CS F213
OOP PROJECT

Sem 2 2020-2021

"LiveMART"
-A Virtual Grocery Shoppe

Done By:

GROUP 25

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SOFTWARES/PLATFORMS USED:
1. Frontend: Flutter (using Dart language)
2. Backend: Firebase
3. Google APIs
4. IDE: Android Studio

MODULE 1: Registration and Sign Up

Screen 1: Front Page for users to define their role + Login/Signup/Social SignIn
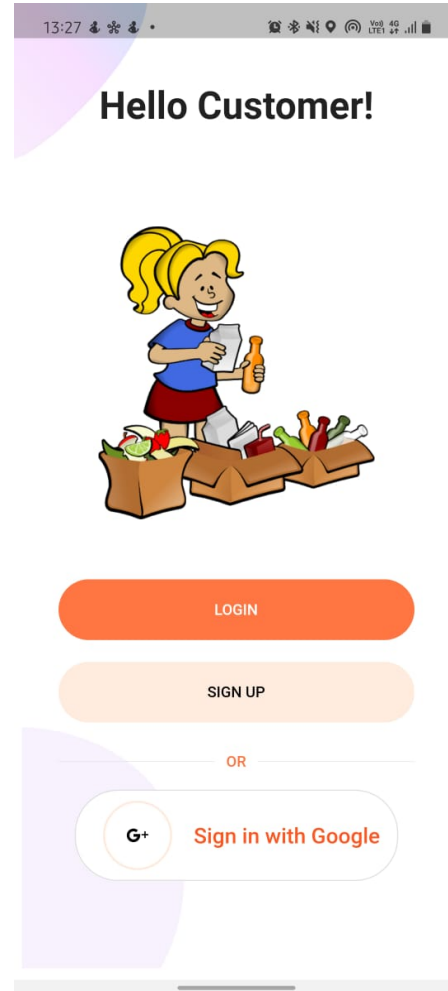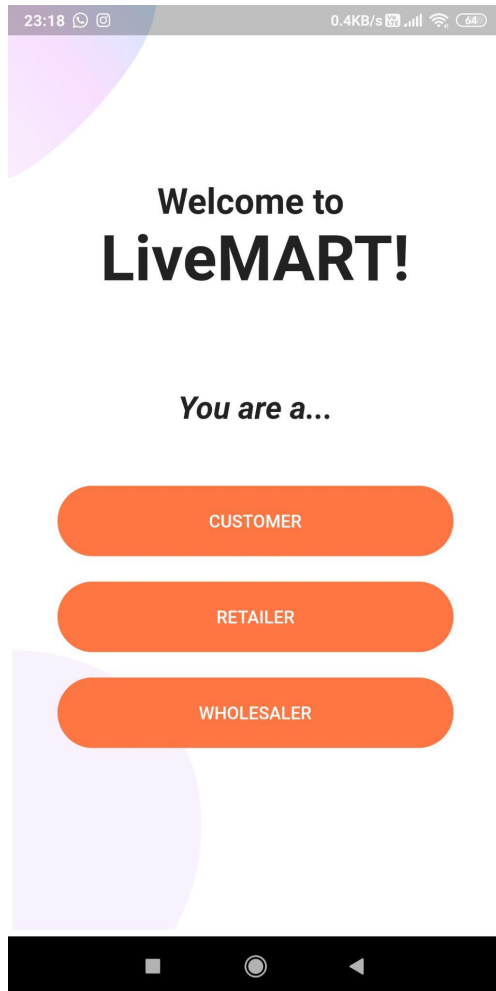
Screen 2: Registration pages for Customer, Retailer and Wholesaler

SIGNUP FOR CUSTOMERS

Enter User Name

Enter Email

Enter password

Enter Phone No.

Enter Address

SIGNUP

Already have an Account ? **Sign In**

SIGNUP FOR RETAILERS!

Enter User Name

Enter Email

Enter password

Enter Phone No.

Enter Shop Name

Enter Shop Address

SIGNUP

Already have an Account ? **Sign In**

SIGNUP FOR WHOLESALERS!

