



# Special Topic

# Android App Development Project

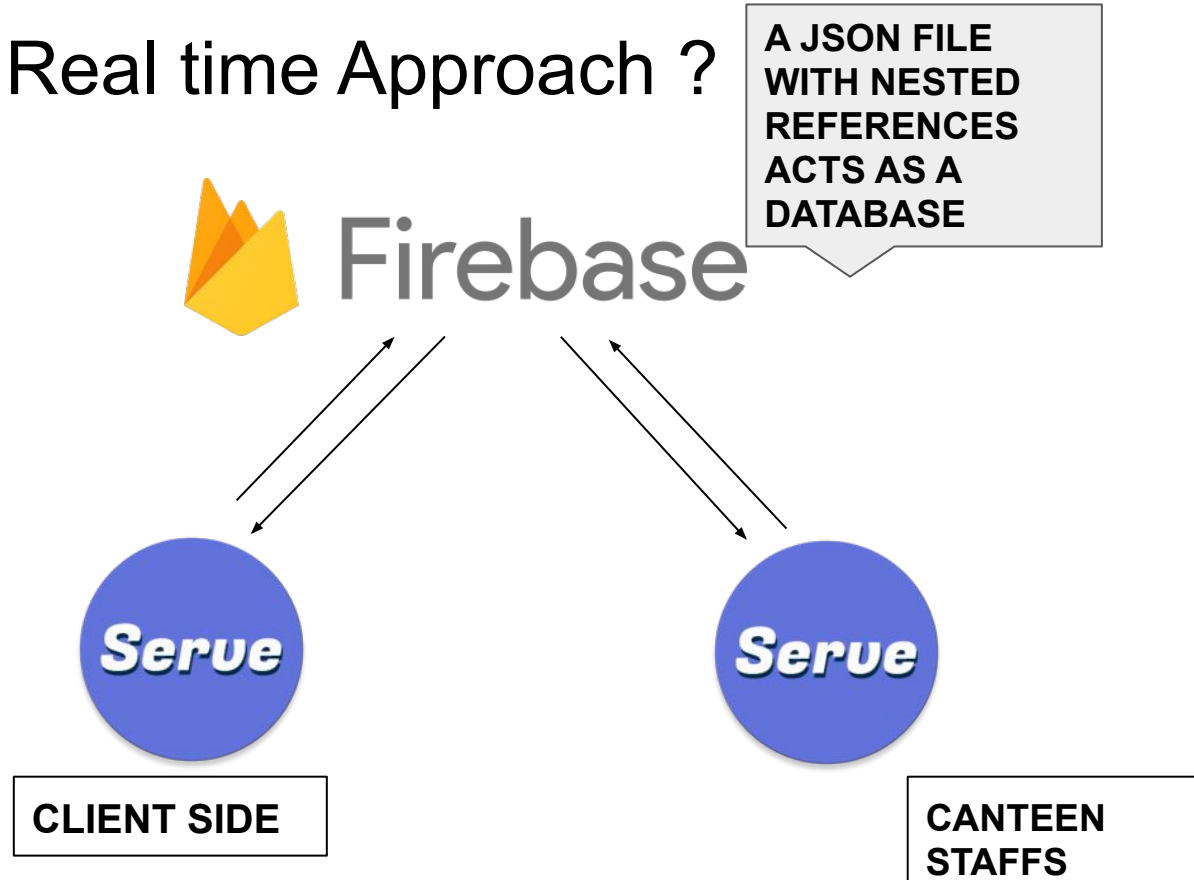
## Canteen Automation System

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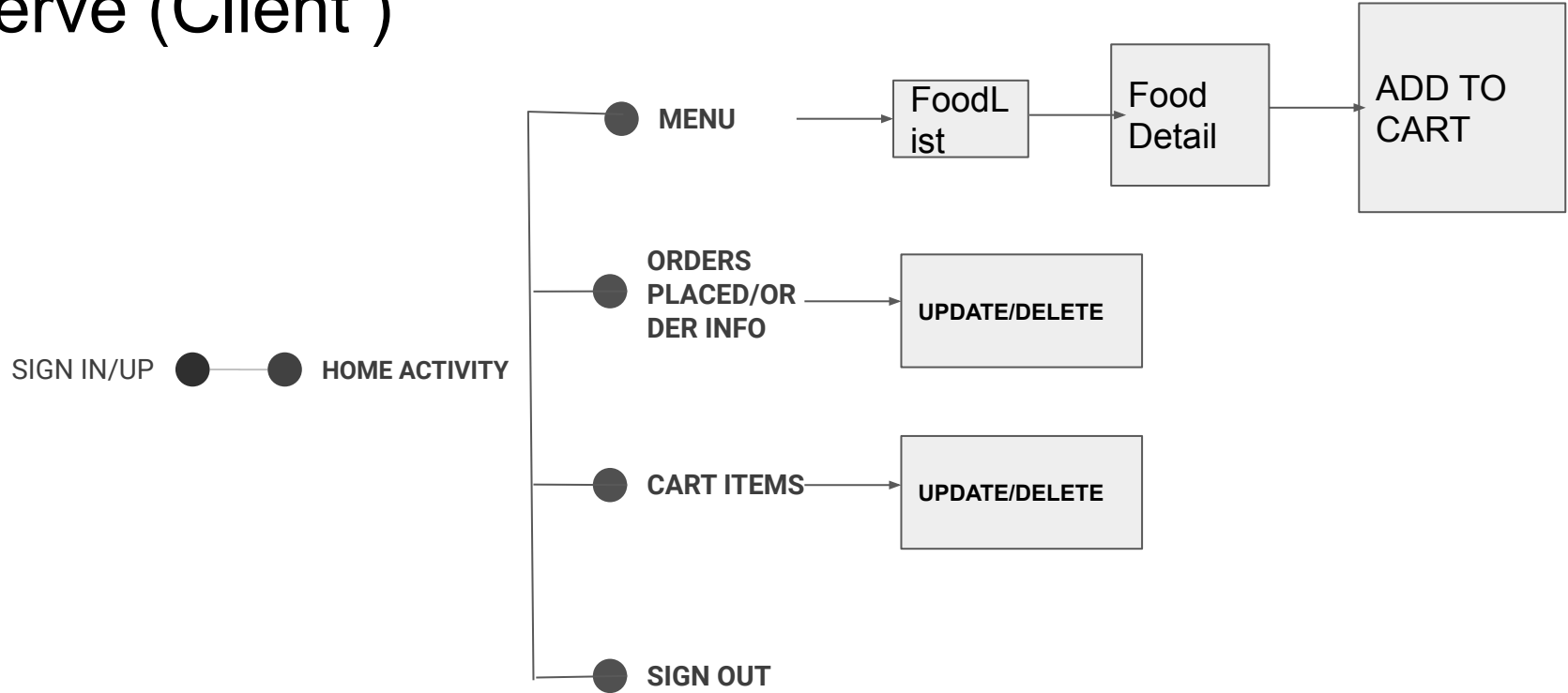
# What Does The App Do?

- This App is a **real-time canteen based automation application**.
- Provided with UI to place any number of orders,update ,delete them and ensures a happy mealing for the clients !
- Provided with UI to add ,update ,delete the canteen menu for the Canteen Staff!
- Categories of users :
  - CLIENT(STUDENTS,STAFFS,etc)
  - CANTEEN STAFFS ONLY

# How is it a Real time Approach ?



# Serve (Client )



# Brief note on functionalities

## 1. Sign in/Sign Up

To provide authorized access to the users, user's phone number is the **primary key** of reference in the **firebase database**(**getReference method**).

## 2. Menu /category of foods

**A scrollable view interface** achieved using **drawer layout**(serves a root view) and **coordinator layout**. Display the food categories in a scrollable fashion by using the **firebaseRecyclerAdapter** to fetch sequence of data.

## 3. FoodList/food items in a category

**A scrollable view interface** achieved using **drawer layout**(serves a root view) and **coordinator layout**. Display the food categories in a scrollable fashion by using the **firebaseRecyclerAdapter** to fetch sequence of food items under a parent food category.

#### 4. Food\_details

This activity displays the **cost, discount, quantity and the description** of the food item. Add to cart by pressing the floating action button **addValueEventListener** , **onDatachange** methods are evoked here to reflect any addition or modification done to the data.

