CC105 - App Dev & Emerging Technologies

09.04.20XX

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Sanson, Theo Jay M'Lleno

Algupera, Aizzy Dianne

Poblacion, Albeth

CS3A

WEEK OCTOBER 5 - 17 Activities

General Overview

These activities generally focus on the absolute basics of the uses of, and how to use, the UI toolkit flutter through Android Studio. This includes why developers choose flutter, how to create a basic application as well as an explanation of functions within the development environment, structure of the applications, and basic coding techniques.

Outcomes

1. The team will have a fully configured android studio and has installed the Flutter Prerequisites
2. The team understands the UI of the IDE
3. The team has created the flutter apps found in the videos
    3.1 " Your First Flutter App Ep 1 - Creating a New Flutter Project from Scratch"
    3.2 " Your First Flutter App Ep 2 - Scaffolding a Material App"
4. Submission of a Google docs file Report

General Milestones

    I.   Understood the use of flutter

    II.   Installed Flutter Prerequisites

    III.   Properly Installed Java JDK for Gradle

    IV.   Created the Hello World Activity

    V.   Created the I Am Rich Activity

    VI.   Organized documentation for submission

    VII.   Made successful use of the assets and pubspec features, enhancing the I Am Rich Application

    VIII.   Successfully Changed the I Am Rich Application Icon

    IX.   Created the chat UI Activity

    X.   Created the Brew Crew App with firebase backend funcitonality

Overview of OCTOBER 5 – 10

Specific Overview

This week we set a goal to watch the first 7 tutorial videos provided by our instructor. After understanding the how's and why's of flutter, we then focused on the installation of the prerequisites needed to develop flutter applications. This included installing Git, Android Studio, and Flutter. Then we set about configuring Android Studio by installing the Flutter and Dart plugins, as well as creating the virtual device recommended by the Tutorials.

Outcomes

1. The team will have a fully configured android studio and has installed the Flutter Prerequisites
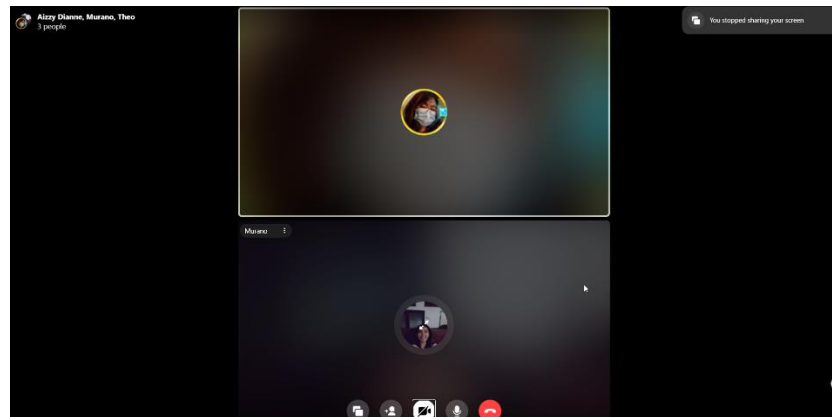2. The team understands the UI of the IDE

