CS352 - Spring 2017
Team 18 Project Proposal

Team Members

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Project Title

- poolShark: an interactive pool/billiards coaching application

Project Description

- poolShark is a mobile and tablet application that shows the user (pool/billiards player) the best possible next move in a pool game and the results of the move. The user can also select other possible moves for the app to analyze. poolShark does this by allowing the user to take a picture of the physical playing table, which the app then analyzes and inputs the ball locations on a virtual playing table in the application. poolShark then analyzes the virtual table for the best (or chosen) move, instructs the user on how to complete the move, and simulates the results.

- From a usability standpoint, the poolShark app will allow the user to physically view the best moves and the results of those moves, as opposed to a traditional (in person) coach who verbally instructs the player, requiring the player to visualize the move in their mind.

- Concern for usability will be a very large factor in the creation of the poolShark app; from the instructions for positioning the picture of the physical playing table to making sure the user can easily view the simulated results of the move on the virtual playing table. There will be a variety of different screens for the app, such as: a login screen, game initialization screen, advanced options screen, custom move screen. Since the goal of this app is to allow the user to translate a virtual move to a physical move, usability of the app must be at a high level to accurately facilitate this translation.

- The target users for the poolShark app are more serious pool/billiards players of any age that want to increase their skills at the game. Target users are described as more serious because they are expected to be concerned about their skill level, whereas a casual player would likely not care enough about their skill level to use poolShark. As such, the app should make every attempt to be consistent with official playing rules and

standards. Ideally, the app would be sponsored by the World Pool-Billiard Association to garner trust and a sense of effectiveness from more serious players.

- As pool/billiards is a common game found in recreational areas (bars, pool halls, living rooms) around the world, access to potential users should be nearly universal.

- Team 18 is the best fit for this project because the team member that created the concept has a strong interest in pool, and several team members have a basic level of experience playing pool. As such, the team member has already thought through many of the steps required for a clear and well developed plan to complete the project before the end of the term. Each team member recognizes this as a very interesting project and is excited to work on it. Despite coming from different cultural backgrounds, we share a common goal of being innovative and finding solid solutions. We acknowledge the necessity of being able to communicate with each other timely, set measurable goals, divide up the work efficiently, work as a team to complete our tasks by the deadline, and give each other feedback if something is not going well.

Predispositions

What we know:

- End users own a smartphone, and have used software applications before.

- Knowledge of the game at different levels. These include rules and game types. As our target audience are more serious players, the basics of the billiards like how to hit the cue ball will not be part of app. This however can expand later on to accommodate a feature.

- There is sufficient information that can be gathered in terms of feedback and design intent by external sources. These include friends or other patrons that may be playing at a local bar or recreational center.

- The basic app features that we want incorporated. These include menu screens and information with these screens that the user may find helpful in navigating or using the app.

- Generally speaking, there are a certain set of moves that will be the most beneficial given a certain placement of balls on the table.

- Visually, the user will be able to take a picture of the table, the app will be able to display the table, and then overlay simulated moves and their results.

- The team has a basic understanding and resources to determine the rules of the supported game types and what moves will be beneficial.

What we don't know:

- User participation. Not everyone will be willing to learn from an app that may make the game easier for them. Maybe they want to figure out how to decide the next move on their own so they don't have to rely on an app every time.

- Will it destroy the flow of a game if it is being used in real-time alongside an active game (at a recreational level)? Or will both users participate in using it?

- Potential difficulty with determining placement of balls on the table, and how to communicate meaningful feedback to the user to improve the accuracy?

- How to match player skill level with simulations and move recommendations so that the proposed shots are manageable by the player?

- Unsure of the need to support many different game types outside of standard pool (eight-ball, nine-ball, three-ball, cutthroat, cribbage, etc.)?

- Is it important to add in extra coaching and technical suggestions, beyond the suggested moves, to make it more of a teaching app? How to do so without being overwhelming.

- What information should be stored and displayed for different users? Should it remain very simple, including: skill level, game type, and name. Should it go beyond that and allow for rankings, high scores, setting up matches and social media elements (walls, messages, etc.)