**Test Case: Successful User Registration**

**Objective: Verify that a user can successfully register through the API.**

Test Steps: Send a POST request to the registration endpoint with valid user information.

Assert that the API returns a 201 Created status code.

Verify that the response includes the user ID and other relevant details.

Optional: Validate that the user is persisted in the database.

**Test Case: Invalid Login Credentials**

**Objective: Confirm that the API handles invalid login credentials correctly.**

Test Steps: Send a POST request to the login endpoint with incorrect username and password.

Assert that the API returns a 401 Unauthorized status code.

Verify that the response includes an appropriate error message or code.

**Test Case: Get User Profile**

**Objective: Validate that the API retrieves user profile information accurately.**

Test Steps: Send a GET request to the user profile endpoint with a valid access token.

Assert that the API returns a 200 OK status code.

Verify that the response contains the expected user profile data, such as name, email, or preferences.

**Test Case: Create a New Product**

**Objective: Ensure that the API can create a new product.**

Test Steps: Send a POST request to the product creation endpoint with valid product data.

Assert that the API returns a 201 Created status code.

Verify that the response includes the product ID and other relevant details.

Optional: Check that the newly created product exists in the database.

**Test Case: Delete an Existing Product**

**Objective: Verify that the API can successfully delete a product.**

Test Steps: Send a DELETE request to the product deletion endpoint with a valid product ID.

Assert that the API returns a 204 No Content status code.

Optional: Confirm that the product no longer exists in the database.