Milestones

I.   Understood the use of flutter

The team, using the videos, was able to understand the use of flutter, being a "one-stop-shop" for the development of mobile applications across multiple devices, platforms, and even operating system versions for both Android and iOS.
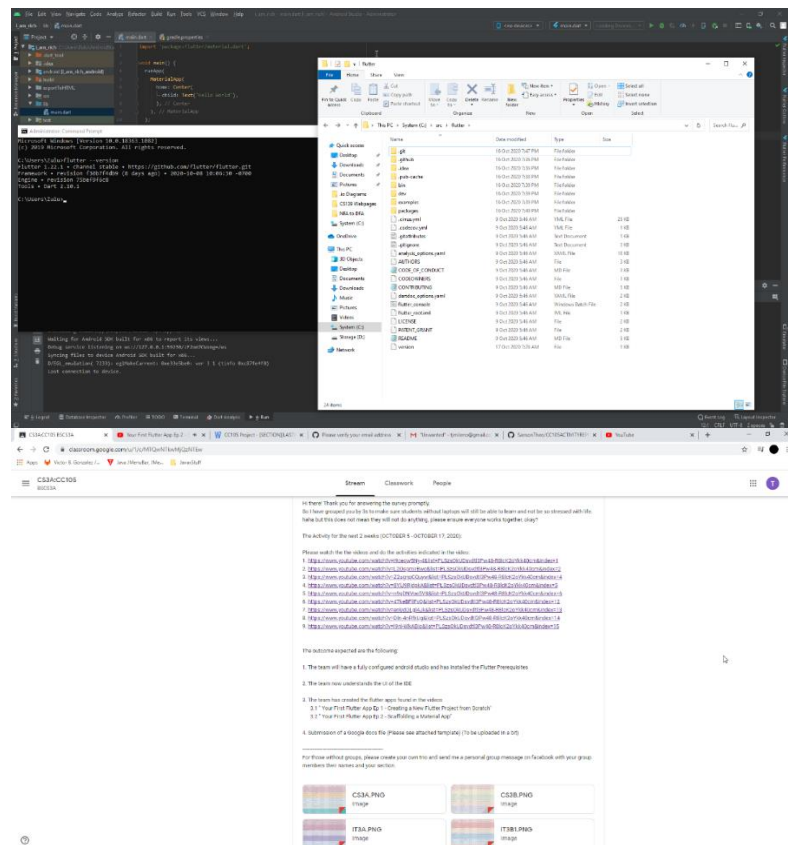
Evidences of Milestone
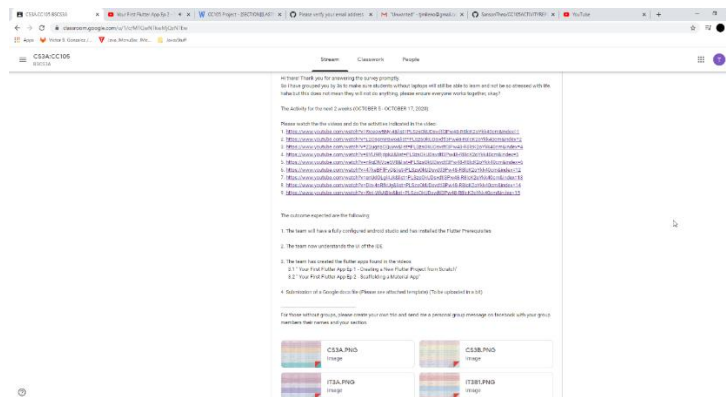
II.   Installed Flutter Prerequisites

Now that our devices were ready for the development of flutter applications, we decided to continue with the activities for the next week.

Evidences of Milestone

Overview of OCTOBER 12 – 17

Specific Overview

This week's focus was shifted towards the last two videos, where we had to create the applications that were featured. It was problematic to say the least, given the huge demand for system resources that Android Studio needs, limiting the amount of work we can do within a given amount of time.

It was during this time that Teammember Theo Sanson also encountered an error regarding the JRE and JDK dependency of the Gradle functionality. He was able to solve it by first installing a JDK, and then configuring the gradle.properties file within the project.

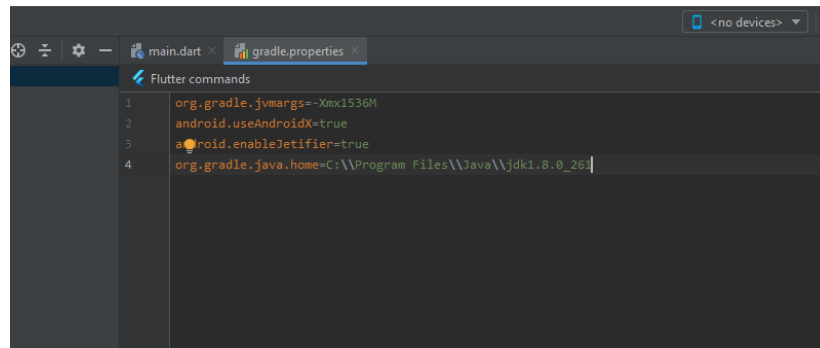Besides that snafu, the team was able to create the applications.

Outcomes

3. The team has created the flutter apps found in the videos

    3.1 " Your First Flutter App Ep 1 - Creating a New Flutter Project from Scratch"

    3.2 " Your First Flutter App Ep 2 - Scaffolding a Material App"

4. Submission of a Google docs file Report

Milestones

I.   Properly Installed Java JDK for Gradle

As it turns out, what we only had installed was the JRE. As this was not mentioned in any of the tutorials (be it videos, flutter's home page, android studio), this prevented us from running the code that we wrote and seeing how it looks at the emulated device. Installing the JDK and then configuring the System Environment Variables's JAVA_HOME to the JDK's path had not worked at first. Adding the line *org.gradle.java.home=JDK_FILEPATH* to the project's gradle.properties file worked.
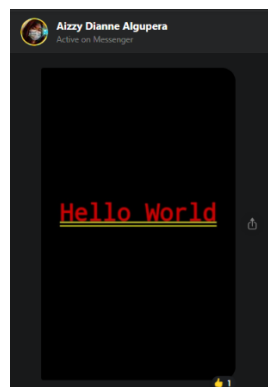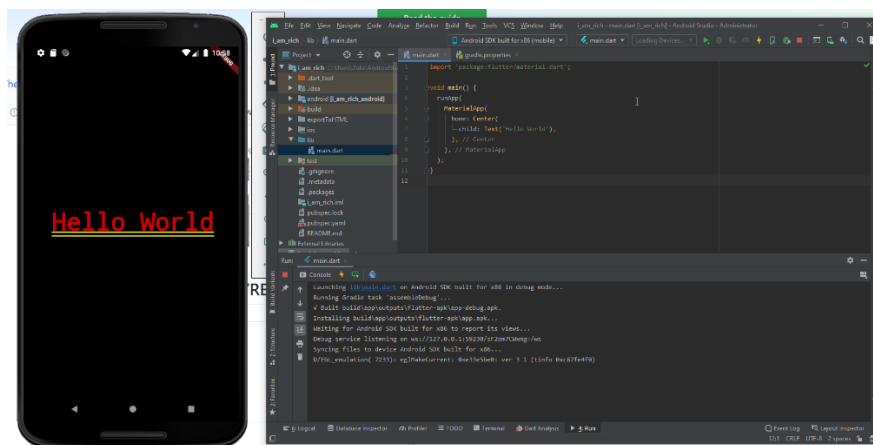
Evidences of Milestone

II.   Created the Hello World Activity

We were able to create the Hello World Activity successfully, and we were able to see the effects of the center widget. From this we were able to understand the structure behind applications and the child-parent relationship that widgets share.
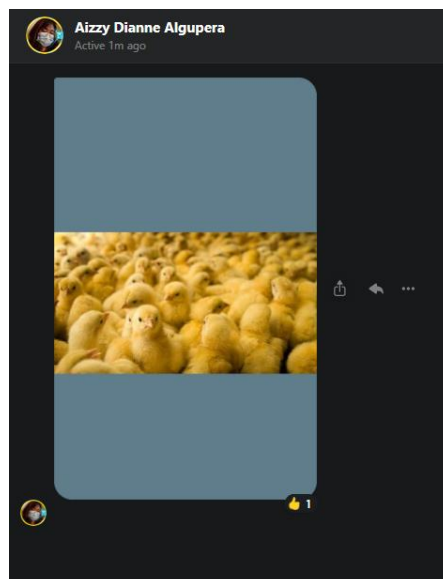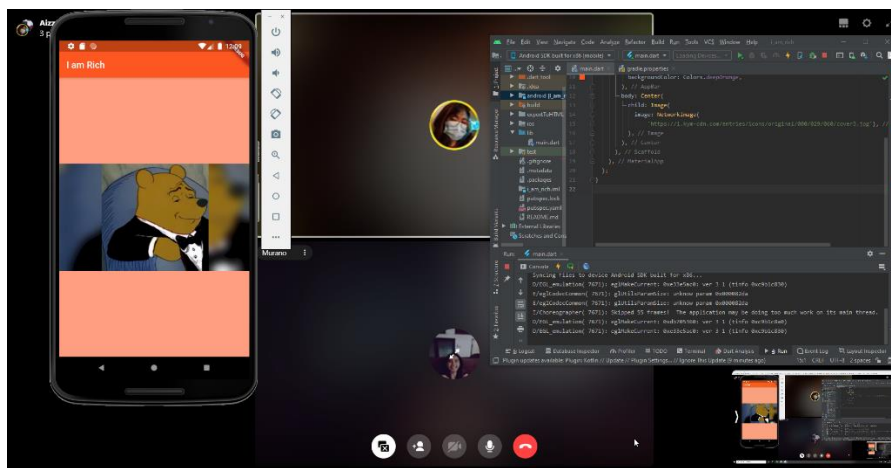
Evidences of Milestone