#### 5. Order\_Details

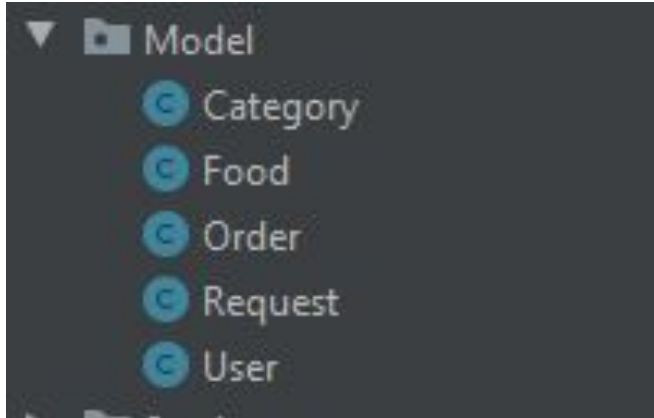
It is an activity used to **ensure the client and canteen staff that the order is placed**. It generates a **unique order id** which distinguishes the orders. **Androidx.cardview.widget.CardView** is used as view in xml file.

#### 6. Order\_Status

This is used to set the **order\_status(order placed, being cooked, order is ready)**. **OrderViewHolder** java class is being used here.

# MODELS ?

Different References in the database correspond to different CLASS OF OBJECTS



THE MODELS ARE JUST DIFFERENT CLASSES ,TO FORM A TEMPLATE FOR THEIR OBJECTS!

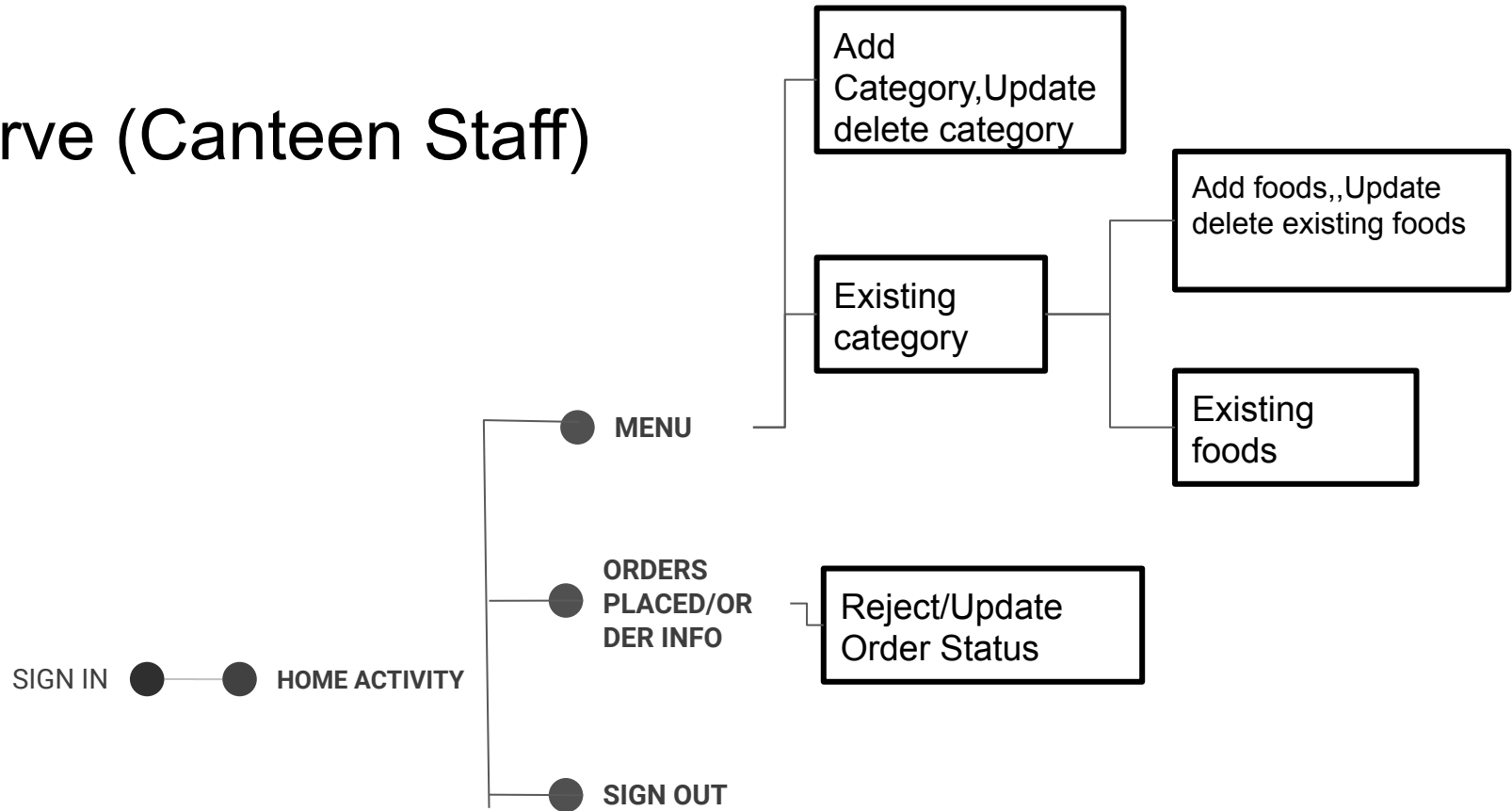
```
public class Category {  
    private String Name;  
    private String Image;  
  
    public Category() {  
    }  
  
    public Category(String name, String image) {  
        Name = name;  
        Image = image;  
    }  
  
    public String getName() { return Name; }  
  
    public void setName(String name) {  
        Name = name;  
    }  
  
    public String getImage() { return Image; }  
  
    public void setImage(String image) {  
        Image = image;  
    }  
}
```

