Report 1

Team Members

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SPRINT 1 (2/9/2021 - 2/16/2021):

As the first sprint, the focus was to become familiarized with react native, and to get the development portion started. Both the database and codebase were initialized, and preliminary work was completed on various required features, such as AR, camera, QR codes, and models. Additionally, a meeting was held on Feb. 11th to discuss UI design alterations. More discussion on this can be found below in section UI MEETING.

Assigned items:
- Database initialization
- Codebase initialization
- Initial AR work
- Initial camera work
- Initial QR codes work
- Initial models work
- Research on resources for 3D models
- Global stylesheet initialized
- Update README with information for process and workflow
- Finalize UI Designs

- Fahad Ansar
  - QR code generation resources were found which will be used to generate QR codes of food items.
  - Global stylesheet file for the whole app was created with some initial styles.
  - Initial AR work was done i.e. AR resources were found to be used in the app. *(with Michael Missana)*
  - UI Finalization was done i.e. overall flow of UI and placement of components on screens. *(with Michael Miassana and Paranjelly Kathuria)*

- Nicholas Aksamit
  - Database initialization created the initial database which is hosted on DigitalOcean.
  - Codebase initialization created the initial codebase, which was react-native with expo support by default.

- Michael Missana
  - Initial AR work was done i.e. AR resources were found to be used in the app. *(with Fahad Ansar)*
  - UI Finalization was done i.e. overall flow of UI and placement of components on screens. *(with Fahad Ansar and Paranjelly Kathuria)*
  - Third Party Component Package looking for a component package that fits with our overall theme for the app that has good resources and documentation to use as a starting point *(with Karanjot Pabla)*

- Karanjot Pabla
  - View AR Model From the Digital Menu initial work was started; outlining the menu structure, and exploring ideas on how exactly the AR Model could be shown from the menu. *(with Paramvir Singh and Paranjelly Kathuria)*

- ○ <u>Third Party Component Package</u> looking for a component package that fits with our overall theme for the app that has good resources and documentation to use as a starting point. *(with Michael Missana)*

- Tyger Mascarenhus/Shivam Garg
    - ○ <u>Initial files</u> created on git, mapping user stories on trello.
    - ○ Commentary added and exploring ideas to setup the system.

- Pranjelly Kathuria
    - ○ <u>Initial UI design was finalized</u> by deciding the overall flow of control and navigation on the user interface. The placement of components on the screen was also discussed and finalized. *(with Fahad Ansar and Michale Missana)*
    - ○ <u>Researched and looked for potential AR templates</u> and sources which could be used for our app. Looked up various possibilities if we could fetch AR models from open source websites.

- Paramvir Singh
    - ○ <u>Initial UI Design</u> UI prototype was prepared to get an idea of where most of the elements will be placed. *(with Fahad Ansar)*
    - ○ <u>Color Palette</u> with 5 colors was generated. *(with Fahad Ansar)*
    - ○ <u>Initial Digital Menu</u> basic skeleton of the digital menu was created that lets customers look at all the dishes provided by the restaurant.

Retrospective:
What went well:
- No major issues, everything went smoothly for the first sprint.
What are our roadblocks:
- Consider the packages that will be used and keep track of them.

UI MEETING (2/11/2021):

- Cut scan menu/digital menu screen
    - Use an application flow similar to Snapchat
- Upon first app launch, display login screen but allow user to continue without
    - If not first launch, then go straight to camera
- Side menu options
    - Profile Name
    - Digital menu
    - Sign in/My Profile
    - Privacy
    - About Us

SPRINT 2 (2/16/2021 - 2/23/2021):

The focus of sprint 2 focuses on three core functionalities of the application:
- Storing and retrieving 3D models
- AR implementation (camera and displaying models)
- 3D model container for item view

This sprint does not enforce the need for these features to be polished and/or fully complete, but only to have the essential framework finished. Team members should be wary of any roadblocks that may occur in the future, so sprints can be planned with less risk.

Groups are responsible for working in Trello to track and better manage large items. It may be advised to break items down into manageable pieces or to checklists.

- Fahad Ansar
  - AR resources trial run was done to select the most appropriate option. Tried Expo AR and ARCore, Expo AR was not feasible enough and ARCore has deprecation errors so discarded both options.
    (with Michael Missana)

- Michael Missana
  - AR resources trial run was done to select the most appropriate option. Tried Expo AR and ViroAR. ViroAR demo was created in a private repo and video attached to the user story. Utilized models from Google Poly and was able to display multiple models on distinct QR codes. *(with Fahad Ansar)*
  - Created group Moqup account for continued UI work.
  - Created a workflow process and added to the Readme.

- Nicholas Aksamit
  - Database work done and tables were created following what will be needed.
  - Initial REST API created so application can communicate with database.