III.   Created the I Am Rich Activity

We were also able to create the i_am_rich activity successfully, simultaneously understanding how each widget can have its own properties. Each widget also has the ability to have its own widgets, and those widgets can have its own widgets embedded, ad infinitum. We were able to successfully use the BackgroundColor Widget as well as the NetworkImage Widget. From this, we reached a profound understanding that developing an application through flutter is more of a UI-centric experience and makes designing UI for mobile applications much easier.
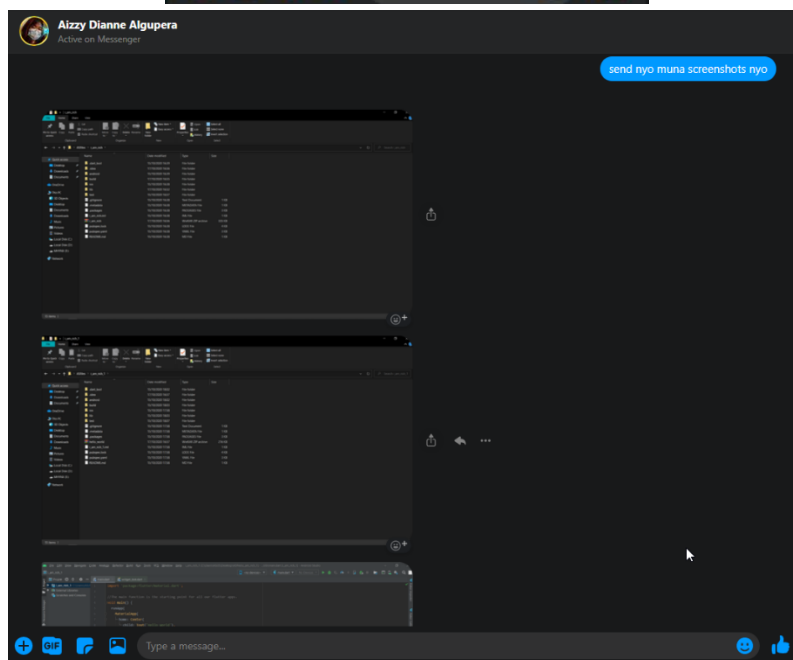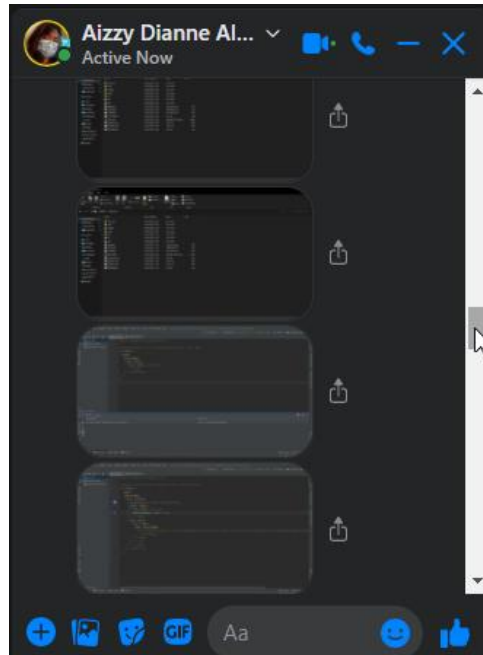
Evidences of Milestone

IV.   Organized documentation for submission.

We were able to compile all our screenshots for documentation purposes.

Evidences of Milestone

Overview of OCTOBER 25 – NOVEMBER 17

Specific Overview

This week we were able to create flutter applications that made use of assets and change the application icons through the tutorials provided, as well as understanding the process behind UI design in flutter by following a tutorial to create a messaging app.

Outcomes

3. The team has created the flutter apps found in the videos

    3.1 " Your First Flutter App Ep 3 - Working with Assets in Flutter & the Pubspec file"

    3.2 " Your First Flutter App Ep 4 - Adding App icons to Your Flutter Apps"

    3.3 " Flutter Chat UI Tutorial"

4. The team has complete documentation and source code repositories for the activities4. Submission of a Google docs file Report

Milestones

I. Made successful use of the assets and pubspec features, enhancing the I Am Rich Application

By adding an image to a project's directory, we were able to use the assets for the application by first uncommenting the 'assets' line in the pubspec file, then adding the image to the directory, and adding the directory under the "assets" section. We did this by simply using the "-imiages/" line for the application to import the entire folder as opposed to only one image.