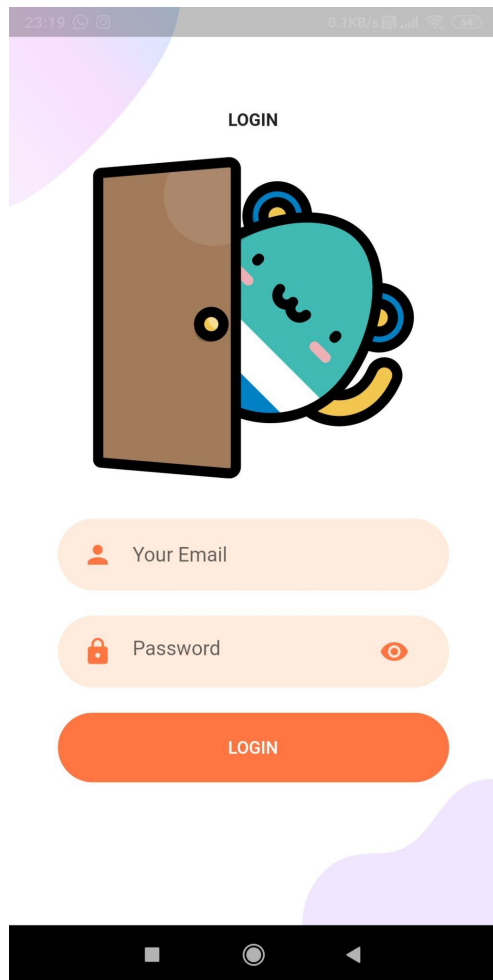Enter User Name

Enter Email

Enter password

Enter Phone No.

