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Mathe-llectual

Description

How can your children improve their Mathematical intellectual capability right from childhood with smart practice on simple maths. Mathe-llectual aims to provide a platform for children to practice basic mathematical skills with increasing difficulty levels. School kids can test their math skills and enhance their mental capabilities. Schools can make use of this app for their students mathematics practice/trainings.

Intended User

1. In general Children (Mathematics practice)
2. School Kids
3. Anyone who wants to break ice from their busy schedule.

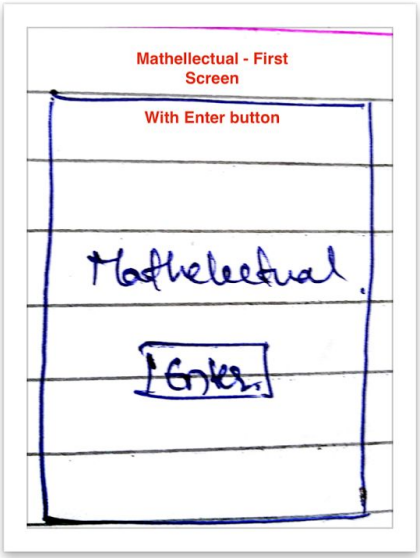
Features

Main Features include:

1. Saves information of the player
2. Displays the score at the end of each level

3. Provides different levels (Basic/Intermediate/Advanced) - Easy/Basic/Medium/Hard/V.Hard
4. Test scores with top 5 ranking by level and day
5. Widget to show the test scores and ranking

User Interface Mocks



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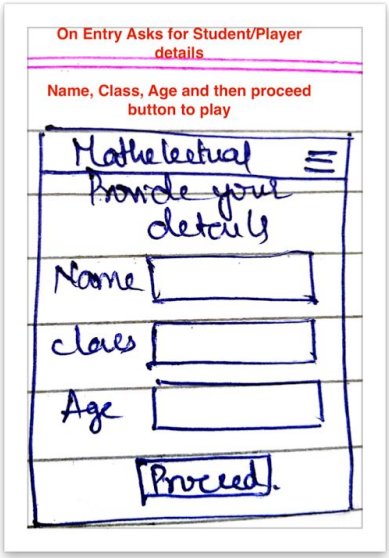

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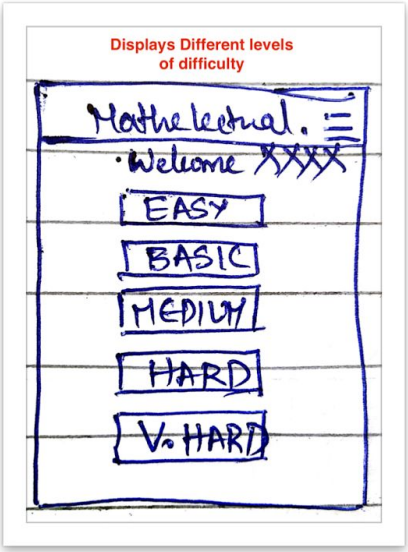
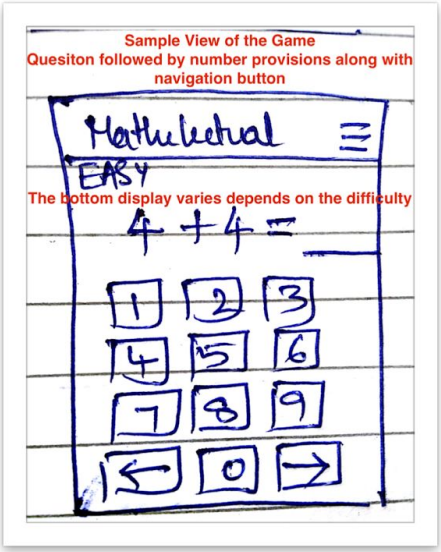
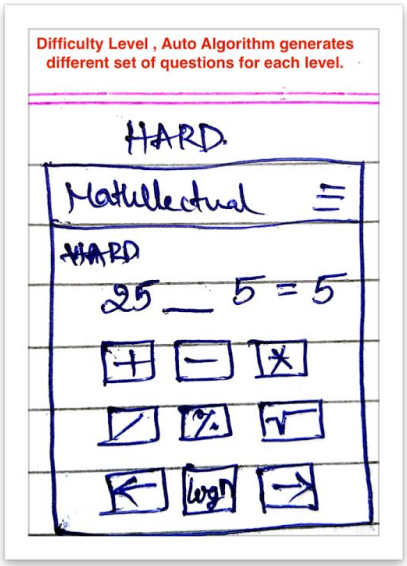

Displays Different levels
of difficulty
Mathelectual.
Welcome XXXX
EASY
BASIC
MEDIUM
HARD
V. HARD