# Few additional functionalities..

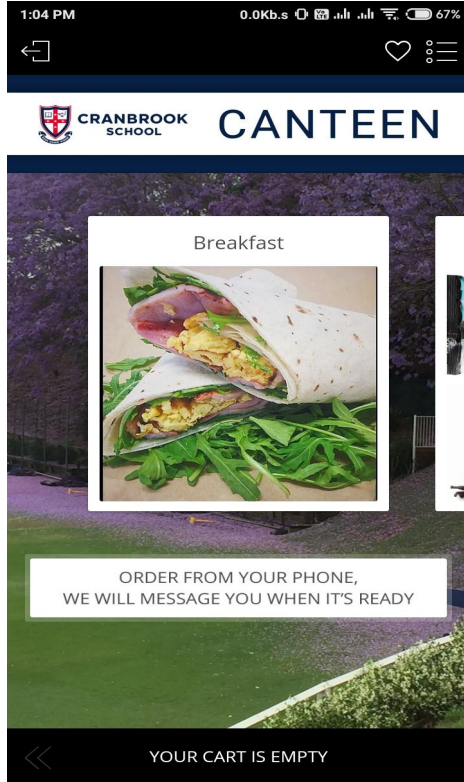
- The **user is regularly updated** with his/her Order's Status
  - Order Placed
  - Being Cooked
  - Order Ready.
- **Receipt Generation** is achieved
- The **Unique Order-Id and the client's identity** info(here SRN) is made use of to identify the user.
- **Cash On Delivery** method is the chosen mode of payment
- User can **delete the order** if needed , with **certain restrictions!**



# Serve (Canteen Staff)



# Similar Existing Apps



- A nearly similar application exists in the PLAY STORE by the name
  - **CRANBROOK SCHOOL CANTEEN.**
- **How does our app stand out differently ?**
  - Our application **creates a perfect demarcation** between Canteen Owners and Clients
  - The Canteen **owner has the privilege to add new set of foods ,Constantly update the customers about their order's status or remove the food items** on non availability .
  - Clients have the **privilege of withdrawing** their orders!

# Innovation and Pros !

- **Pre-Ordering of foods** from a remote location in the campus instead of queuing at the canteen desk!
- **Simple and User friendly UI** and easy navigation.
- **No restrictions on minimal limit** of order. First Come First SERVE ensured.
- Makes the job **easier** for canteen staff/owner **to have a track of incoming orders and payment.**

# Possible Future Developments

- 1.Scheduling of the Order for a later time can be done .
- 2.Develop a more user friendly environment and granting coupons for regular users.
- 3.Enable the online payment option.
- 4.Extending the ideas to Restaurant based Food Automation.

# What's The TakeAway ?

- 1.A clear idea has to how 2 applications are bound onto the same firebase project.
- 2.A good hands on programming practice by creating various assets and workspace subpackages.
- 3.A great exposure to different design layouts/ Views and data retrieval methods .

Thank You