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Team Temp Project Proposal: Childrens Learning App

App name: LearnIt

Reason we chose this app:

We chose this idea because we wanted to create an app that is not only fun, but also educational and caters to a diverse age range, including toddlers. By integrating interactive learning modules, quizzes, and subjects, the app ensures an engaging learning experience. Features such as a reward system, progress tracking, and parental involvement further contribute to user engagement and make the app a valuable tool for both children and their parents.

Overview of apps potential features: (add more)

- **Progress Tracking** - We should be keeping track of the user's progress to allow parents to see how their children are progressing.
- **Easy to use interface** – Since we want the app to target a wide age range of children including those as young as toddlers, we need to ensure the app is overall very simple, easy to use, and aesthetically pleasing.
- **Potential Reward System?** - A reward system might be something we should look into because it could motivate children to continue learning, and as a positive side effect would encourage them to continue using our app.
- **Interactive Learning Modules** - Create interactive lessons or modules for various subjects like math, science, language, etc. Use animations, quizzes, and interactive elements to make learning engaging.
- **Visual and Auditory Learning** - Include images, videos, and audio to cater to different learning styles. Allow children to listen to pronunciations, stories, and explanations.
- **Quiz and Assessments** - Implement quizzes to reinforce learning and assess children's understanding. Provide instant feedback and rewards to motivate children.

Overview of potential Kotlin Concepts to include in app: (add more)

- **Firestore Database** - We could implement a Firestore database for a ton of varied reasons. Firstly, we could have users create accounts which would be stored in the database so we could keep track of their progress. Secondly, we could have a ranking system, with various scoreboards for users to look at and compare themselves locally, regionally, globally, amongst their friends, etc. We could also store the problems/questions in the database which would make for easier managing and updating, for example we could have a table full of math problems aimed towards 1st graders and another table that has pictures of dinosaurs for toddlers to guess. Another thing we could do is store all the resources needed in the database and pull them from there, especially since we might have a lot of pictures. Finally, we could track user analytics and store this data in our database, for example the average age of the users, time spent on the app, what parts of the app are being utilized most, etc. which would help us gain a better understanding of how we can improve the app in the future.
- **Notifications** - Notifications can be used to engage users by sending reminders about upcoming lessons, new lessons that are added, or by providing overall feedback
- **RecyclerView** – We can use RecyclerView to display interactive lists of lessons, quizzes, achievements, etc.
- **Room** – I'm not sure if Room is just an alternative to Firestore or if it has other use cases, but we could possibly divide the backend into learning material / User information and use Room for one of them and Firestore for the other, if we need to.
- **Constraint Layout** - Utilize ConstraintLayout to create flexible and responsive UI designs, ensuring a consistent user experience across various screen sizes.
- **Navigation Component** - Navigation Component simplifies the implementation of navigation in your app. It provides a visual representation of the app's navigation graph, making it easier to understand and maintain the navigation flow between different fragments and activities.

App Design:

- **Login:**
- **Interactive Learning Module(with gui to display videos/differnt images)**



