a user who wishes to host a boardgame session will create a lobby that specifies the meeting time, venue, game to be played and maximum number of players allowed. Other users can then browse game lobbies for a session that suits their preferences and join the session. Once a lobby is full (i.e. the lobby has reached its maximum player capacity), the host can lock in the session where users can no longer join the lobby. The app then has an alarm reminder function to remind users to attend the session. Lobby sessions are stored as data objects in a database, and in this database are also stored the registered users, as well as the list of supported board games. As this app is still under development, some other functions will be added to this app in order for it to fulfill its aim more robustly.

Introduction

**The problem**

The current problem with tabletop games is that tabletop game enthusiasts do not have a platform where they can meet new players and share new games. There are two types of people suffering from this problem. The first type is tabletop gamers who often do not have enough players to play a game. People in cities live increasingly isolated and it can be hard to gather enough friends that share the interest of playing a particular tabletop game as it is a niche activity. Finding a suitable time is also difficult especially as everyone has their own schedules. Secondly, tabletop gamers usually have to purchase a game without fully knowing whether or not they will enjoy the game. Thus, they are hesitant to buy new tabletop games.

**Proposed app**

The proposed web application aims in its end-goal to be a platform for the tabletop game community to share, trade, and review tabletop games. The users in the app share the same role in the community so each user has the same functionalities. Users can find other players who want to play a particular tabletop game. This facilitates face-to-face interactions and allows users to try new tabletop games. Our web application bridges the gap between a user and new board games by recommending users new board games according to their preferences. The app will be named as Dungeons and Ladders (DnL), as a mash-up of two well-known tabletop games Dungeons and Dragons, and Snakes and Ladders.

The app so far (as at Deliverable 3)

The app thus far developed possesses these functionalities:

* **Host a session lobby**

A user can host a boardgame session by creating a lobby for people to join. The host specifies the game to play, the time to play and the venue in which to play. The lobby is stored in a Sessions database and the host can either set it to public (without password) or private (with password), and the lobby will be displayed in a list of lobbies which other users can access. When the player capacity has been maxed out, the host can lock in the session that prevents more users from joining the lobby and joined players to leave without informing the host. The lobby will be automatically destroyed 24 hours after the stipulated start time.

* **Join a session lobby**

A user can join a hosted boardgame session by accessing a lobby page which displays a list of lobbies that he/she can select to join. Once joined, the user can leave the game any time until the session is locked in, whereafter if the user decides to leave the host and all other players in the lobby will be informed. A user can also join a private game by seeking for the lobby password from the lobby host.

* **Browse through the list of supported games**

Users can browse through all the list of supported games of DnL, which is stored in the app’s Games database. They can click into any game wherein the description page will show the game’s details, including recommended player count, description, screenshots of the board game, tags, and number of upvotes and downvotes. Users can also use the search function to search for any specific game for themselves.

* + **Refine search with tags**

Users can also search for games by tags. By specifying the required tag(s) for results in the search function, DnL will return all supported games by the input tags.

* **Rate a game**

At the description page of a board game, users can rate the game in the form of an upvote or a downvote. The description page will show the rating of the game in terms of the total number of both upvotes and downvotes.

Plans for further development

The app will continue to be developed, and in time we aim to implement these functionalities in the future:

* **Matchmaking**

We will implement in DnL a matchmaking function that is common in many esport games. Users only need to input desired time (or a range of time), location (or locations), and game (or games), and DnL will put the user in a matchmaking queue. The matchmaking system will then randomly pick players (based on individual matchmaking preferences) into a randomly generated lobby with an optimally generated time, venue and game. Upon successfully finding a game, users will be prompted with a message whereupon they can choose to accept or decline (the game will be declined if no reply is received). When a game is joined, a random player will be designated host for the session.

* **Game recommender**

DnL will recommend games for users based on what games the player has played in past sessions. It is likely that this is done through the tags of games which the user has played, and DnL will recommend the most highly rated game based on the tags for the user.

* **GPS for RSVP locations**

DnL will utilise various GPS APIs so that DnL could automatically detect the user’s current location. When users host or join a lobby or find a game through matchmaking, DnL will utilise the GPS function for a more accurate pinpointing of the location.

* **Friend/guild system, in-app communication (user DMs and guild chat), party matchmaking**

DnL will introduce a system where users can add other users as friends, as in Facebook. At the same time, users can also join various friend groups that are called guilds within DnL. Guilds are created by users and others can join the guild. An in-app chat function will also be implemented, whether it is a DM between two random users, two friends or a guild chat for easier communication. Both the friend and guild systems facilitate a special form of matchmaking called party matchmaking, where users find games as a group of friends or guildmates, and where a game is found all members in the party will be within the same lobby session.