

## Activity 1:

### 1. Ask Orientation Questions

**Test Case 1.1:** Verify chatbot response time for orientation queries

- **Steps:**
  1. Open the chatbot interface.
  2. Ask a predefined orientation question (e.g., "What is the orientation schedule?").
  3. Measure response time.
- **Expected Result:** The chatbot provides an accurate response within **3 seconds**.

**Test Case 1.2:** Ensure chatbot provides accurate orientation details

- **Steps:**
  1. Ask a question about campus resources.
  2. Verify that the response matches the latest **Student Affairs data**.
- **Expected Result:** Chatbot references the latest orientation data correctly.

**Test Case 1.3:** Validate predefined question feature

- **Steps:**
  1. Click on a predefined question instead of typing.
  2. Verify if the chatbot provides the correct answer.
- **Expected Result:** The chatbot should return relevant orientation details.

### 2. Provide Chatbot Feedback

**Test Case 2.1:** Submit a star rating feedback

- **Steps:**
  1. Use the chatbot to ask a question.
  2. Submit a **1–5 star rating** for the chatbot's response.
  3. Check if the rating is stored.
- **Expected Result:** The rating should be stored in the database.

#### Test Case 2.2: Submit a text-based feedback comment

- **Steps:**
  1. Enter a comment about the chatbot's performance.
  2. Submit the feedback.
  3. Verify if the comment appears in the database.
- **Expected Result:** The comment should be stored correctly.

#### Test Case 2.3: Verify feedback retrieval

- **Steps:**
  1. Submit feedback.
  2. Access the admin panel to check if feedback is visible.
- **Expected Result:** Feedback should be retrievable from the database.

### 3. Admin Update FAQs and Orientation Data

#### Test Case 3.1: Verify admin login access

- **Steps:**
  1. Attempt to log in with **admin credentials**.
  2. Attempt to log in with **non-admin credentials**.
- **Expected Result:** Only admins should gain access.

#### Test Case 3.2: Verify FAQ update functionality

- **Steps:**
  1. Log into the admin panel.
  2. Modify an existing FAQ entry.
  3. Save and check if changes are reflected in the chatbot.
- **Expected Result:** The chatbot should display updated FAQ details within **1 hour**.

#### Test Case 3.3: Validate orientation schedule updates

- **Steps:**

1. Add a new event to the orientation schedule via the admin panel.
2. Ask the chatbot about the schedule.

- **Expected Result:** The chatbot should return the updated schedule.

#### 4. Scalability and Load Testing

##### Test Case 4.1: Load test with 1,000 concurrent users

- **Steps:**
  1. Simulate **1,000 users** sending messages to the chatbot.
  2. Measure the system's response time.
- **Expected Result:** The chatbot should maintain **under 3 seconds** response time.

##### Test Case 4.2: Validate system stability under heavy load

- **Steps:**
  1. Run the chatbot with increasing user load.
  2. Monitor if the chatbot **crashes or slows down significantly**.
- **Expected Result:** No crashes should occur.

##### Test Case 4.3: Ensure data consistency during load testing

- **Steps:**
  1. Perform **multiple queries** under high load.
  2. Compare responses to ensure consistency.
- **Expected Result:** The chatbot should provide consistent and correct answers.

#### 5. Accessibility Compliance

##### Test Case 5.1: Verify screen reader compatibility

- **Steps:**
  1. Use a screen reader to interact with the chatbot.
  2. Navigate through the responses.

- **Expected Result:** The screen reader should read the chatbot responses correctly.

**Test Case 5.2:** Check color contrast compliance

- **Steps:**
  1. Evaluate the chatbot interface against **WCAG 2.1 contrast guidelines**.
- **Expected Result:** Text should be readable with proper contrast.

**Test Case 5.3:** Ensure keyboard navigation works

- **Steps:**
  1. Use **only a keyboard** to navigate the chatbot.
  2. Attempt to interact with different elements.
- **Expected Result:** All chatbot functions should be accessible via the keyboard.

Activity 2: