

# Maverick Essentials Android Application

# Aim of the Android application

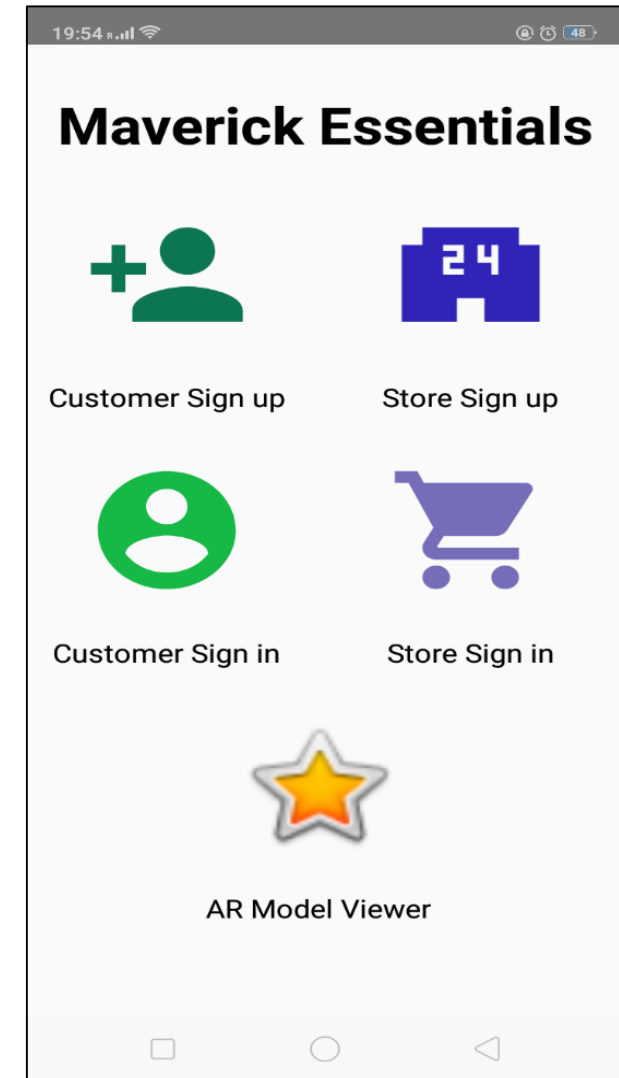
- The application aims to connect brick-and-mortar stores with customers to facilitate fast purchase of goods over the internet by listing items and brands of an existing store for customers to select from and purchase.
- The application aims to collect sales details from different purchases for the application of data analysis operations.
- The application aims to leverage cloud-based Augmented Reality to display 3D model views of new products to users.

# Modules of the Android application

- Sign-up and Sign-in modules for customer/public user
- Sign-up and Sign-in modules for store owner/store keeper
- Add and Edit Store Item modules for store owner
- Scan Purchase QR Code module for store owner
- Upload 3D model Zip module for store owner
- Store List module for customer
- Item List/Cart/Purchase module for customer on selection of desired store
- echoAR Web Interface module for viewing 3D modules on QR code image targets (Augmented Reality Module)

# Working of the Android App


On opening the app, the user is taken to the Start page with 5 buttons which are connected to the five main functionalities. An Internet connection is compulsory for using the application. The app works properly on Portrait orientation. Camera and Storage access permissions must be given in the Settings menu for the app to work properly.



Click the **Store Sign up button** to access the store registration page to enter details of your store and upload the necessary images of store and store owner. On clicking the **Register Store button**, the details are saved in Firebase.

20:56


### Enter your store details



Store Name

Select Store Type

Grocery



Store Owner Name

Store Owner Phone

Store Full Address

Click to select location on map

Store City Store Locality


Store Timings (Time and Days)

Username Password

REGISTER STORE

23:19


### Enter your store details



Shanthi Chemicals

Select Store Type

Medicines



Gunasekhar

5551234508

No. 20, Aminjikarai, Chennai

Click to select location on map

Chennai Aminjikarai


8 am to 11 pm. Monday to Sunday

Uploading Image and Details...Please Wait and do not exit from page

REGISTER STORE

23:19


### Enter your store details



Shanthi Chemicals

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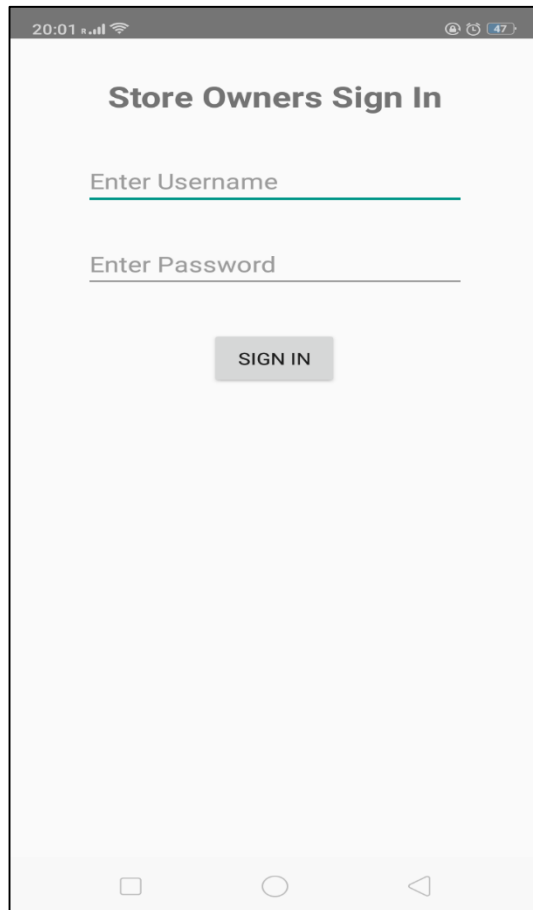
Uploading Image and Details...Please Wait and do not exit from page

Data values saved for Store Shanthi Chemicals

REGISTER STORE

Click the **Store Sign in button** in the Start Page to login with username and password of registered store. Click **SIGN IN button** to access the **Add Store Item and Edit Store Item buttons**.

On clicking the Add Store Item button, enter details of the new item which must be present in your store for customers to purchase. **Confirm button** saves the items details in Firebase and **Clear button** removes all typed information and uploaded images to start fresh.



