Test Plan

Centauri

Unit Testing

Due to the current state of the application, unit testing shall be done through testing the Flask API and the database. As the application progresses further, this section of the test plan will expand. For now, the following contain the current test cases:

Test Case ID	UT-U-001
Title	Create User Account
Objective	Test that the User Controller is able to create a single user with credentials.
Procedure	1. Create a test user with the credentials. 2. Get the created account from API 3. Check created account info with expected account info

Test Case ID	UT-U-002
Title	Get All User Accounts
Objective	Test that the User Controller is able to get all accounts that exist.
Procedure	1. Create three test user accounts. 2. Get the created accounts from API. 3. Compare all created accounts to expected user accounts.

Test Case ID	UT-U-003
Title	Update User Account
Objective	Test that the database updates the User table with new information.
Procedure	1. Create a new user.

	2. Add user to database.
	3. Get the user.
	4. Update the user's information.
	5. Get the result of the new updated user.
	6. Compare the result with expected value.

Test Case ID	UT-U-004
Title	Delete User Account By Id
Objective	Test deleting the correct user by ID from the database.
Procedure	1. Create two new users (id: 3 and id: 4).
	2. Add both users to the database.
	3. Delete user with the id 3.
	4. Retrieve the list of users in the database.
	5. Assert the length of the list of users.
	6. Assert that the user with id 3 is not in the database.
	7. Assert that the user with 4 is still in the database.

Test Case ID	UT-B-001
Title	Create Business Account
Objective	Test adding a new business account to the database.
Procedure	1. Create a new business account.
	2. Add account to database.
	3. Get the result of the added business account from the database.
	4. Compare the result with the expected business account.

Test Case ID	UT-I-001
Title	Create Item Listing
Objective	Test adding a new item listing to the database.
Procedure	1. Create an item.
	2. Add item to database.
	3. Get the result of the added item from the database.
	4. Compare the result with the expected item info.

Results

The following is a screenshot of the test results for the above test cases, as well as other additional test cases that were not mentioned (ie. Orders, etc.).

```
collected 34 items

app/__init__test.py::test_app_creates PASSED                                    [  2%]
app/__init__test.py::test_app_healthy PASSED                                    [  5%]
app/syzygy/businesses/model_test.py::test_Business_create PASSED                [  8%]
app/syzygy/businesses/model_test.py::test_Business_retrieve PASSED              [ 11%]
app/syzygy/businesses/schema_test.py::test_BusinessSchema_create PASSED         [ 14%]
app/syzygy/businesses/schema_test.py::test_BusinessSchema_works PASSED          [ 17%]
app/syzygy/item_reviews/model_test.py::test_ItemReview_create PASSED            [ 20%]
app/syzygy/item_reviews/model_test.py::test_ItemReview_retrieve PASSED          [ 23%]
app/syzygy/item_reviews/schema_test.py::test_ItemReviewSchema_create PASSED     [ 26%]
app/syzygy/item_reviews/schema_test.py::test_ItemReviewSchema_works PASSED      [ 29%]
app/syzygy/items/model_test.py::test_Item_create PASSED                         [ 32%]
app/syzygy/items/model_test.py::test_Item_retrieve PASSED                       [ 35%]
app/syzygy/items/schema_test.py::test_ItemLightSchema_create PASSED             [ 38%]
app/syzygy/items/schema_test.py::test_ItemLightSchema_works PASSED              [ 41%]
app/syzygy/items/schema_test.py::test_ItemFullSchemaa_create PASSED             [ 44%]
app/syzygy/items/schema_test.py::test_ItemFullSchema_works PASSED               [ 47%]
app/syzygy/order_items/model_test.py::test_OrderItem_create PASSED              [ 50%]
app/syzygy/order_items/model_test.py::test_OrderItem_retrieve PASSED            [ 52%]
app/syzygy/order_items/schema_test.py::test_OrderItemSchema_create PASSED       [ 55%]
app/syzygy/order_items/schema_test.py::test_OrderItemSchema_works PASSED        [ 58%]
app/syzygy/orders/model_test.py::test_Order_create PASSED                       [ 61%]
app/syzygy/orders/model_test.py::test_Order_retrieve PASSED                     [ 64%]
app/syzygy/orders/schema_test.py::test_OrderSchema_create PASSED                [ 67%]
app/syzygy/orders/schema_test.py::test_OrderSchema_works PASSED                 [ 70%]
app/syzygy/users/controller_test.py::TestUserResource::test_get PASSED          [ 73%]
app/syzygy/users/controller_test.py::TestUserResource::test_post PASSED         [ 76%]
app/syzygy/users/model_test.py::test_User_create PASSED                         [ 79%]
app/syzygy/users/model_test.py::test_User_retrieve PASSED                       [ 82%]
app/syzygy/users/schema_test.py::test_UserSchema_create PASSED                  [ 85%]
app/syzygy/users/schema_test.py::test_UserSchema_works PASSED                   [ 88%]
app/syzygy/users/service_test.py::test_get_all PASSED                           [ 91%]
app/syzygy/users/service_test.py::test_update PASSED                            [ 94%]
app/syzygy/users/service_test.py::test_delete_by_id PASSED                      [ 97%]
app/syzygy/users/service_test.py::test_create PASSED                            [100%]

================================ 34 passed in 41.46s ================================
```

Use Case Testing

The following are the identified urgent test cases based off of the Centauri use cases. This section is subject to additions.

Test Case ID	UCT-IC-1
Title	Add Item To Cart
Actor	General User

Main Scenario	Alternatives
1. User selects "add to cart" button on a purchasable item. 2. System directs user to their cart. 3. System saves item in the user's cart.	3a. Item is no longer in stock. 3b. System displays message to user that the item is no longer in stock.

Test Situations:
1. User successfully adds item to cart
2. Item goes out of stock while adding item

Test Coverage:
Base: number of main and alternative scenarios = 2
Tests: 2
Coverage: 100%

Test Case ID	UCT-ACC-1
Title	Create Account
Actor	Unregistered User

Main Scenario	Alternatives
1. User Selects "create account" button 2. System displays dedicated account creation page 3. User chooses a standard account, a seller account, or both 4. System requests the user to input a unique username, password, and email. 5. User Inputs a unique username, password, and email. 6. System sends email to the address listed by the user for confirmation. 7. User confirms account through email	5a. User chooses a username or email that already exists for another account. 5b. System notifies the user to select another username or email.

Test Situations:

1. User successfully creates account
2. User chooses a username or email that already exists

Test Coverage:

Base: number of main and alternative scenarios = 2

Tests: 2

Coverage: 100%

Test Case ID	UCT-ACC-2
Title	Edit Account Info
Actor	Registered User

Main Scenario	Alternatives
1. User selects "Edit account information" page. 2. System prompts user to enter a new username, password, or email. 3. User enters a new username, password, or email. 4. System prompts user to re-enter the new username, password, or email. 5. User re-enters new username, password, or email. 6. User selects the "confirm" button. 7. System saves new information to account database.	3a. The inputted information matches an existing account. 3b. The system prompts the user to input a different username password or email. 5a. The inputted information does not match the initial input. 5b. The system informs the user that the inputs do not match.

Test Situations:

1. User edits account successfully.
2. User enters information that matches an existing account (ex. email)
3. User is unable to verify information (ex. New password)

Test Coverage:

Base: number of main and alternative scenarios = 3

Tests: 3

Coverage: 100%

Test Case ID	UCT-ACC-3
Title	Login
Actor	General User

Main Scenario	Alternatives
1. User enters username and password. 2. User selects "login" button. 3. System cross references entered username and password with account database 4. System loads Centauri home page	3a. Entered username or password do not match any reference in the account database. 3b. System alerts user that username or password are incorrect.

Test Situations:
1. User successfully logs in.
2. User enters credentials that do not exist in the system.

Test Coverage:
Base: number of main and alternative scenarios = 2
Tests: 2
Coverage: 100%

Test Case ID	UCT-ACC-4
Title	Logout
Actor	General User

Main Scenario	Alternatives
1. User selects "logout" button. 2. System prompts user to log out of current device or all connected devices. 3. User selects "current device". 4. System removes user access to the account from the current device.	3a. User selects "all connected devices". 3b. System removes user access to the account from all connected devices. 4a. System is unable to log out. 4b. System alerts users of an error and to try again.

Test Situations:
1. User successfully logs out of the account on the current device.
2. User successfully logs out of the account on all devices.

3. A system error causes the user to be unsuccessful in logging out.

Test Coverage:

Base: number of main and alternative scenarios = 3

Tests: 3

Coverage: 100%

Test Case ID	UCT-SER-2
Title	View Search
Actor	General User

Main Scenario	Alternatives
1. User enters keyword(s) into the search bar. 2. The system fetches listings that contain the keyword(s) in the title, description, or tags. 3. The system displays a list of items that matches the keyword(s).	2a. System is unable to fetch listings that match the search. 2b. System returns a message stating No Items Found.

Test Situations:

1. User successfully fetches items on a search.
2. User is unable to find any items after a search.

Test Coverage:

Base: number of main and alternative scenarios = 2

Tests: 2

Coverage: 100%

Acceptance Testing

Acceptance testing shall be done through alpha user testing and usability studies. The process and results will be documented in a future "Usability Study" document. Users will be given a series of tasks to complete in order to gauge the success of the application. Success will be measured by: usability, functional correctness and completeness, and performance. The following are some anticipated test cases and are subject to changes:

Test Case ID	AT-U-001
Title	Register User Account

Objective	Successfully register a user account.
Procedure	1. Start the app. 2. Proceed as user. 3. Click on Create an Account. 4. Fill out the form. 5. Click on Create Your Centauri Account.

Test Case ID	AT-U-002
Title	Login
Objective	Successfully log in with a registered account.
Procedure	1. Start the app. 2. Proceed as user. 3. Enter email address and password. 4. Click on Log In.