- Tyger Mascarenhus/Shivam Garg
  - Google poly experimentation.
  - Continued back-end work.

- Pranjelly Kathuria
  - View AR Model From the Digital Menu continued progress on menu setup; restructuring menu based upon suggestions for menu setup, and debated the feasibility of using certain AR Model platforms from the menu (confusion on Expo AR, and exploring ViroAR).
    (with Paramvir Singh and Karanjot Pabla)

- Karanjot Pabla
  - View AR Model From the Digital Menu continued progress on menu setup; restructuring menu based upon suggestions for menu setup, and debated the feasibility of using certain AR Model platforms from the menu (confusion on Expo AR, and exploring ViroAR).
    (with Paramvir Singh and Paranjelly Kathuria)

- Paramvir Singh
  - Rating System prototype for rating mechanism created to be used wherever required.
  - Item Screen structure for item screen was creasting, that includes view for AR, item description, tiem rating and comments left by users.

Retrospective:

What went well:
- A working prototype of displaying 3D models on QR codes

What could have went better:
- Better use of daily standup posts on Teams
- Updating Trello cards as needed

What are our roadblocks:
- Potential trouble with MySQL
- Google Poly used with ARCore/Expo not feasible

Suggestions for next sprint:
- Research more information on Viro
- Ensure communication is good between working groups

SPRINT 3 (2/23/2021 - 3/2/2021):

Assigned items:
- UI colour palette and styling
- Continue database work
- Look into Viro further
    - Can we add packages to the current project or must we create a new repo?
- Push notification work
- Report 1
- Continue implementing initial design

- Fahad Ansar
    - <u>User Interface</u> color palette and design was decided and implemented. (*with Paranjelly Kathuria)*
    - <u>Side Menu</u> was created for the app for useability of users. It lets you switch between the screens.
    - <u>Push Notification</u> feature was created which is one of the main features of the app. (*with Karanjot Pabla and Paramvir Singh)*
    - <u>Transition to viro</u> from expo. Tried and researched ways to transit from expo to Viro. (*with Michael Missana)*
    - <u>Cleaning repo</u> and shifting repo back to React Native. (*with Paramvir Singh)*

- Michael Missana
    - Continued work with ViroAR exploring integration with current expo repo.
    - Looked into the best solution for QR codes when utilizing ViroAR.

- Nicholas Aksamit
    - <u>Database API</u> completed for basic needs, including the fetching of database models and reviews.

- Tyger Mascarenhus/Shivam Garg
    - Working on the top navigation bar implementation.
    - Working on extended rating feature in the code.
    - Continued back end implementation.

- Karanjot Pabla
    - <u>View AR Model From the Digital Menu</u> continued progress on menu setup; restructuring menu based upon suggestions for menu setup, and waiting for Viro transition to be completed to allow for AR Model Display from Menu.
    (with Paramvir Singh and Paranjelly Kathuria)
    - <u>Push Notification</u> feature implementation tools were explored, discovered a popular Push Notification Library for React Native we can use, but it takes some effort to set up. (*with Fahad Ansar and Paramvir Singh)*

- Pranjelly Kathuria
    - <u>View AR Model From the Digital Menu</u> continued progress on menu setup; restructuring menu based upon suggestions for menu setup, and waiting for Viro transition to be completed to allow for AR Model Display from Menu.
    (with Paramvir Singh and Karanjot Pabla)
    - <u>Finalized the next version of the User Interface</u> by deciding the main color palette and main theme the app is going to follow. Finalyzed the styling components and rearranged some parts of the app to make it user accessible and easy to use even for beginner level app users. *(with Fahad Ansar)*

- Paramvir Singh
    - <u>Digital Menu Design</u> digital menu was changed in accordance with the new UI design. Redundancy components were also removed.
    - <u>Menu Subsection</u> dishes belonging to the same category are put under the same subsection.
    - <u>Search Bar</u> functionality to search for items.

Retrospective:
  What went well:
  - API has models, dishes, descriptions, etc.
  - UI design has colours and layouts to be implemented

  What could have went better:
  - Viro/Expo compatibility

  What are our roadblocks:
  - Viro and Expo are not working together
  - Code refactor was required
  - Push notification problems with Android

  Suggestions for next sprint:
  - User story weights/velocity
  - Documentation for setup

Sprint 4 (3/2/2021-3/9/2021):

This sprint has a focus on the AR aspect, and integrating this functionality into the application. It will take some work considering Expo was found to not be compatible with Viro, which has superior AR capability. Push notifications will be worked on carefully to ensure multi-platform support, where previously Android had issues. Various UI elements will be developed to match the designs provided in Teams, and a basic framework for the User Registration/Login System will be implemented.

Information on each team member and their work for this sprint is not available and will be found in Report 2.

Additionally, because the sprint is not concluded, a retrospective is also not available but will be located in Report 2.

Demonstrations

Item View
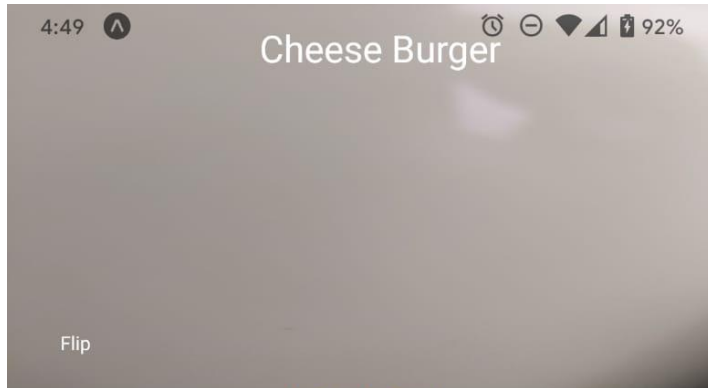
The price seems to vary quite a bit and fluctuates around $1 (I was quoted a price of 98 cents at my local McDonald's but they also offer two for $1.79 under normal menu pricing). In some markets, it actually costs more than a McDouble (which only differs in that it contains an extra beef patty).
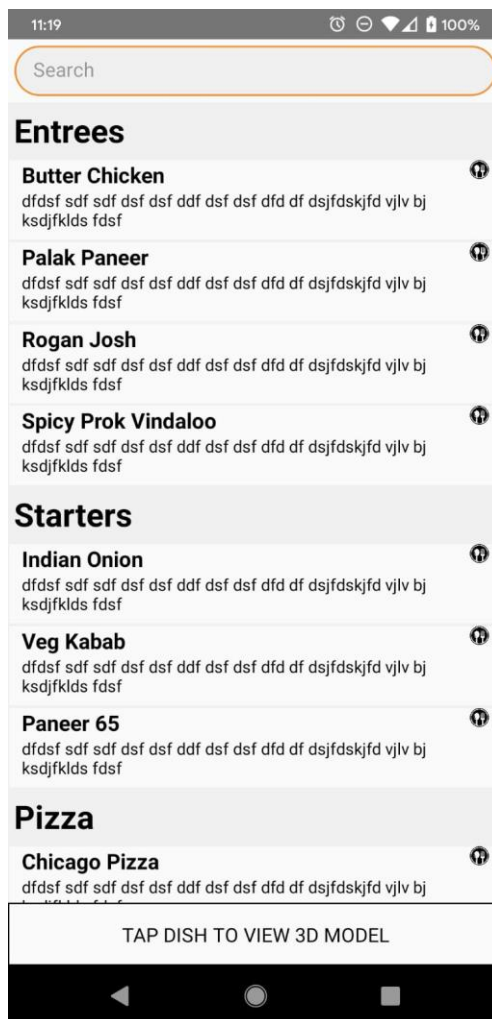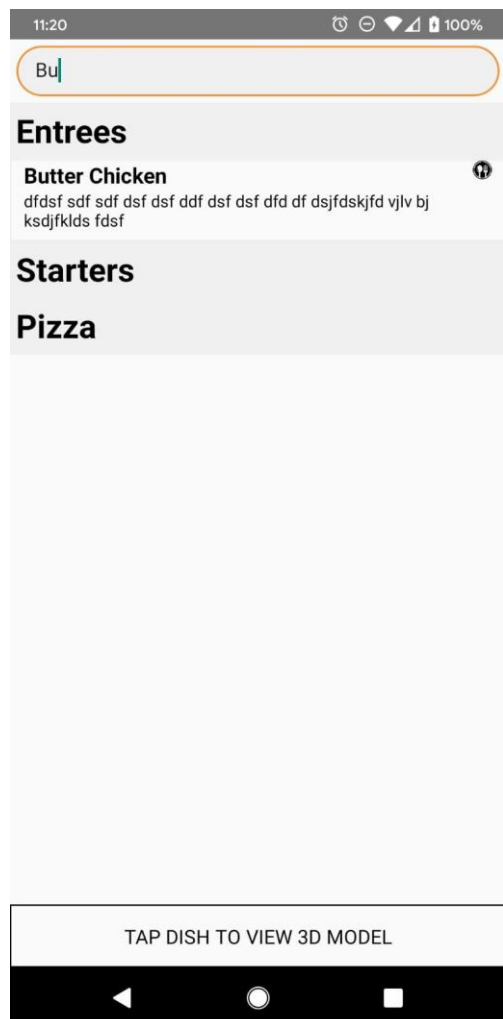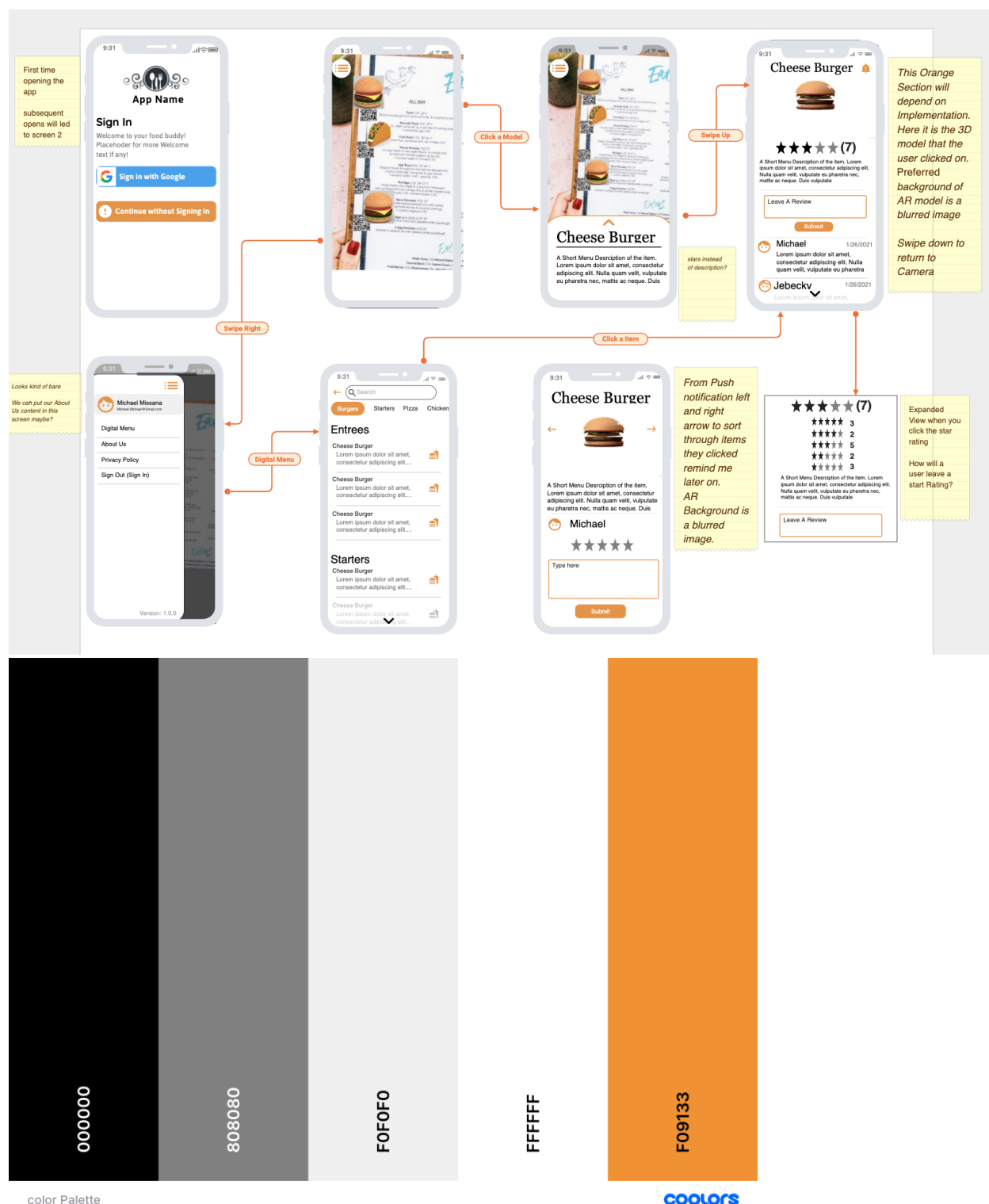
cool
amzaing

Digital Menu

Screen 1 (11:20)

Search field: Bu

Entrees

Butter Chicken
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Starters

Pizza

TAP DISH TO VIEW 3D MODEL

Screen 2 (11:19)

Search

Entrees

Butter Chicken
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Palak Paneer
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Rogan Josh
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Spicy Prok Vindaloo
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Starters

Indian Onion
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Veg Kabab
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Paneer 65
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj ksdjfklds fdsf

Pizza

Chicago Pizza
dfdsf sdf sdf dsf dsf ddf dsf dsf dfd df dsjfdskjfd vjlv bj

TAP DISH TO VIEW 3D MODEL

UI Design and Colour Scheme

color Palette

000000 808080 F0F0F0 FFFFFF F09133

coolors

Current Database Model

AR Demo

Demo Video