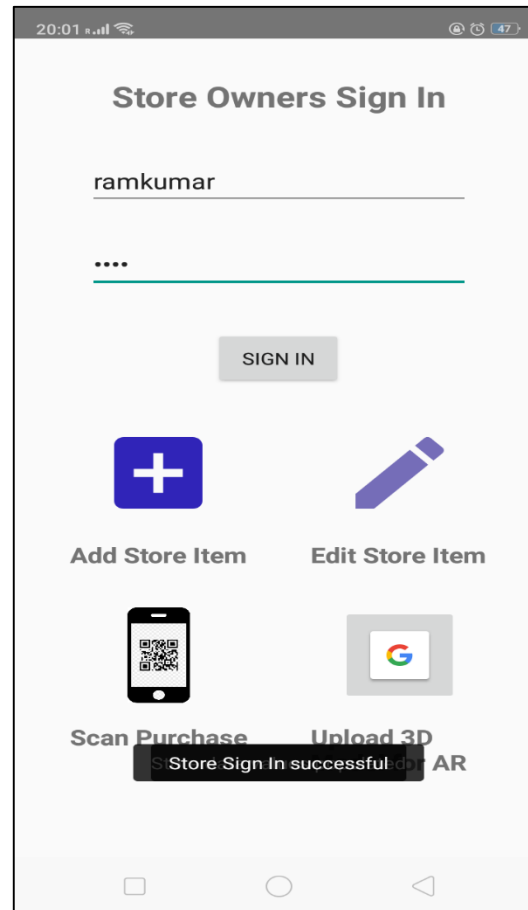
20:01

### Store Owners Sign In

Enter Username

Enter Password

SIGN IN




20:01


### Store Owners Sign In


ramkumar


....

SIGN IN

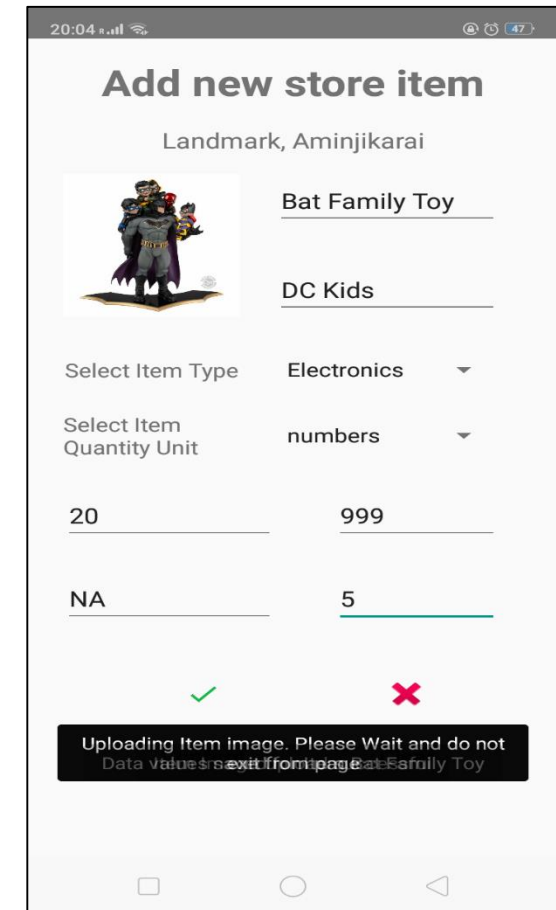
 Add Store Item

 Edit Store Item

 Scan Purchase

 Upload 3D


Store Sign In successful



20:04

### Add new store item

Landmark, Aminjikarai

 Bat Family Toy

DC Kids

Select Item Type Electronics

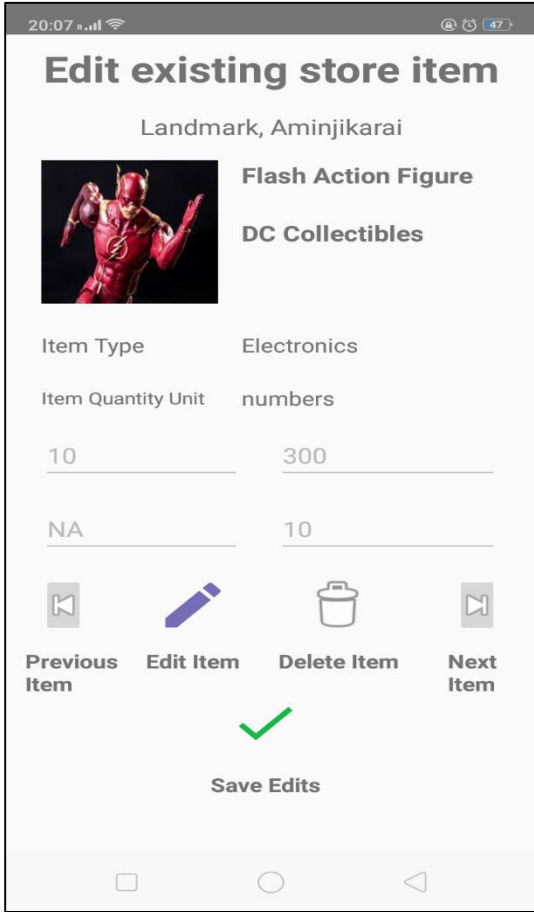
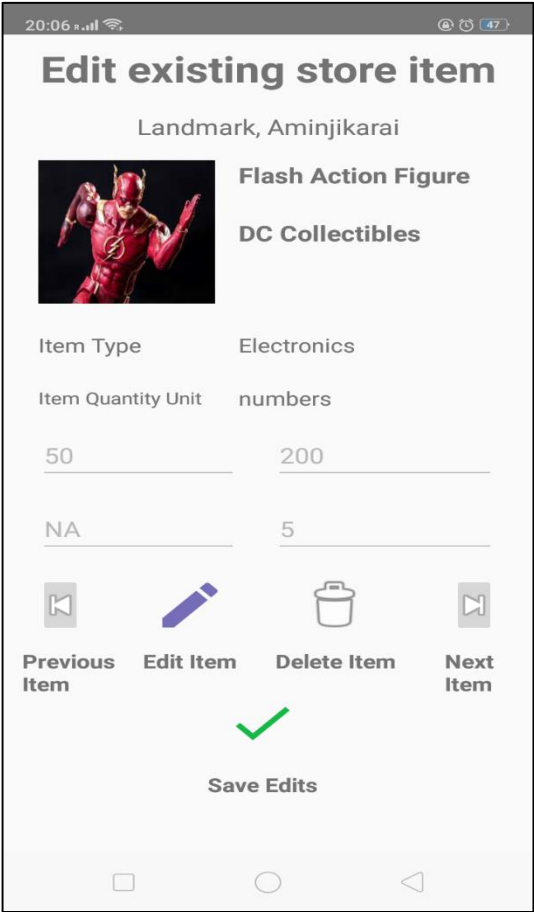
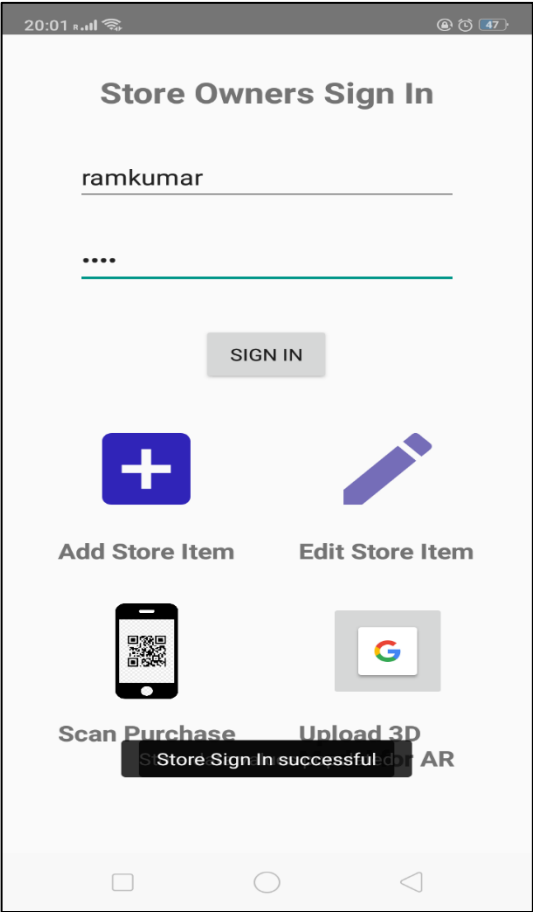
Select Item Quantity Unit numbers

20 999

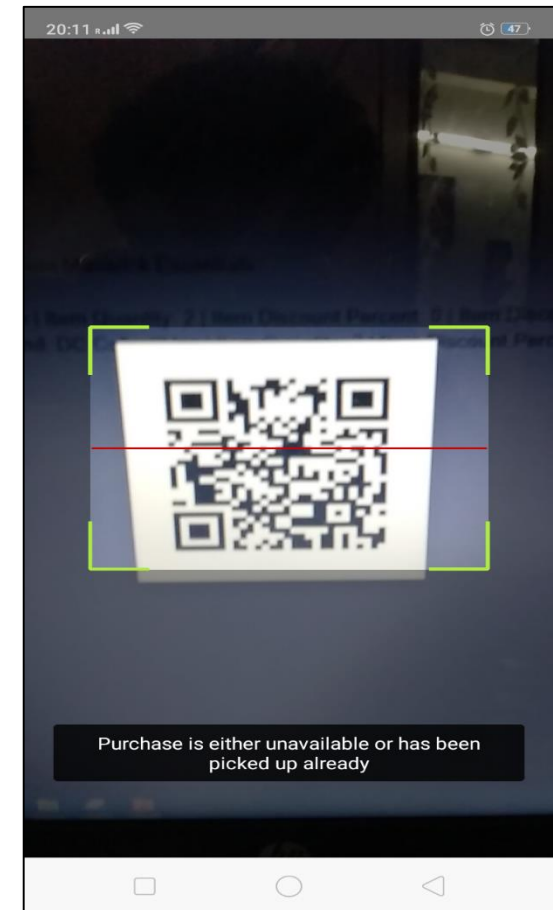
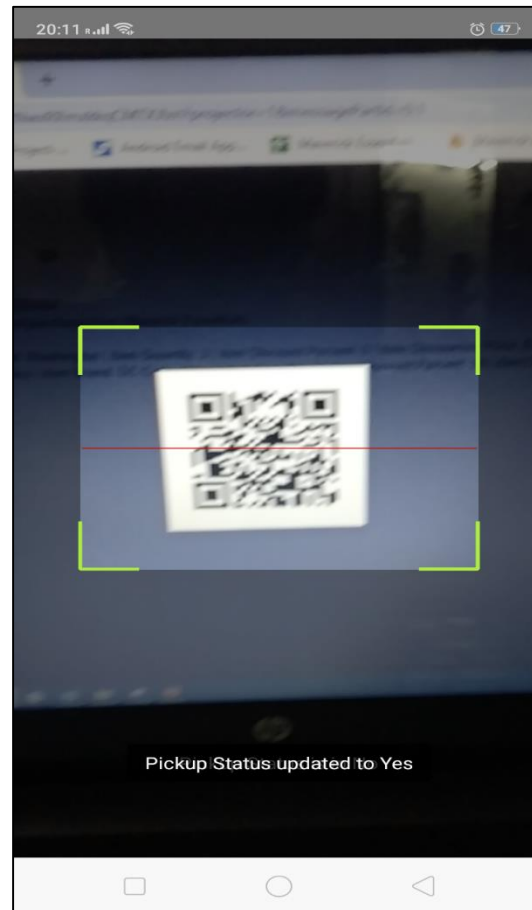
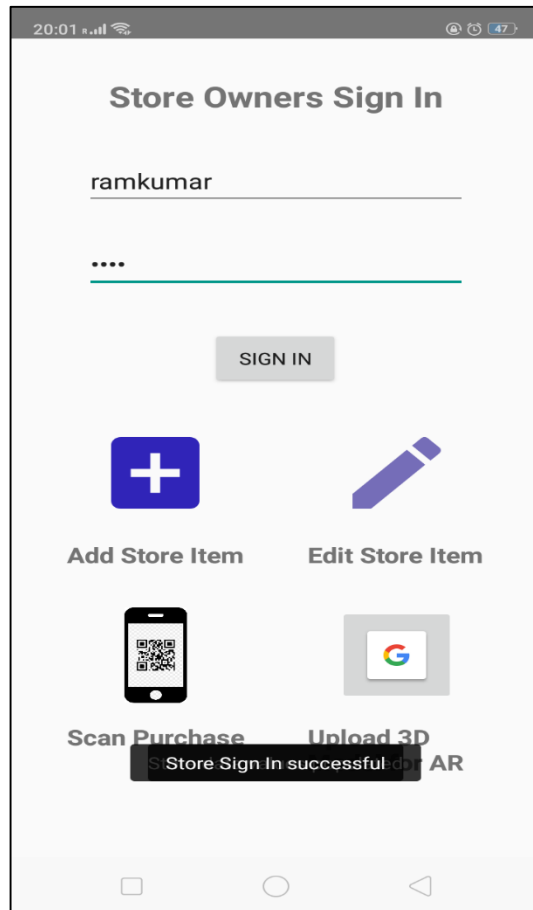
NA 5

Uploading Item image. Please Wait and do not exit from page

On clicking the **Edit Store Item button**, the corresponding page is open. After clicking the Edit Item button, the store keeper can edit the enabled text boxes of the Item Quantity, Expiry Date, Original Price and Discount Price fields of an existing item in the store. Click Save Edits button to save the data changes. On clicking the Delete Item button, the item is removed from the store list visible to the customer.

