**SYSTEM NOTES**

**Component Tree**

App

* + WelcomeComponent
    - Bid-Providers
  + HomeComponent
    - CartComponent
    - ShopsComponent
  + ShopComponent

CategoryComponent

ItemComponent

SettingsComponent

NewCategoryComponent

1. Explore

System Overview

1. **Welcoming/Landing Page**

Once a user hits the welcome page, the application retrieves all the shops in the real-time database and renders them on the template, sorting by *bidding value.*

The user can however search for a specific shop, using shop name, or filter the data using the following filters:

1. Country
2. City
3. Address
4. Category of Items in stock, say furniture, computers, clothing etc
5. **Login/Register**

This application uses Firebase Authentication. It authenticates users by integrating with federated identity providers. The Firebase Authentication SDK provides methods that allow users to sign in with their Google, Facebook, Twitter, and GitHub accounts. In this application, users are restricted to sign in with their Google accounts only.

After a successful sign in, the login component accesses the user's basic profile information, and other components can later control the user's access to data stored in application’s database. The Login component also provides an authentication token that can be used to verify the identity of users in by the backend services.

The security of user data is guaranteed, since the application relies on the fact that Google’s [Firebase](https://firebase.google.com/) is hosted on SSL (**Secure Sockets Layer**), which is a typical security technology used to establish encrypted link between a server (Host) & client (Browser). The major task for this application is to secure access to the data through two ways: **one by adding a conditional access pattern as a rule**and**second by validating the data before it gets added to the database**.

1. **Home**

A user has to be authenticated to access this component. The home component fetches all shops and implements the same filters as the welcome component. However, it additionally filters data according to:

1. recent arrivals
2. The user’s location
3. The user’s mostly searched categories
4. **Settings**
5. **Bidding**
6. **Explore**
7. **myShop**
8. **Category**
9. **Item**
10. **Cart**
11. **Checkout**
12. **Tracking**

**Backend Services**

1. shopsService