**Architectural Decisions**

**Scenario 1**

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Requirement 1: Offline Mode Support

Decision:

I decided to have an offline mode in the mobile app to allow users to browse products and add items to their cart even without the internet. It will be synced with the server once the internet is available.

Rationale:

Offline mode improves the user experience by providing continuous access to apps, even in areas with poor internet connectivity. Allowing users to stay connected to the app’s future regardless of poor connectivity can help users become more loyal to the app.

Consequences:

* Improved user experience and a loyal customer base.
* Increase customer satisfaction.
* The ability to browse and add items to their cart offline meets user’s needs and expectations. This can result in higher satisfaction from the users.

Requirement 2: AI

I decided to use an AI to help the mobile application or us to analyze user behavior and preferences for us to provide personalized recommendations and content. This will make shopping easier and more fun for users to use because they’ll see things they’re interested in without even looking for them. It also helps the company advertise the items.

Rationale:

By using AI in the app, we can learn the behavior and preferences that can help us offer them personalized recommendations based on the data we got. We can also AI assistance features to help disabled users navigate the app better and improve the overall experience by making shopping easier.

Consequence:

* Users will enjoy shopping more because they see products
* Advertising the products the app has by using the algorithm.

Requirement 3: Push Notifications

Decision:

I will add a push notification service to the mobile app to send notifications to customers to keep them updated on deliveries, orders, new products, and offers.

Rationale:

Push notifications will be our way to keep our users engaged and keep them informed about important updates and promotions, leading to increased users engagement. By keeping our users engaged with timely and relevant notifications we can increase satisfaction among users.

Consequences:

* Make sure that our customers get notifications about our upcoming offers and sales.
* Improve user engagement and satisfaction through notifications order updates and promotions.

Requirement 4: localization support

Decision: we will implement localization features to support multiple languages.

Rationale: localization enhances accessibility and usability for international users. Allowing them to understand the application better with their first language.

Consequences:

* Expanded our approach making available from other countries.
* It can increase development maintenance efforts.

Requirement 5: Payment gateway

Decision:

We will integrate multiple payment gateways to secure convenient transactions for customers.

Rationale:

Offering multiple payment options can improve our app’s flexibility for customers and reduce cart abandonment rates. It ensures that our users’ checkout experience is easy to use and safe to use.

Consequences:

* Expanded customer reach.
* Users can use different online payments (Apple Pay, Visa, Credit Card, etc.).
* Having a broad payment can be hard to maintain.

Decision 6: Image Storage and Optimization

Decision: we will add image optimization features to avoid lazy loading, and to ensure optimal performance for displaying products.

Rationale:

We want to make sure we have high-quality images in our app for our users to see our products. It also improves app performance, leading to faster load times.

Consequences:

* Faster load times
* Storage costs.