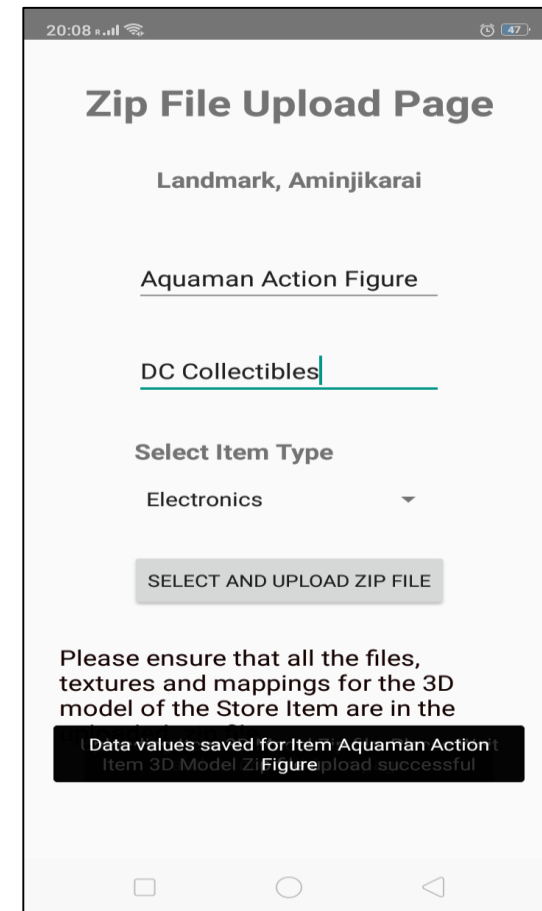
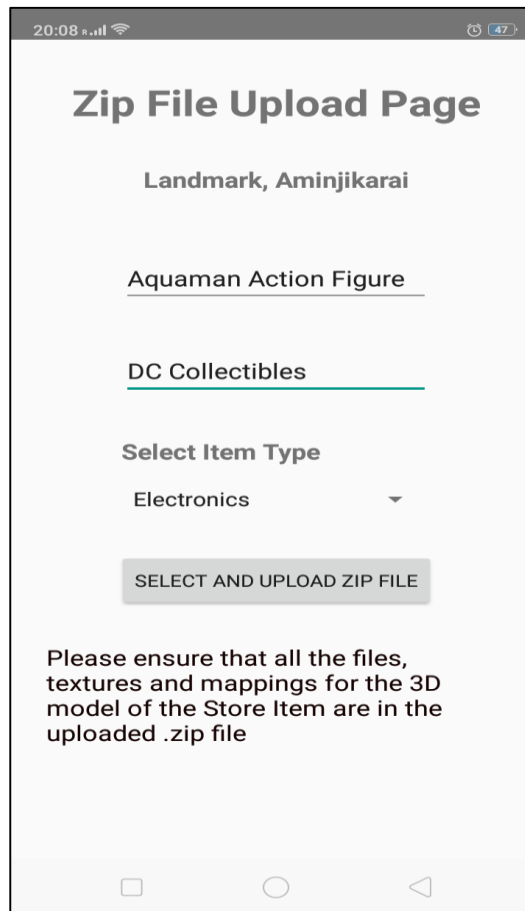
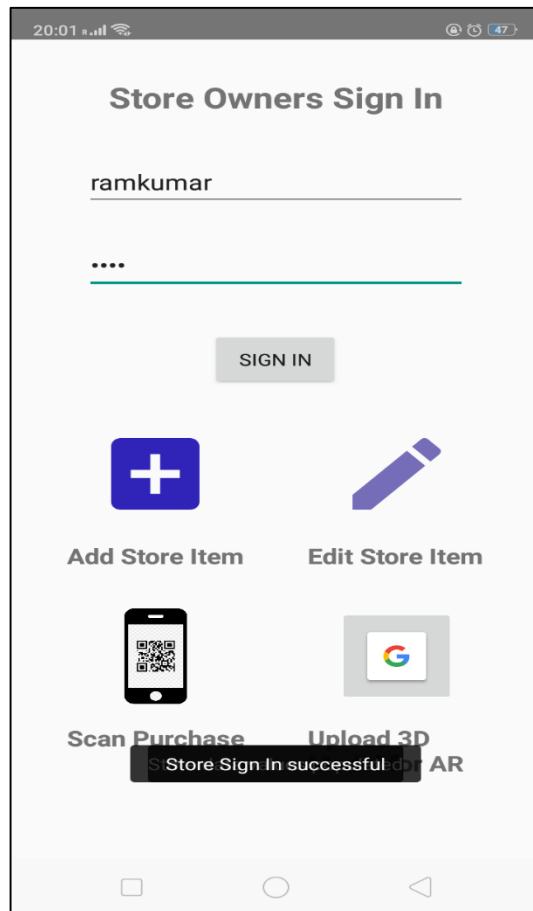


On clicking the **Scan Purchase button**, a page is opened to scan a QR code sent to a registered users email ID after purchase. Camera permissions must be enabled for the app in the smartphone to use this page. On scanning the QR code, the Pickup status of the purchase is now changed from No to Yes signifying that the customer has collected the purchase. This QR code is then rendered non-effective to prevent fraudulent duplicate pickups.

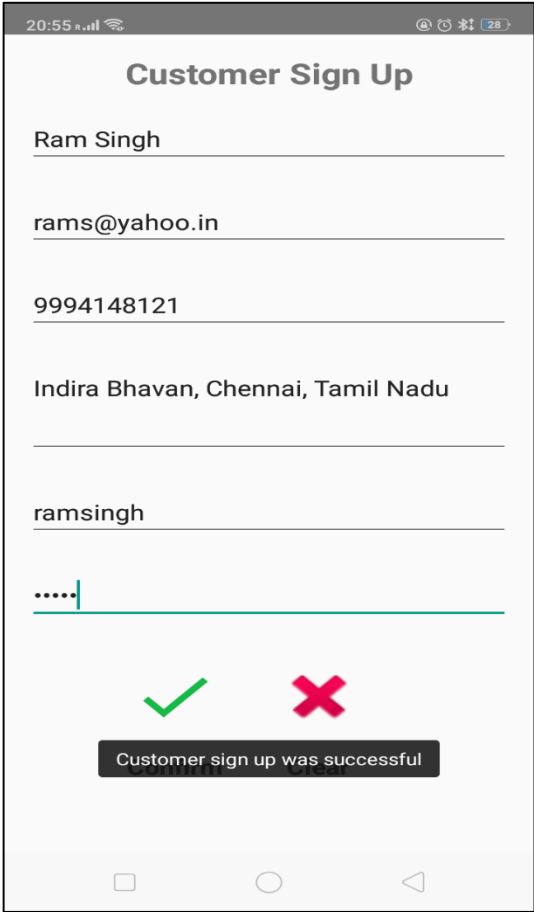
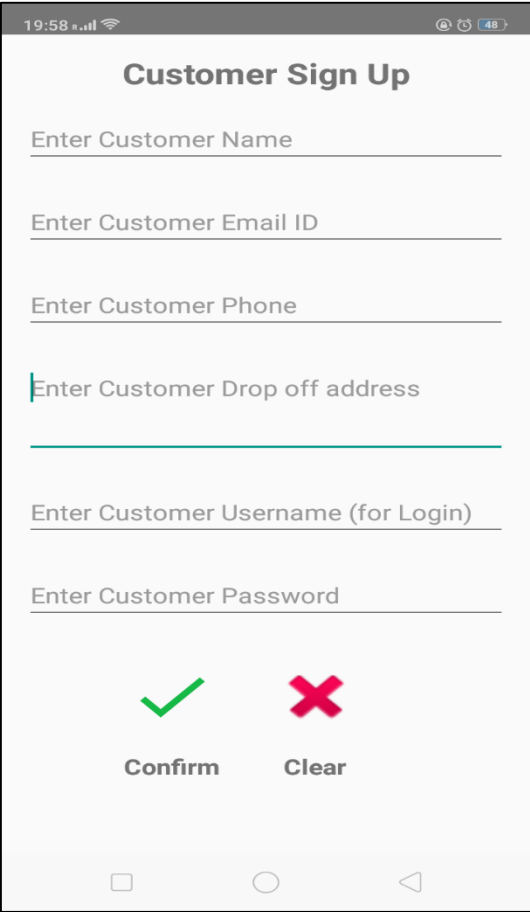
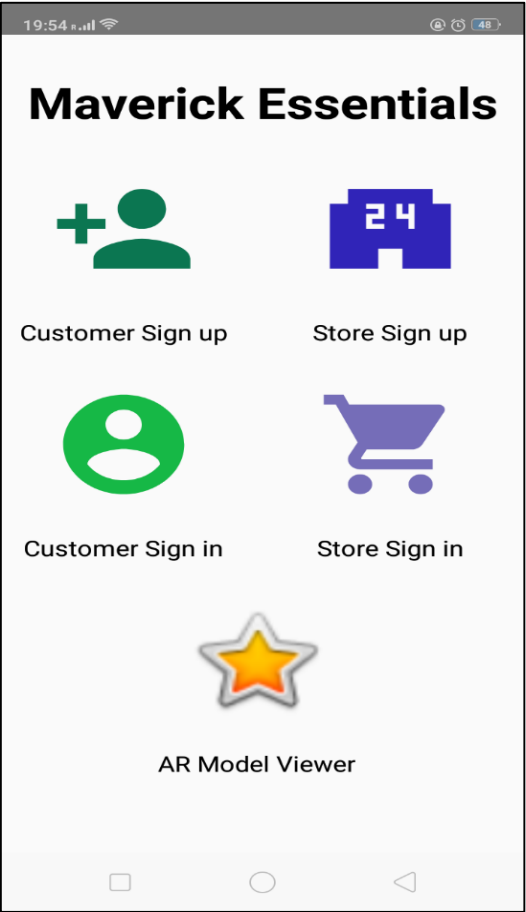




On clicking the **Upload 3D Model for AR button**, a page is opened for store owners/store keepers to upload important items and a zip file of the item's 3D model. This is done so that we can prepare the Augmented Reality models for that particular item on echoAR cloud platform and sent the image target QR codes back to the store keeper to distribute AR to his customers as an interactive store service.

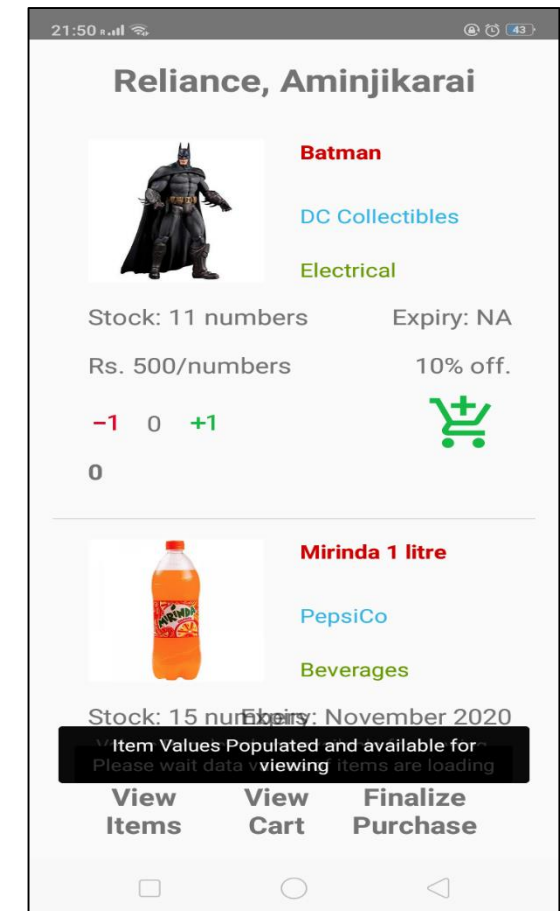
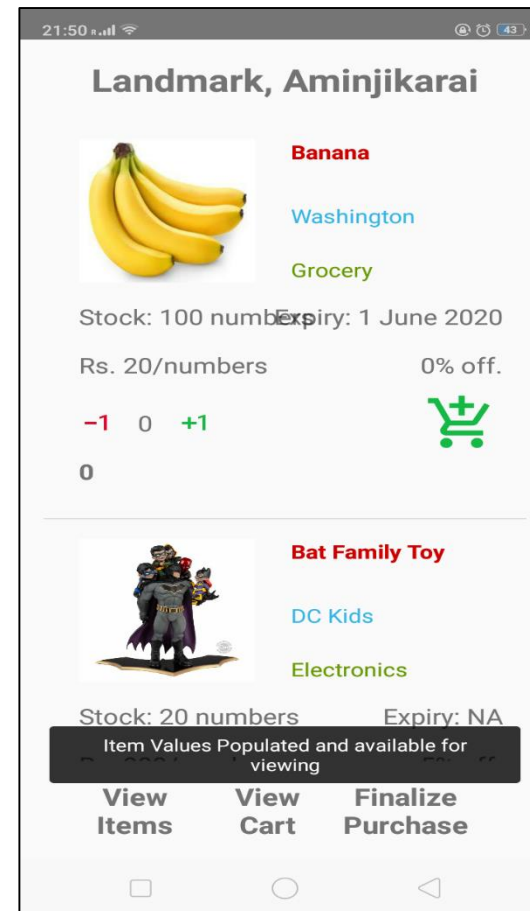
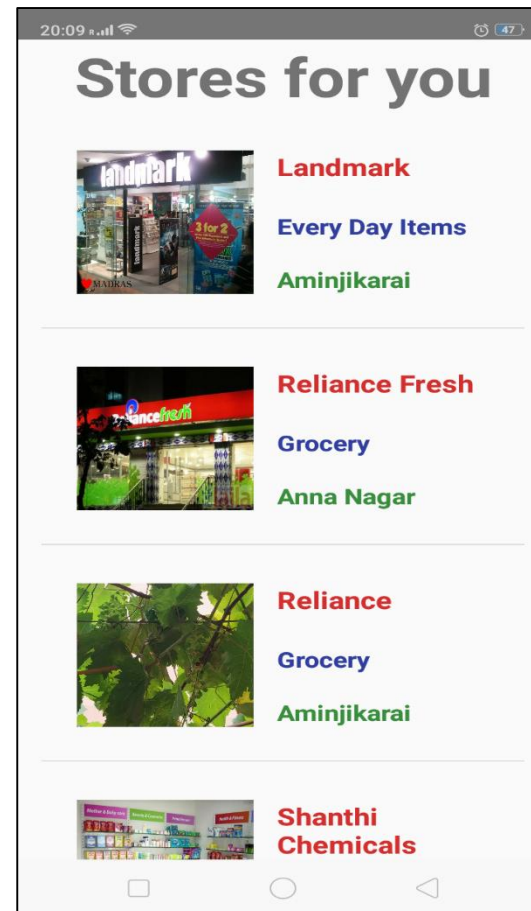
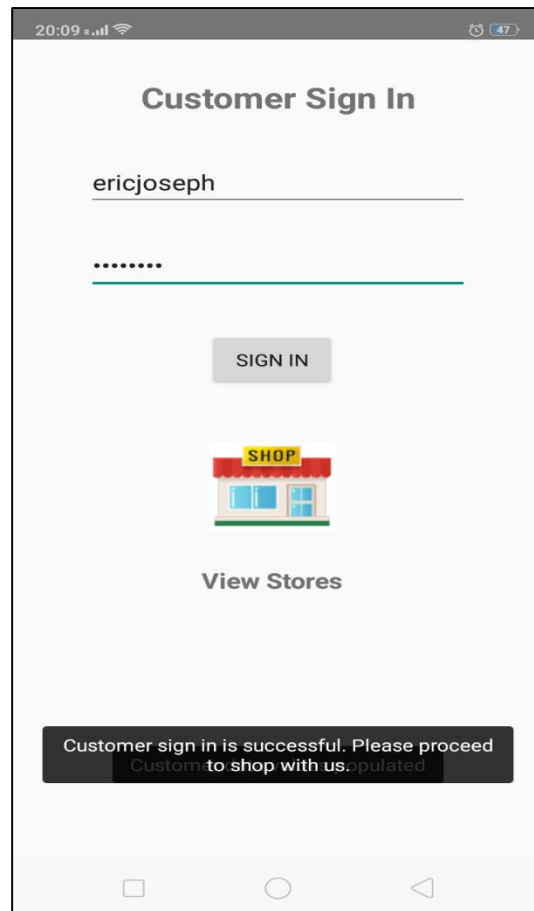


