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# Submission description:
# Mobile App Development

We have now completed the development phase of our app, *DiaBeatThis!*.

It was the first time for any of us to design and develop a mobile app. Although there were many difficulties along the way, and looking back with the experience we now have, we would certainly change many things in the front- and backend, we are quite proud to present the final product.

The center of our application is the home screen, in which we display all recipes created by the community. We quickly designed the basic look of the app and created some mock data to display. After some designing and planning, the journey truly began. Whilst writing data in the 'Create Recipe Screen' was quickly implemented, reading and displaying the actual data was far more difficult. Even more so, once we added an image storage to the Realtime Database to store Post pictures alongside the titles, nutritional values and descriptions of the various recipes. Uploading a picture and then storing its URL as a parameter was perhaps not a good, albeit a functional solution. Especially challenging was dealing with confusing type conversions that arose from fetching various kinds of data formats.

The implementation of the authorization module from firebase proved to be more simple than initially thought, and the creation of a corresponding user in the Realtime database could be implemented with our experience from 'Create Post'. Again, we decided to store the profile picture as a URL parameter in the Realtime Database.
The comments posed some initial problems, we would have very much liked to display some on both the home feed and the post detail screen, but inexperience and the lack of time prevented us from succeeding quickly. However, outsourcing the comments to a dedicated screen was in hindsight the right decision.

We are very happy with the implementation of our feature, the 'Meet your Meal' gamification of a tag search. With the tags and the search functionality already implemented, our team could make quick progress with the development of our Tinder-esque swipe search. The resulting Recipes that are displayed contain all the tags the user swiped right. A possible combination to test this Feature would be: Veggie, Gluten-free, Dessert, Quick.

Overall, we are very satisfied with our finished product! It has been a lot of fun to actually learn to program an entire App by ourselves.

**Fabian:**
- Setting up the create recipe screen
  - Adding database writes, designing data structure, extending it wherever it was necessary
- Reading and writing the pictures in the storage
  - Displaying and Caching correct pictures
- Added comment functionality
- Added Sorting functionalities to FirebaseAnimatedList and Realtime Database
- Added camera functionality
- Added Reactions and reaction functionality

**Kim:**
- Implementing the "Meet your Meal" Game
- Improving & implementing most of the Design
  - Creating default constants for each TextStyle
- Implementing Home Screen structure, including:
  - Search Bar
  - Like Filter
- Improving & implementing more features in CreateRecipe Screen (based on Fabian's initial structure)
- Implementing Post Screen
- Validators for most TextFields

**Timo:**
- Login & User Registration Front and Backend + Validators for the Text Fields
- Profil Screen Front and Backend
- Managing User Rights between Guest and Logged In User
- Login/Logout Button Front & Backend
- General Bug Fixes