Enter Shop Name

Enter Shop Address
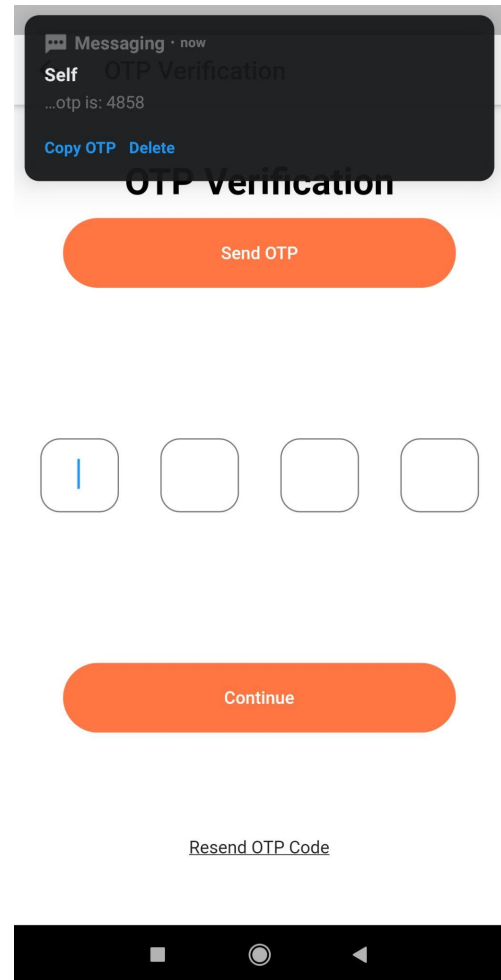
SIGNUP

Already have an Account ? **Sign In**

Screen 3: Login Page   **Screen 4**: OTP Page

MODULE 2: Dashboard for all users

Screen 5: Dashboard for customer, retailer and wholesaler
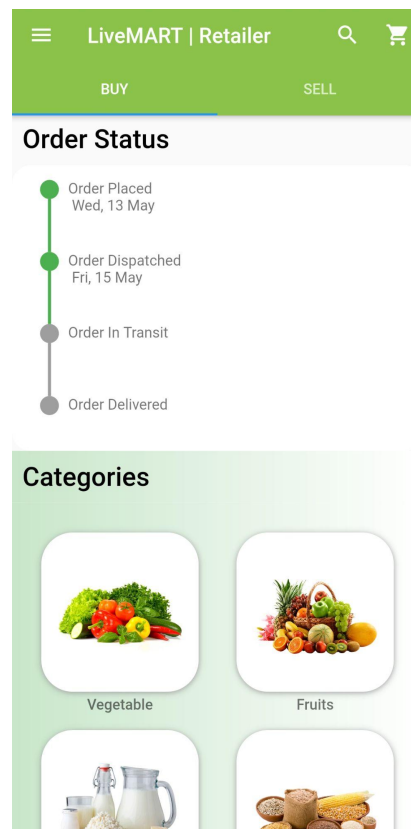
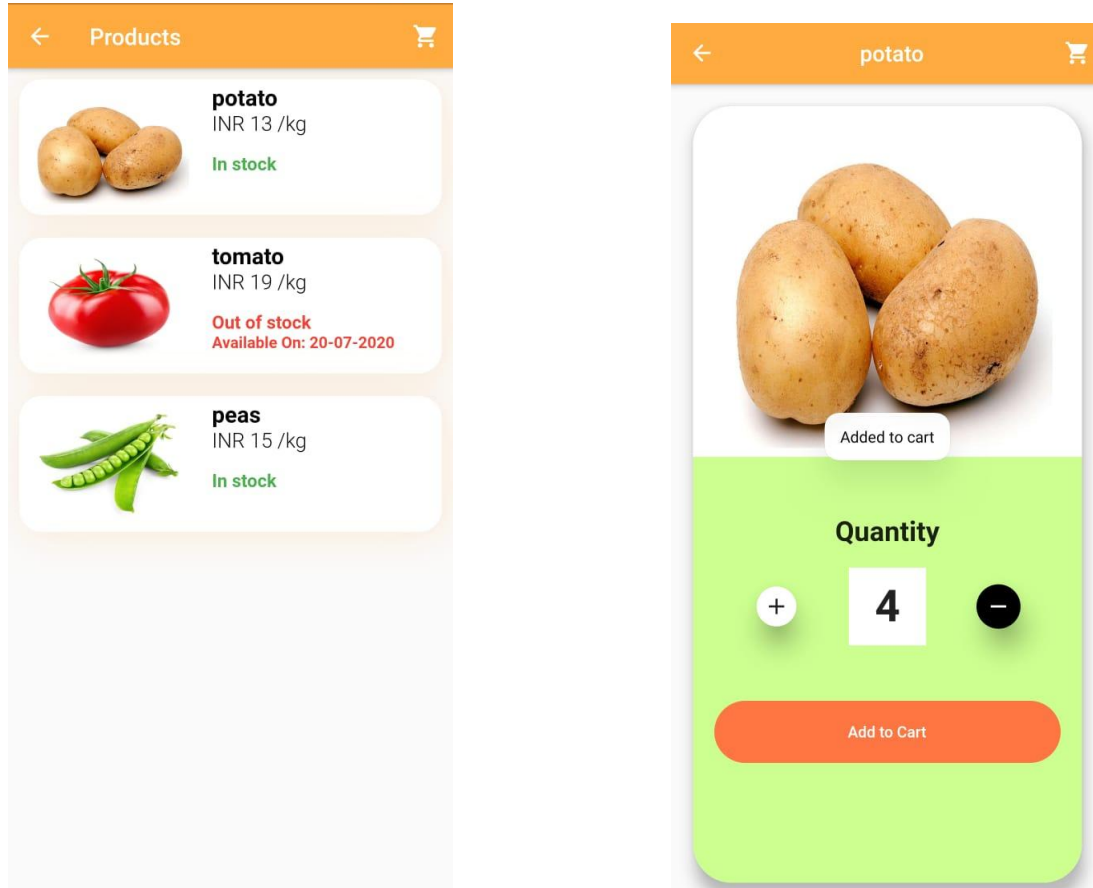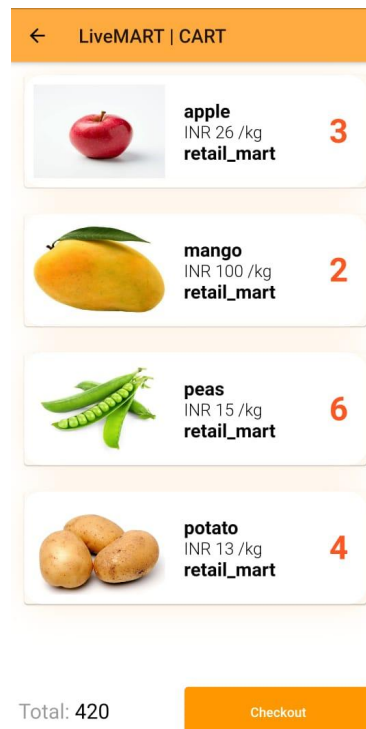## Customer
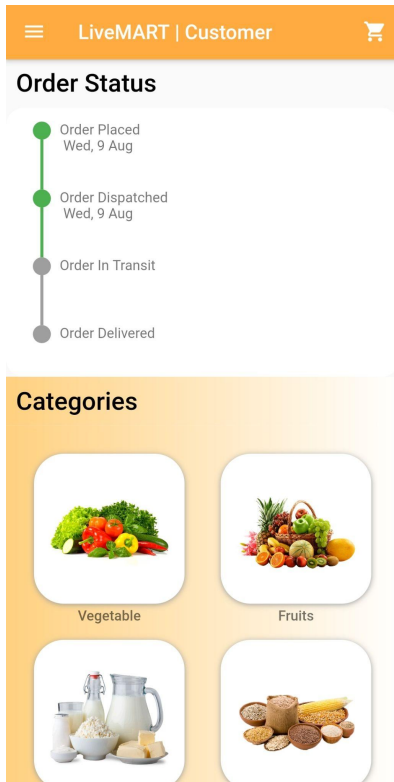
Wholesaler