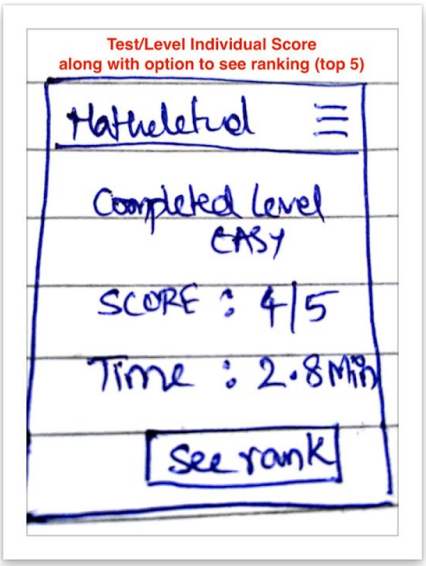
3


Sample View of the Game
Quesiton followed by number provisions along with navigation button
Mathelectual
EASY
The bottom display varies depends on the difficulty
4 + 4 =
1 2 3
4 5 6
7 8 9
0

4

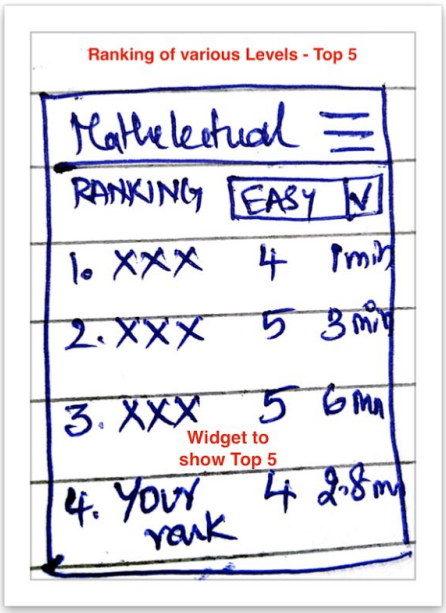

Difficulty Level , Auto Algorithm generates different set of questions for each level.
HARD
Mathelectual
HARD
25 _ 5 = 5
+ − x
/ % √
log

5

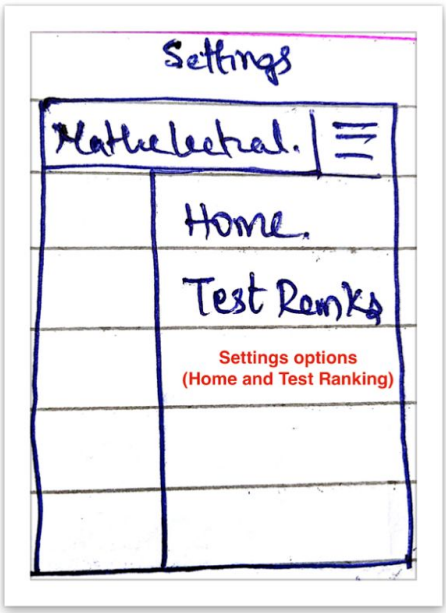

Test/Level Individual Score
along with option to see ranking (top 5)
Mathelectual
Completed level
EASY
SCORE : 4/5
Time : 2.8 Min
See rank

6

App's WIDGET will show the top 5 ranking results (7)



7



8

Key Considerations

How will your app handle data persistence?

App will store the information of the participant and store their information like their name, scores etc. It will be stored offline (for now) using SQLite database. If time permits will use Firebase cloud database. (I will mostly plan to implement Firebase cloud database)

Describe any corner cases in the UX.

If they click back button during any evaluation (level), they need to retake the level from start.

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

Butter Knife - dependency Injection

Describe how you will implement Google Play Services.

Google AdMob : to generate revenue
Google Analytics : to track user activities

Next Steps: Required Tasks

Task 1: Project Setup

Project which support Android phone/tablet with min API 15

Task 2: Implement UI for Each Activity and Fragment

Activities and Fragment:

- Build UI for MainActivity (main screen)
- Build UI for recording the player/student details before the start of the level
- Build UI for sub Activities for each level
- Build UI for listing the final scores of the player
- Widget to showcase the Test Ranking
- AsyncTask to load/update the Test Ranking page.
- AyncTask to load the questions from the Mathellectual Algorithm.

Task 3: Data Model & DATA Persistence

Design the data model for the Mathellectual app

- Data will be stored OFFLINE, SQLite database
- If time permits will use Firebase cloud database.
- Content providers if any for read and write of the actions (storing and retrieving information of the student/participant and their test results)

Task 4: Mathe-llectual Intelligent Algorithm

Design an algorithm to randomly generate the levels of the game

- Create an algorithm which generates the questions based on the difficulty level of the intellectual training app.

Task 5: Final Testing

Testing end to end to ensure the rubric is met