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# Multiplication Wizard

## Description

Want your child to become a multiplication wizard? Then this fun math game is just for you. Kids can practice multiplication tables just by playing this game.

The app is designed as a multi-level game starting with single digit multiplication. The complexity increases as the levels increase.

Once the player completes all the levels, the kid is awarded with "Multiplication Wizard" certificate which can be printed.

Once the app is installed on your device, it can be played by multiple players. It will be a fun game to be played at kids get together.

## Intended User

The app is intended for elementary school kids. It can be played by anyone who wants to sharpen your math skills.

## Features

List the main features of your app. For example:

- Multi player math game. Saves the player names and their scores
- Multi level game. Saves the level and each level score for individual players
- Share the scores
- At the end of the game, prints the certificate

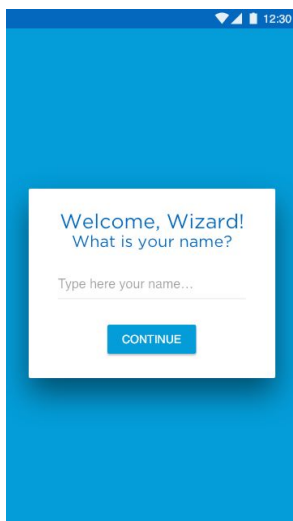
## User Interface Mocks

### Screen 1



Splash screen

### Screen 2 - First time user



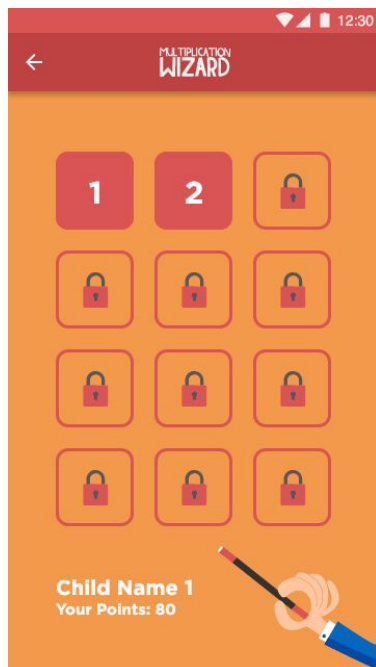
The player can enter his/her name. The app will be interactive and it will be regularly motivating the kid to play the game.

### Screen 2 - If users exist



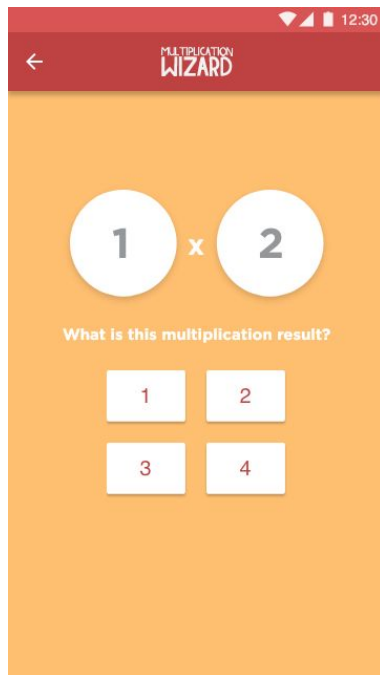
Multiple users can play the game on single device. This screen provide one click selection for the user and to add new user.

### Screen 3



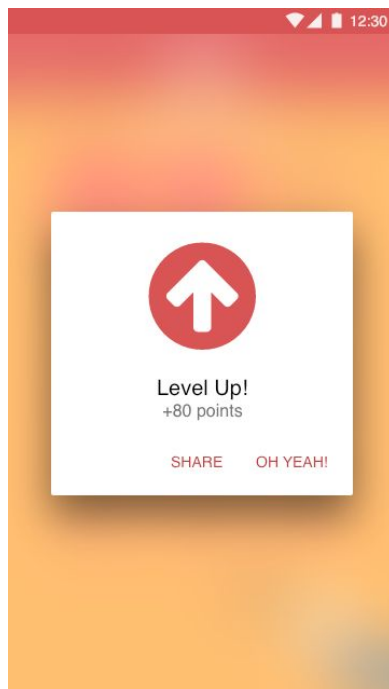
Screen showing game levels. Initially only level 1 will be unlocked and the remaining levels will be locked. Only if the player completes level 1 he can move to next level.

#### Screen 4



The screen which shows the problem to solve

#### Screen 5



Screen seen when the player completes one level

## Screen 6



App widget showing scores

## Key Considerations

**How will your app handle data persistence?**

The app will have local Sql databases and Content Providers will be implemented for data persistence.

**Describe any corner cases in the UX.**

From Screen 4, if user presses back button he will go back to Screen 3 showing the levels. If user pressed back without completing the current level, he will be shown only the current level as unlocked and the remaining unlocked.

**Describe any libraries you'll be using and share your reasoning for including them.**

Will use TwoStageRate library to help promote my app by prompting users to rate the app after using it for a few days.

**Describe how you will implement Google Play Services.**

Will use Google Analytics and Google Mobile ads

## Next Steps: Required Tasks

### Task 1: Project Setup

This app is built for phone and tablet. Configure the project for all these devices

Modify gradle files to include Google play services.

### Task 2: Implement UI for Each Activity and Fragment

- Create layouts

Subtasks:

- Build UI for MainActivity
- Build UI for adding users
- Build UI for game levels
- Build UI for actual game
- Build UI to show popups such as scores, level up etc
- Build UI flows for Tablet

### Task 3: Create Sql databases and Content Providers

- Create Sql database and tables
- Tables to maintain user info, their respective levels and scores.

### Task 4: Build algorithm to generate math problems based on levels

- The key algorithm is to generate math problems based on the level.

### Task 5: Implement Google Analytics and Google Mobile Ads

- Google Analytics to check which level players are playing. The app is designed in such a way that initial levels are single digit multiplication problems. The analytics data will let us know the players age group.
- Google Mobile Ads integration

### Task 6: Building app widget

### Task 7 : Integrating third party library