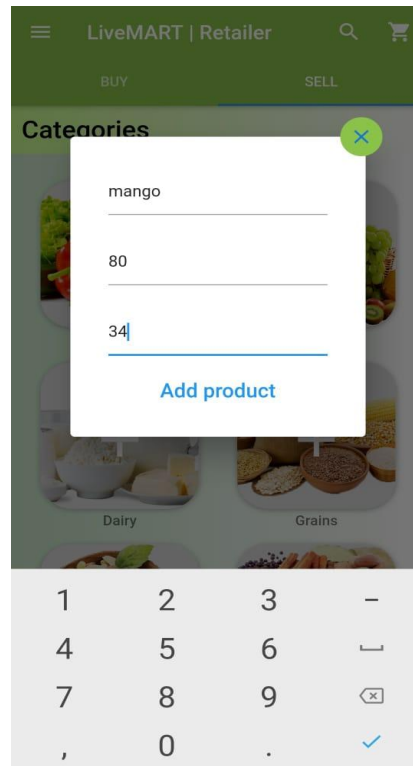

Retailer - Sell

Retailer - Buy

Screen 6: Adding products to cart from a category of products and details

Screen 7: Cart

Screen 8: Adding products to stock from Retailer/Wholesaler Dashboard

MODULE 3: Search/Navigation Module
Screen 9: MAPS API
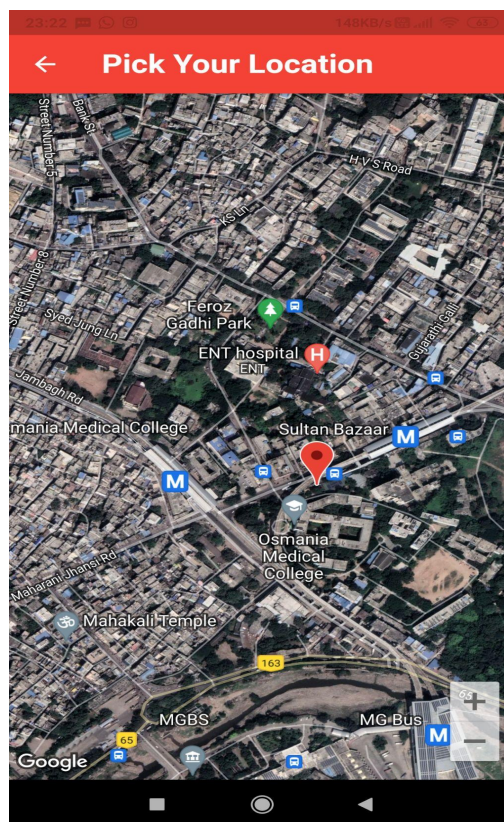
MODULE 4: Place Order and Status