Evidences of Milestone
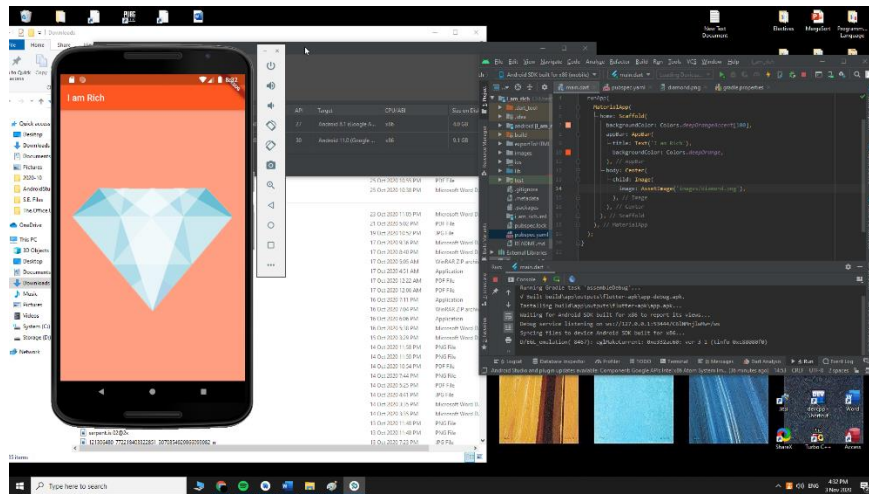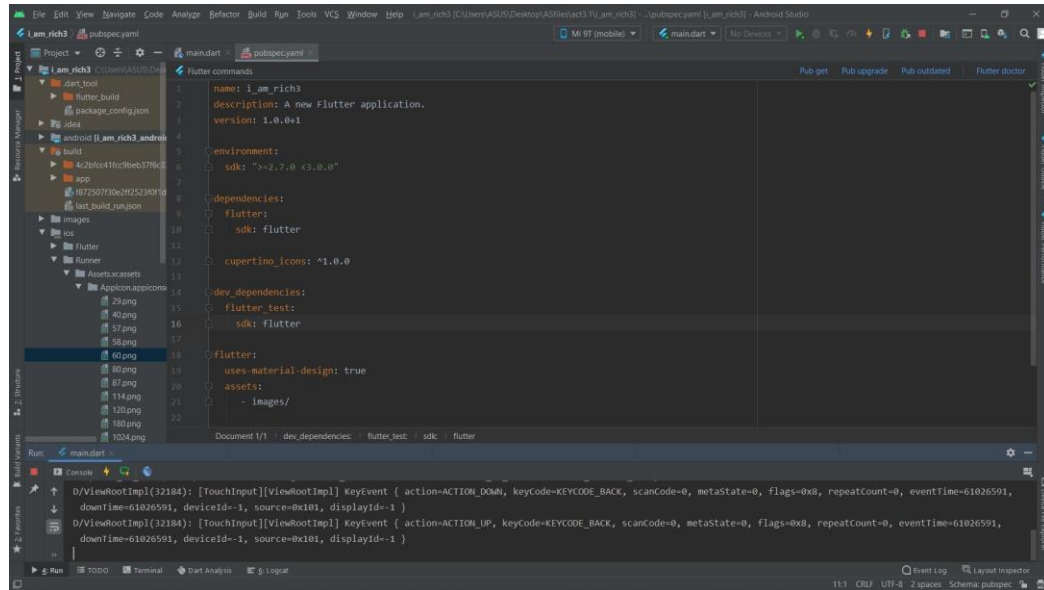
II. Successfully Changed the I Am Rich Application Icon

By using a website called appicon.co, we were able to download app icon sized .png's of our chosen images and we were able to use them on the app by first replacing the relevant folders under the android and ios directories, then resizing them and reconfiguring them for a more sleek and stylized appearance in different android and ios devices in Android Studio by using the built in Image Asset Configuration Studio or Asset Studio.