Test Case ID	AT-I-001
Title	Add Item Listing
Objective	Successfully add an item listing.
Procedure	1. Start the app. 2. Proceed as a business user. 3. Click on Create A Business Account. 4. Fill out the form. 5. Log in with business account. 6. Click on Add Listing. 7. Fill out the form. 8. Create the listing.

Test Case ID	AT-I-002
Title	Browse Items
Objective	Successfully
Procedure	1. Start the app. 2. Log into the app.

	3. Click on View All Items.

Results

Due to the nature of these tests and the current state of the application, there is currently no screenshots for acceptance testing from alpha users. Instead, the following are screenshots of each test case performed by the development team and a conclusion drawn by the test case (accept as delivered, accept with conditions, or do not accept.) Results are to be updated accordingly after testing with alpha users.

Test Case ID: AT-U-001
Title: Register User Account
Conclusion: Accept
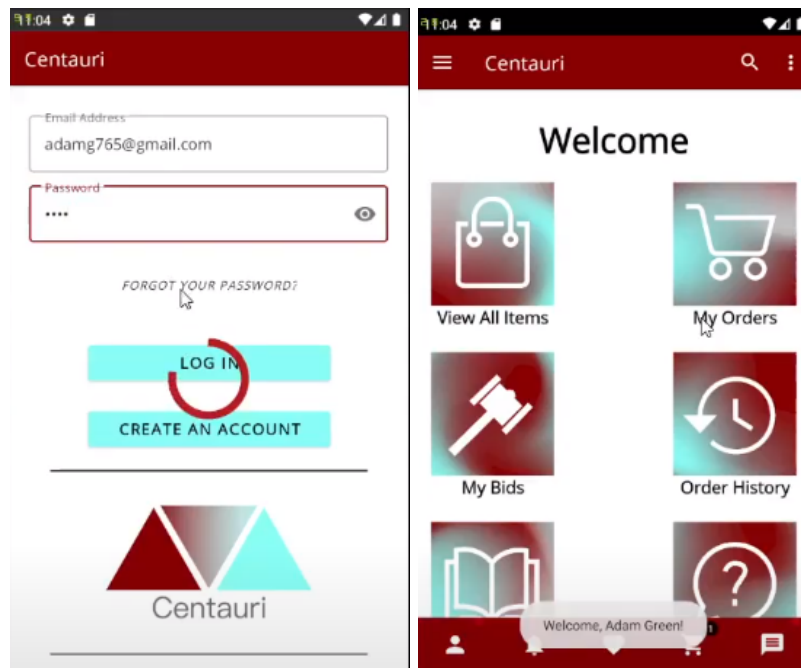Conditions: N/A

Test Case ID: AT-U-002
Title: Login
Conclusion: Accept With Conditions
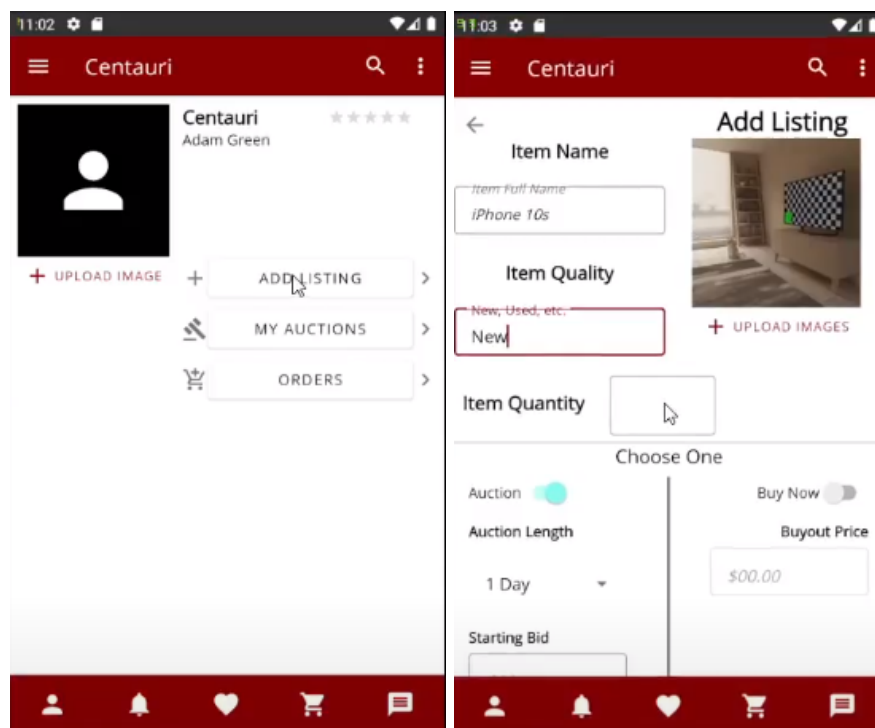Conditions: Notify user on an unsuccessful login/timeout.

Test Case ID: AT-I-001
Title: Add Item Listing
Conclusion: Accept With Conditions
Conditions: Redirect business user away from Add Item Listing page once done.

Test Case ID: AT-I-002

Title: Browse Items

Conclusion: Accept

Conditions: N/A