Screen 10: Choose Online/Offline Payment

Choose your
Payment Method
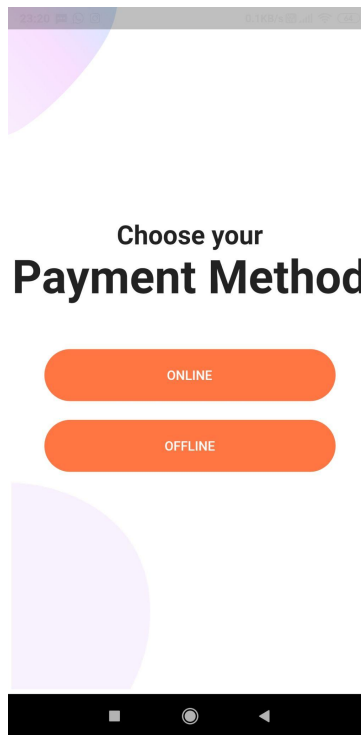
ONLINE

OFFLINE

Screen 11: Online Payment

Select Address

➕ Add New Address

⦿ PCT
911
bphc, hyd
hyd, ts
123

○ Heaven
1233
aisi u2w, enwnw
dbsb, nssn
123

○ Vyshnavi
88w9w
jsjak, snaja
sjaj, anaj
1828

Continue

**Your order No #M246
has been
Successfully Placed!**

****
Here are the delivery order details:
Order No: M246
Tentative Delivery Date: 28/04/2021
**(Due to lockdown in nearby areas, delivery orders take
time, please be patient)**
Delivery Agent: Mr.PCT
Phone number of agent: 9876543210:

CLICK HERE TO RETURN TO
DASHBOARD

CLICK HERE TO GIVE FEEDBACK!

Screen 12: Offline Payment using Google Calendar API

Event Start Time   2021-04-25 23:20:37.202516

Event End Time   2021-04-26 23:20:37.202519

shopping at LiveMART

Insert Event

MODULE 5: Feedback and Queries

Screen 13: Feedback Page

Rating and Service Feedback

Thank you for using LiveMART! Please rate our service and leave a feedback for us to improve.

★ ★ ★ ★ ★

good

Submit

BACKEND SCREENSHOTS IN FIREBASE:

LiveMART ▾   Cloud Firestore   Go to docs 🔔 Ⓐ

🏠 > Users > 9nEaGve4AoCfy...

📶 livemart-f8ac2	📄 Users ⋮	📄 9nEaGve4AoCfyPGlWyr1 ⋮
+ Start collection	+ Add document	+ Start collection
Users >	7XH5JBbcIsmpPlMVU3pC	orders
users	**9nEaGve4AoCfyPGlWyr1** >	
	CZTKVtuWPSCsgNoejckn	
	Ra3f2y5CEBY3TXfBUDJT	+ Add field
	eWkPwnGq3AqbWLN1JXng	address: "J 12/35 Varanasi"
	l04cNJp82v7WdS03XP8u	email: "kashishag@gmail.com"
	vLTbUmwYZTVFBWPAEXY5	name: "kashish"
		phone: "9648930609"
		role: "Customer"
		uuid: "Ef0ev7pDWxRKVVGmigOdqsT9HBo2"

Activate Windows
Go to Settings to activate Windows.

🏠 > Users > 9nEaGve4AoCfy... > orders > ilsZ9Wi7KesPLs...

📄 9nEaGve4AoCfyPGlWyr1 ⋮	📄 orders ⋮	📄 ilsZ9Wi7KesPLsmm8FzA ⋮
+ Start collection	+ Add document	+ Start collection
orders >	**ilsZ9Wi7KesPLsmm8FzA** >	+ Add field
		▾ 1
		cost: "26"
+ Add field		name: "potato"
address: "J 12/35 Varanasi"		quantity: "6"
email: "kashishag@gmail.com"		▾ 2
name: "kashish"		cost: "36"
phone: "9648930609"		name: "tomato"
role: "Customer"		quantity: "3"
uuid: "Ef0ev7pDWxRKVVGmigOdqsT9HE"		

Activate Windows
Go to Settings to activate Windows.