Evidences of Milestone
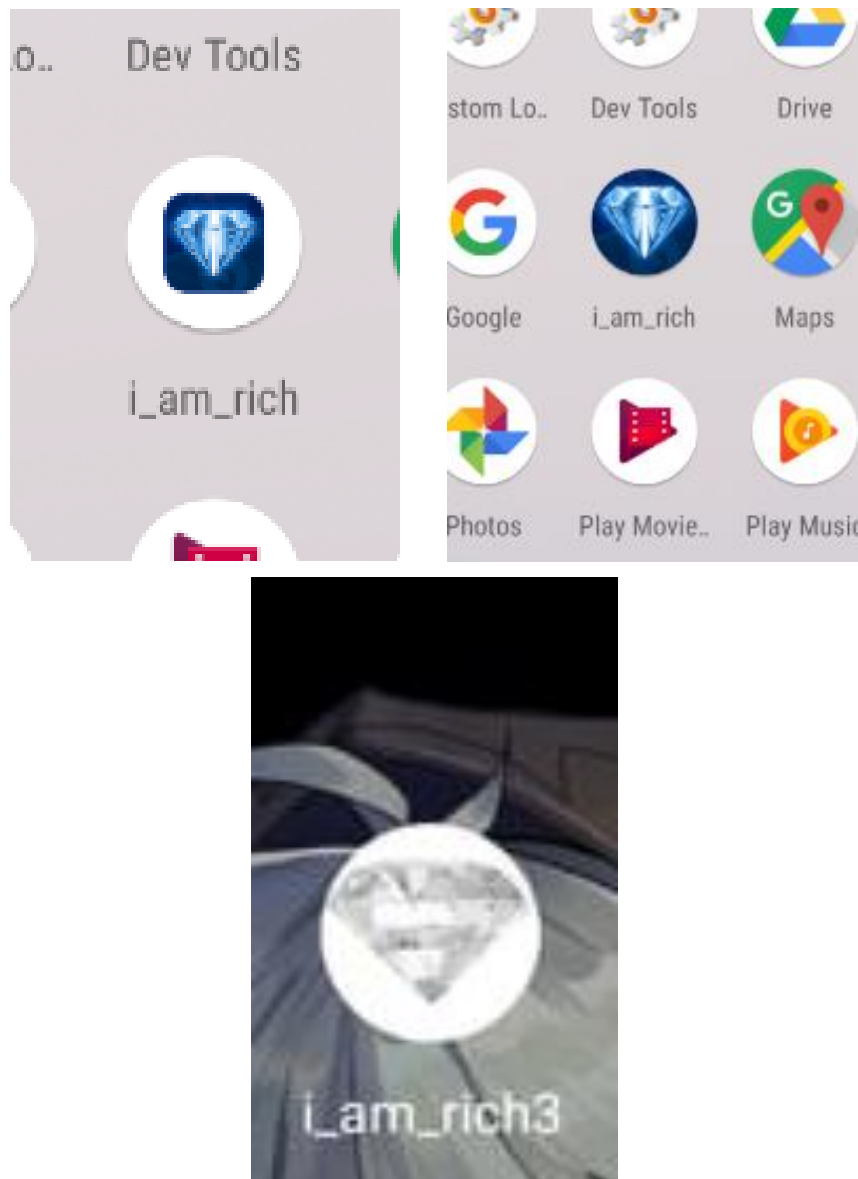
III.   Created the chat UI Activity

We were able to follow Marcus Ng's Flutter UI Tutorial and create a basic layout for a messaging application. From this tutorial, we were able to moderately understand the concept of 'wrapping', further understand the concepts of widgets, containers, and the different attributes and functions that could be used within them.

