# SCaR Arcade

**By Ryan Cunneen, Martin O’Connor**

## 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.
* Manages game applications.
* Tracks high scores of the user for each game.
* Contains a sensor game.

## 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 a hub where the user can access the game, it’s 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 range, wherein the 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. They try to move the displayed number of disc from one side of the screen to the other. 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 difficulty increase 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. The players 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 decrease 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”.