Click the **Customer Sign up button** to access the customer registration page to enter customer details. On clicking the **Confirm button**, the details are saved in Firebase. On clicking the **Clear button**, all the text boxes are cleared to start fresh.



Click the **Customer Sign** in button to login with username and password of registered customer. Click **SIGN IN button** to access the **View Store button**.


On clicking the View Store button, choose a store to purchase items from. On selecting a store, a list of items present in the store are generated for customer purchase.



The details of each item are presented as a list. Increase/decrease the number of selected items (as per given unit) using the **+1 and -1 buttons**. On acquiring the required quantity, the total price is calculated as the product of quantity and discounted price of each item and is displayed. Click the green Cart button to add the item to customer cart.

20:09

Landmark, Aminjikarai



Bat Family Toy

DC Kids

Electronics

Stock: 20 numbers

Expiry: NA


Rs. 999/numbers

5% off.


-1

2

+1



Price after discount - Rs. 1898



Flash Action Figure

DC Collectibles

Electronics

Stock: 10 numbers

Expiry: NA

View Items


View Cart

Finalize Purchase

Item added to your cart

23:24

Shanthi Chemicals, Aminjikarai



Benadryl Cough Syrup

ABC Pharmacy

Medicines

Stock: 50

Expiry: May 2023

Rs. 99 / numbers


2% off.


+1

0

-1

0





Vaporub

Vicks

Medicines

Stock: 20

Expiry: May 2022

Rs. 12 / numbers


0% off.