Evidences of Milestone
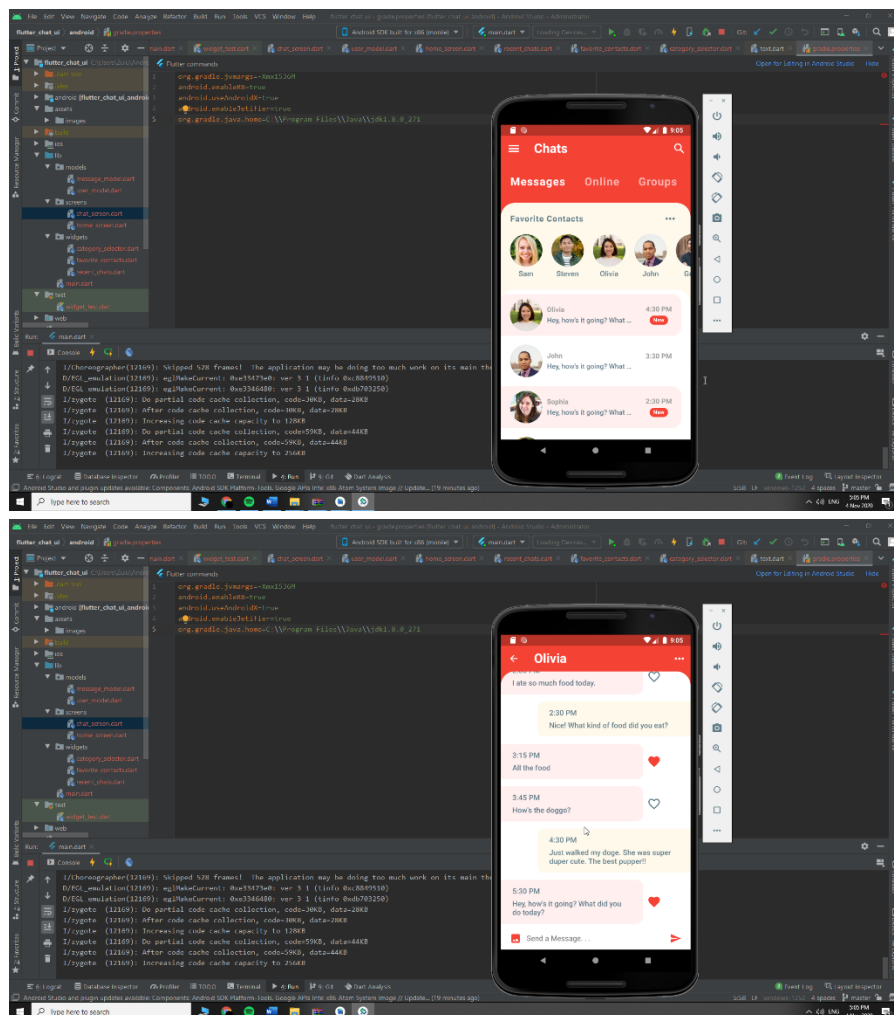
Overview of NOVEMBER 9 – NOVEMBER 29

Specific Overview

This week we were able to successfully setup the firebase backend for the Brew Crew app which we created by following along a tutorial series.

Outcomes

3. The team has completed the Net Ninja App Tutorials

4. The team has complete documentation and source code repositories for the activities submission of a Google docs file Report

Milestones

I.   Created Brew Crew App with firebase backend functionality

By setting up firebase for the app, we were able to make use of the database functionality of the firebase services as a backend for the brew crew app that we made. We were able to do this by first setting up a firebase profile, creating a new project, then downloading the services.json which we placed in the app directory. Apart from this, we added a few lines of code so that the app is able to communicate with the firebase services and add the necessary information after creating the database.

