

Based on our System design, User Story Boards, Functional and Non-functional requirements here there are 10 test cases That we can perform on our system.

**1. User Registration Test Cases:**

- Verify that a new user can be successfully registered.
- Verify that all required user fields (Username, Email, etc.) are mandatory during registration.
- Verify that the registration date is accurately recorded for each new user.

**2. User Login and Session Management Test Cases:**

- Verify that registered users can log in successfully with valid credentials.
- Verify that the session is created upon successful login and expires according to the specified time.
- Verify that the system restricts access to unauthorized users.

**3. User Policy Acceptance Test Cases:**

- Verify that users are prompted to accept the application policies before using the app.
- Verify that the system restricts access to users who have not accepted the policies.

**4. GPS Access Management Test Cases:**

- Verify that users can grant and revoke GPS access as required.
- Verify that the system respects the user's GPS access settings.

**5. Food Source Management Test Cases:**

- Verify that new food sources can be added to the system with all required details.
- Verify that users can view the list of available food sources accurately.
- Verify that the system properly associates suppliers with their respective food sources.

**6. User Favorites Management Test Cases:**

- Verify that users can mark specific food sources as favorites.
- Verify that the system correctly maps users to their favorite food sources.
- Verify that the system properly handles cases where users attempt to favorite the same source multiple times.

**7. Supplier Management Test Cases:**

- Verify that new suppliers can be added to the system with all required details.
- Verify that the system correctly establishes the relationship between suppliers and their food sources.

**8. User Authentication and Authorization Test Cases:**

- Verify that the system enforces proper authentication for different user roles (admin, regular users).

- Verify that only authorized users can access specific functionalities, such as adding new food sources or managing suppliers.

### **9. Data Integrity Test Cases(non-functional):**

- Verify that the database enforces data integrity constraints such as primary key uniqueness and foreign key relationships.
- Verify that the data remains consistent even after various user interactions.

### **10. System Performance Test Cases:**

- Verify that the system response time remains within acceptable limits during peak usage.
- Verify that the system can handle a large number of concurrent user sessions without performance degradation.

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Or we can use this:

#### **Functional Test Cases:**

- Verify that a buyer can successfully search for their desired fresh food from the drop-down menu of food classes.
- Verify that the system accurately generates the best registered sellers for each buyer based on the buyer's location.
- Verify that notifications are sent to registered sellers before the renewal of their subscriptions as per the system requirement.
- Verify that a user opting to use GPS is seamlessly connected to the nearest sellers and provided with the shortest route to the desired location.
- Verify that both buyers and sellers are required to accept the terms and conditions during their initial login before being allowed to proceed with any activities on the platform.

#### **Non-Functional Test Cases:**

- Verify that the supplier's information provided during registration is correctly added to the database without any data loss or corruption.
- Verify that the webpage effectively integrates the Google Maps API for displaying locations of buyers and sellers, providing a seamless and user-friendly map interface.
- Verify that the system correctly implements a free non-paid 3-mile radius and a paid 25-mile radius for location-based services.
- Verify that the system maintains responsiveness and minimal downtime during peak usage periods, ensuring a seamless user experience.
- Verify that the system adheres to data privacy and security standards, ensuring the confidentiality and integrity of user and supplier information stored in the database.