+1

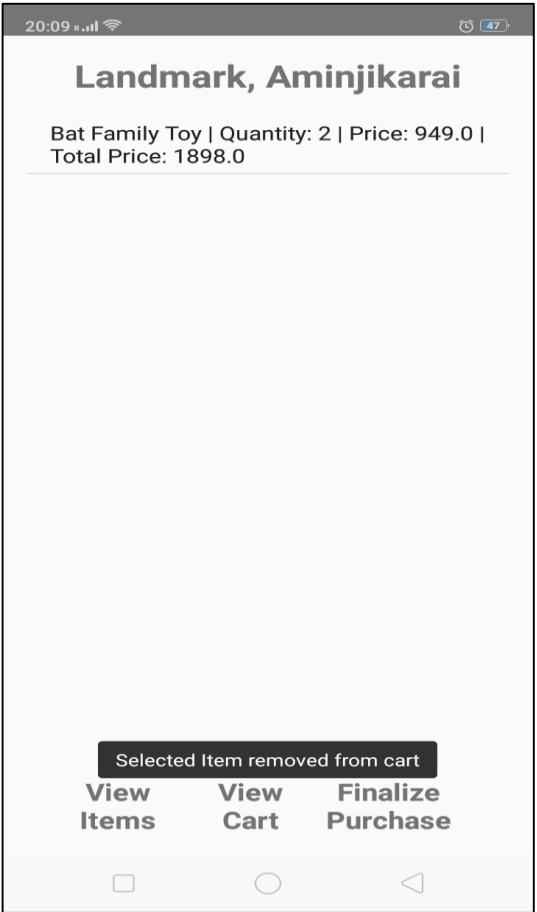
0

-1

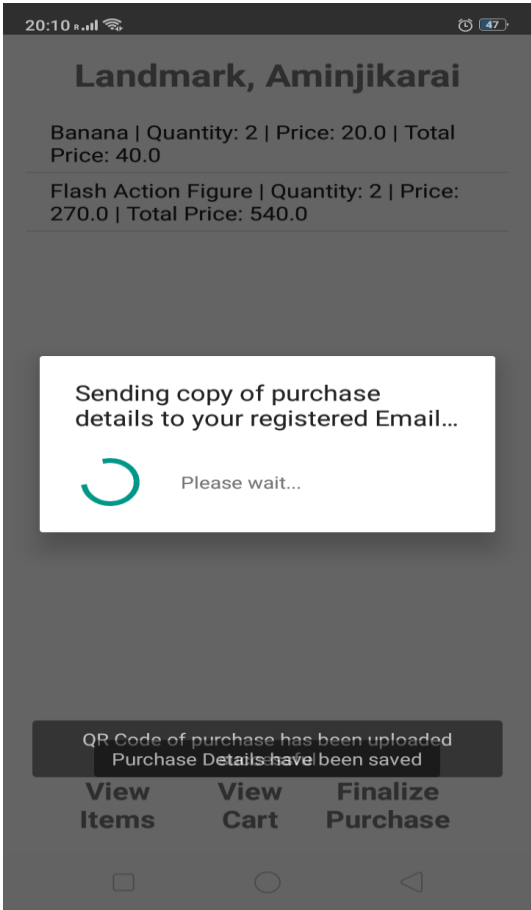
0



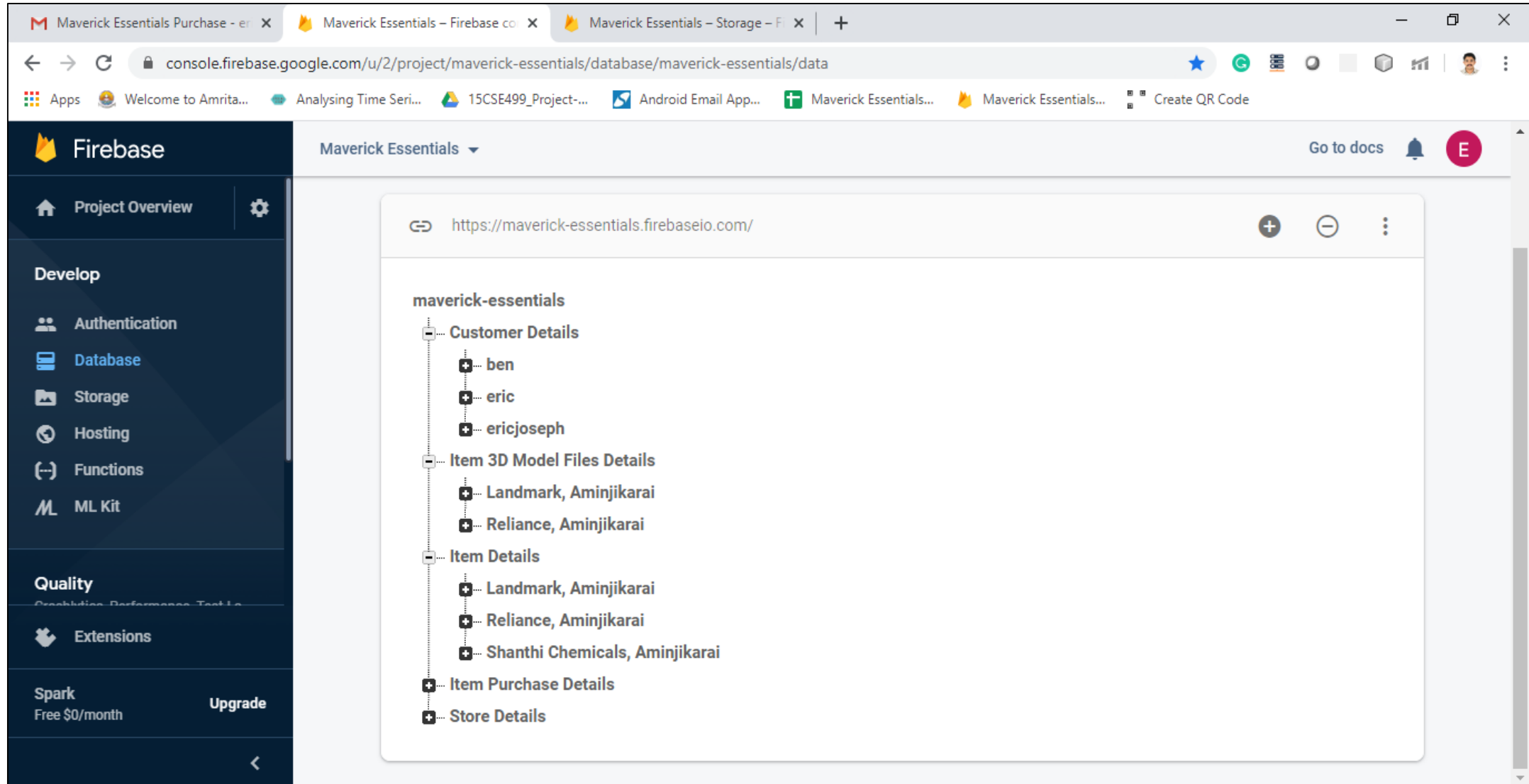
Click the **View Cart** text to view the items added to the customer cart. To remove an item from the cart, long press the desired item and it will be deleted from the cart. To continue to shop, click the **View Items** text to generate the Items List. Please refrain from pressing the back button as the cart will be cleared and you will have to restart shopping from the beginning.



To purchase items from the cart, click the **Finalize Purchase** text. A unique purchase ID with QR code image, list of contents and the grand total price are generated. These details are stored in Firebase for primary storage, Google Sheets for secondary storage, and also sent in an email to the customer for picking up their purchase from the store after QR Code verification.



**Firestore Database and Storage services** are used to save files and images of different purchases and store/customer details



Recent - Google Drive

Inbox (165) - ericjkurusinkal@gmail.com

Programming challenges, coding

Maverick Essentials – Firebase console

console.firebase.google.com/u/2/project/maverick-essentials/database/maverick-essentials/data

Apps

Welcome to Amrita...

Analysing Time Series...


15CSE499\_Project...

Android Email App...

Maverick Essentials...

Maverick Essentials...

Create QR Code

 **Firestore**

Project Overview

Develop

Quality

Extensions

Spark

Authentication

Database

Storage

Hosting

Functions


ML Kit


Free \$0/month

Upgrade

Maverick Essentials

Go to docs





Item Purchase Details

Landmark, Aminjikai\_1590328763591

Item 1

Item Brand: "DC Collectibles" ×

Item Discount Percentage: 5

Item Discounted Price: 190

Item Name: "Flash Action Figure"

Item Selected Quantity: 2

Item Total Price: 380

Item Type: "Electronics"

Pickup Status: "Yes"

Purchase Date: "24/05/2020"

Purchase ID: "Landmark, Aminjikai\_15903287635"

Purchase QR Code URL: "https://firebasestorage.googleapis.com/v0/b/mav..."

Purchase Store with location: "Landmark, Aminjikara"