Evidences of Milestone
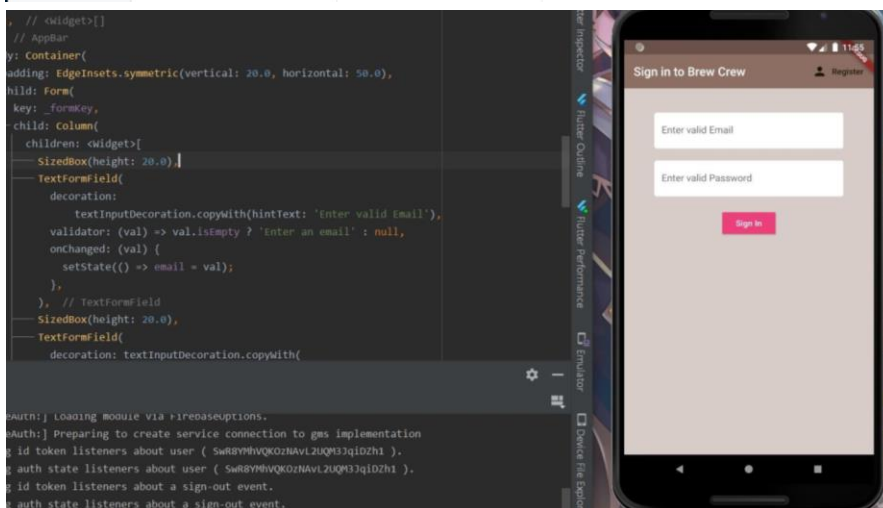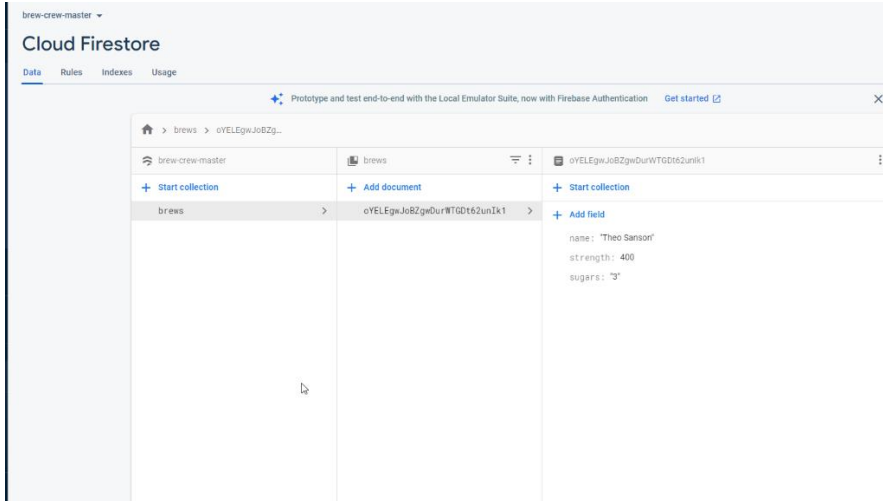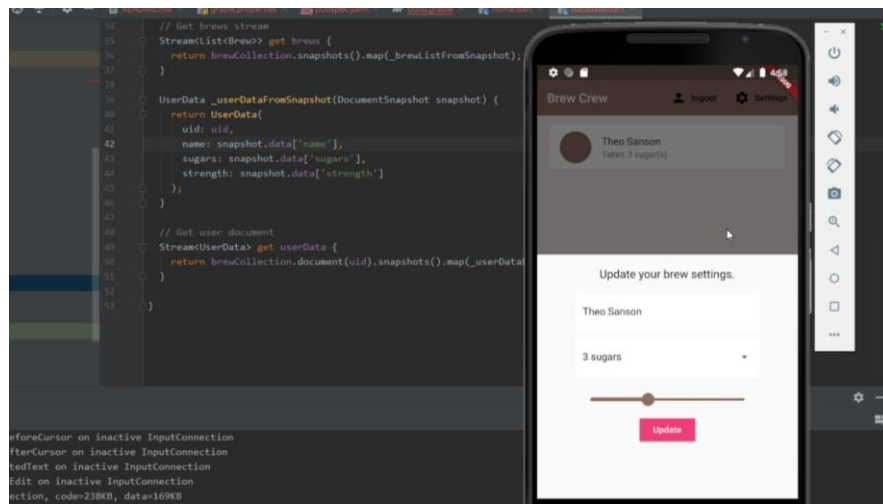
Application Code and Screenshot

Sanson, Theo Jay M'Lleno G.

Activity 1 - https://github.com/SansonTheo/CC105ACTIVITYHELLOWORLD

Activity 2 - https://github.com/SansonTheo/CC105ACTIVITYIAMRICHREPOSITORY

Activity 3 - https://github.com/SansonTheo/CC105ACTIVITYIAMRICHASSETS

Activity 4 - https://github.com/SansonTheo/CC105ACTIVITYIAMRICHICONS

Activity 5 - https://github.com/SansonTheo/CC105ACTIVITYCHATUI

Activity 6 - https://github.com/SansonTheo/CC105ACTIVITYBREWCREW

Algupera, Aizzy Dianne

Activity 1 -
https://github.com/AluperaAizzyDianne/CC105ACTIVITYHELLOWORLDREPOSITORY

Activity 2 -
https://github.com/AluperaAizzyDianne/CC105ACTIVITYIAMRICHREPOSITORY

Activity 3 - https://github.com/AluperaAizzyDianne/CC105ACTIVITYIAMRICHASSETS

Activity 4 - https://github.com/AluperaAizzyDianne/CC105ACTIVITYIAMRICHICONS

Activity 5 - https://github.com/AluperaAizzyDianne/CC105ACTIVITYCHATUI

Activity 6 - https://github.com/AluperaAizzyDianne/CC105ACTIVITYBREWCREW

Poblacion, Albeth

Activity 1 - https://github.com/PoblacionAlbeth/CC105ACTIVITYIAMRICHREPOSITORY

Activity 2 - https://github.com/PoblacionAlbeth/CC105ACTIVITYIAMRICHREPOSITORY

Activity 3 - https://github.com/PoblacionAlbeth/CC105ACTIVITYIAMRICHASSETS

Activity 4 - https://github.com/PoblacionAlbeth/CC105ACTIVITYIAMRICHICONS

Activity 5 - https://github.com/PoblacionAlbeth/CC105ACTIVITYCHATUI

Activity 6 - https://github.com/PoblacionAlbeth/CC105ACTIVITYBREWCREW