🏠 › Users › vLTbUmwYZTVF… › products › VqwJgMleX8jO…

| vLTbUmwYZTVFBWPAEXY5 ⋮ | products ▽ ⋮ | VqwJgMleX8jOJ1M2V1s3 ⋮ |

＋ Start collection

orders

products ›

＋ Add field

address: "Shop No. 123, Shanti Vihar, Hazrak Ganj, Lucknow"

email: "retailmart@gmail.com"

name: "Kashish"

phone: "9928772778"

role: "Retailer"

shopname: "retail_mart"

uuid: "il1e3xJch6Vb7BGjpWBpmrK9US2

＋ Add document

VqwJgMleX8jOJ1M2V1s3 ›

a6SpAY1hmKeCsnwZEd3F

＋ Start collection

＋ Add field

cost: "80"

name: "mango"

quantity: "34"

Cloud Firestore location: asia-south1

LIST OF APIs AND DEPENDENCIES

```
23   dependencies:
24     flutter:
25       sdk: flutter
26
27
28     # The following adds the Cupertino Icons font to your application.
29     # Use with the CupertinoIcons class for iOS style icons.
30     cupertino_icons: ^1.0.2
31     google_sign_in: ^5.0.2
32     shared_preferences: ^2.0.5
33     fluttertoast: ^8.0.3
34     font_awesome_flutter: ^9.0.0
35     provider: ^5.0.0
36     flutter_svg: ^0.22.0
37     flutter_otp: ^0.3.1
38     firebase_auth: ^1.1.1
39     cloud_firestore: ^1.0.6
40     firebase_core: ^1.0.4
41     firebase_core_platform_interface: ^4.0.0
42     jwt_decode: ^0.3.1
43     flutter_secure_storage: ^4.1.0
44     firebase_storage: ^8.0.4
45     connectivity: ^3.0.3
46     rating_dialog: ^2.0.0
47     flutter_datetime_picker: ^1.3.8
48     googleapis: ^2.0.0
49     googleapis_auth: ^1.1.0
50     url_launcher: ^6.0.3
```

Links to resources used:

    a. https://flutter.dev/docs
    b. https://firebase.flutter.dev/docs/overview/
    c. https://flutter.dev/docs/resources/bootstrap-into-dart
    d. https://codelabs.developers.google.com/?cat=flutter
    e. https://pub.dev/flutter/packages
    f. https://medium.com/@afegbua/flutter-thursday-13-building-a-user-registration-and-login-process-with-provider-and-external-api-1bb87811fd1d
    g. https://medium.com/swlh/flutter-login-registration-using-firebase-1bef34007b91
    h. https://medium.com/@shubham.narkhede8/flutter-login-register-ui-4fb0cf09eab3#:~:text=We%20have%203%20pages%3A,password%20field%20and%20create%20account.
    i. **For e-commerce app**
    j. https://developers.google.com/maps/documentation/embed/get-api-key
    k. https://firebase.google.com/docs/android/setup

Members Roles and Responsibilities:

1. Aakanksha Singh: Enabling Social Login in Module 1, Module 3 and Module 2 backend
2. Aakanksha Bharadwaj: Enabling OTP Module 1, Module 2 backend and UI
3. Kashish Agrawal: Module 2 and 3 UI and backend
4. Vyshnavi S K: Module 1, Module 4, Module 5 UI

Challenges Faced and Resolutions:

1. Seeing the demo presentation and the number of complete tutorials that were available for building an android application, we also decided to create an android application using Flutter with Firebase for the backend in Android studio since these are the latest technologies. However, learning to use and getting familiar with Android Studio was itself a challenge and took us a lot of time.

2. When we started to code, we realized that there have been several dependency changes in both Firebase and Flutter in 2020-21, and as a result, most of the functionalities and libraries that we were supposed to

use according to the tutorials were now deprecated. Even functionalities in the official documentation were not working properly.

Resolution: We had to spend a lot of time scouring through the official documentation pages in order to implement our code. Also, since proper resources were not available, we had to search all errors separately and spend hours to resolve them.

3. Health and family wise also, we had to face several difficulties because of the second wave of Covid-19 in India. Unfortunately, one of our members, Kashish Agrawal, also got Covid and could not work for 2 weeks. Other members also had Covid-positive family members, which hindered their ability to work.

Resolution: All of us were very supportive and understanding of each other's circumstances. When one member was unable to work, others started implementing their part of the code so they can easily build up on that later, and vice-versa. Despite the challenging times, all members worked hard and contributed equally without slacking off.

4. The day before our final project demonstration, there was an update in the Flutter plugin in Android Studio because of which our application, which was running perfectly the night before, suddenly stopped working. What made this even more challenging was the lack of documentation about these kinds of errors.

Resolution: All of us worked together the whole night on resolving this error and finally we were able to run our application by doing "Flutter upgrade" and then running it in the Master channel.