SCaR Arcade

Ryan Cunneen   3179234

Martin O'Connor   3279660

What is SCaR Arcade?

SCaR_Arcade is a Library Game Application Manager (LGAM) designed, and built for the Android OS.

Features of SCaR Arcade:

- Supplies multiple game applications to the user.
- Places game applications into a simple list.
- An extensible base for games to modify.
- A simple layout that works for multiple games.
- Tracks high scores of the user for each game.
- Can contain many diverse types of games.

How it works:

The main menu of SCaR Arcade is a list of games that are on the device. The list, displays a title and a logo for each game. When a user selects the game, they want to play, it sends the users choice to the game menu.

The game menu is the hub where a user can access the game, its description and the leaderboards for the game. The background image of the game menu is a custom image for each game. The user can also affect the games difficulty, by increasing or decreasing the difficulty, within the minimum and maximum difficulty parameters, wherein the minimum and maximum values are set by the game independently.

The leaderboard hub is the place where the user can see the top 20 local high scores and see how good they are at the game.

Towers of Hanoi is one of the games preinstalled, it is a game that implements a drag and drop feature to allow the player to interact with discs. Where the user tries to move the displayed number of disc from one side of the screen to the other in the least amount of time and moves. Without placing a bigger disc (in size and displayed number) onto a smaller disc. The difficulty effects the number of discs to be moved across the three poles, where increasing the difficulty increases the number of discs.

Dice Rolls is the other preinstalled game. It uses the accelerometer sensor to determine if the phone has been shaken well enough, so that the displayed number of dice can be rolled and given new face values. Where the user tries to get the highest score possible. The users score is increased by the sum of all the face values that have been rolled. If the player was to roll two or more dice with equal face values, they would be given the chance to roll again. The difficulty effects the number of dice available to be rolled, where increasing the difficulty decreases the number of dice.

What real world problem it solves?

- It declutters the "All apps drawer" by removing what could be standalone apps into one application.
- It can handle high scores for multiple games, in app.
- It can sort the games into a scrollable list, along with showing a sizable logo and title for simple reading in comparison with the "All apps drawer".

The approximate percentage contribution of each member, along with a statement to say that each team member has agreed to this percentage.

Ryan Cunneen   **50%**

Martin O'Connor   **50%**

The approximate percentage contribution of each member shown above, was put forward by Ryan Cunneen and has been approved by Martin O'Connor.

GROUP ASSESSMENT ITEM COVER SHEET

Student Numbers:	Emails:	FIRST NAMES	FAMILY / LAST NAMES
3 2 7 9 6 6 0	c327966@uon.edu.	Martin	O'Connor
3 1 7 9 2 3 4	c3179234@uon.edu	RYAN	CUNNEEN

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