Landmark, Aminjikai\_1590331201743

Item 1

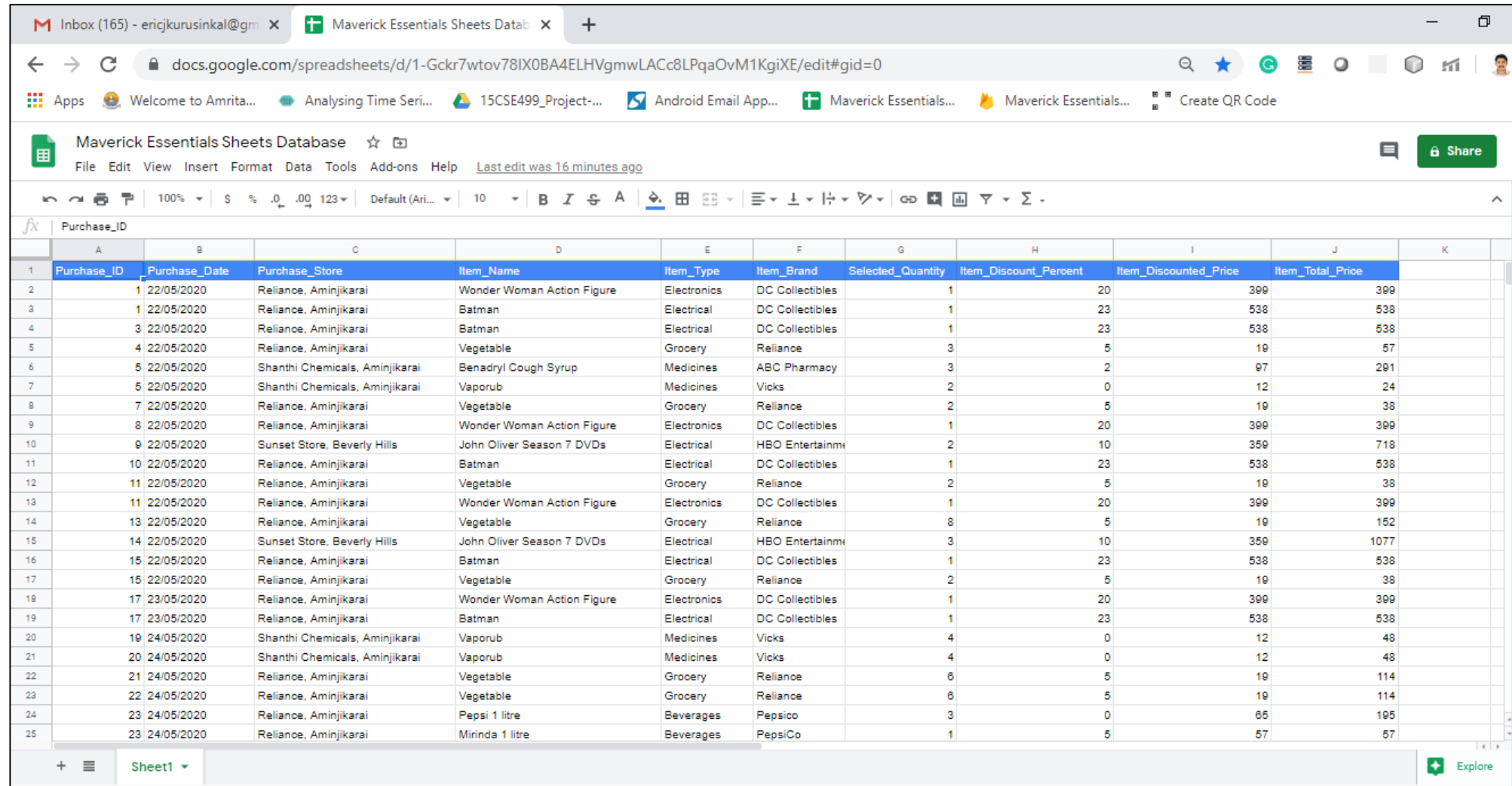
Item 2

Pickup Status: "No"





**Google Sheets Database** of purchased items. Only the details of the purchased items and not the user details of those who purchased them are recorded. This is done to safeguard customer privacy. The collected data can then be sent to MongoDB for data analytics operations like average sales, aggregation, maximum and minimum number of items bought etc. Apriori and Recommender System algorithms can also be applied on the dataset (These operations are the future work of the project).



	A	B	C	D	E	F	G	H	I	J	K
1	Purchase_ID	Purchase_Date	Purchase_Store	Item_Name	Item_Type	Item_Brand	Selected_Quantity	Item_Discount_Percent	Item_Discounted_Price	Item_Total_Price	
2	1	22/05/2020	Reliance, Aminjikarai	Wonder Woman Action Figure	Electronics	DC Collectibles	1	20	399	399	
3	1	22/05/2020	Reliance, Aminjikarai	Batman	Electrical	DC Collectibles	1	23	538	538	
4	3	22/05/2020	Reliance, Aminjikarai	Batman	Electrical	DC Collectibles	1	23	538	538	
5	4	22/05/2020	Reliance, Aminjikarai	Vegetable	Grocery	Reliance	3	5	19	57	
6	5	22/05/2020	Shanthi Chemicals, Aminjikarai	Benadryl Cough Syrup	Medicines	ABC Pharmacy	3	2	97	291	
7	5	22/05/2020	Shanthi Chemicals, Aminjikarai	Vaporub	Medicines	Vicks	2	0	12	24	
8	7	22/05/2020	Reliance, Aminjikarai	Vegetable	Grocery	Reliance	2	5	19	38	
9	8	22/05/2020	Reliance, Aminjikarai	Wonder Woman Action Figure	Electronics	DC Collectibles	1	20	399	399	
10	9	22/05/2020	Sunset Store, Beverly Hills	John Oliver Season 7 DVDs	Electrical	HBO Entertainment	2	10	359	718	
11	10	22/05/2020	Reliance, Aminjikarai	Batman	Electrical	DC Collectibles	1	23	538	538	
12	11	22/05/2020	Reliance, Aminjikarai	Vegetable	Grocery	Reliance	2	5	19	38	
13	11	22/05/2020	Reliance, Aminjikarai	Wonder Woman Action Figure	Electronics	DC Collectibles	1	20	399	399	
14	13	22/05/2020	Reliance, Aminjikarai	Vegetable	Grocery	Reliance	8	5	19	152	
15	14	22/05/2020	Sunset Store, Beverly Hills	John Oliver Season 7 DVDs	Electrical	HBO Entertainment	3	10	359	1077	
16	15	22/05/2020	Reliance, Aminjikarai	Batman	Electrical	DC Collectibles	1	23	538	538	
17	15	22/05/2020	Reliance, Aminjikarai	Vegetable	Grocery	Reliance	2	5	19	38	
18	17	23/05/2020	Reliance, Aminjikarai	Wonder Woman Action Figure	Electronics	DC Collectibles	1	20	399	399	
19	17	23/05/2020	Reliance, Aminjikarai	Batman	Electrical	DC Collectibles	1	23	538	538	
20	19	24/05/2020	Shanthi Chemicals, Aminjikarai	Vaporub	Medicines	Vicks	4	0	12	48	
21	20	24/05/2020	Shanthi Chemicals, Aminjikarai	Vaporub	Medicines	Vicks	4	0	12	48	
22	21	24/05/2020	Reliance, Aminjikarai	Vegetable	Grocery	Reliance	6	5	19	114	
23	22	24/05/2020	Reliance, Aminjikarai	Vegetable	Grocery	Reliance	6	5	19	114	
24	23	24/05/2020	Reliance, Aminjikarai	Pepsi 1 litre	Beverages	Pepsico	3	0	65	195	
25	23	24/05/2020	Reliance, Aminjikarai	Mirinda 1 litre	Beverages	PepsiCo	1	5	57	57	

Click the **AR Model Viewer button** in the Start Page to open a webpage embedded with the echoAR console and API key in the default internet browser of the smartphone. Camera permissions should be provided if asked for. This webpage allows the user to view 3D models on top of QR code image targets prepared on the cloud console to provide a more interactive view of the product to a customer.

