

Test Procedures

Lyst: Recipe

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1. INTRODUCTION

1.1 PURPOSE OF TEST PLAN

The purpose of this document is to summarize the test strategy as it relates to the implementation of the Lyst: Recipe system. This test plan provides the project team with the necessary approach to validate that each process performs correctly and that the requirements of the system have been satisfied. This document will provide the following:

- Detail the approach and strategy for testing of the system
- Describe the planning, test case preparation, and scheduling, including resource requirements
- Explain the execution, results documentation, and review of the testing
- Provide the test cases which will be executed for testing

1.2 SCOPE OF TESTING [PR1]

Testing for this system will include system, regression, and user acceptance testing. These phases are described in *section 2* below. Test cases will be developed for system and user acceptance testing phases. Development related to fixes identified during testing will be considered part of the testing phase of this project and will be tracked on the schedule as such.

A Requirements Trace Matrix, initially developed in the *Software Requirements Specification* deliverable, will be used to track the status and execution of the test cases as they relate back to said requirements.

1.3 SYSTEM DESCRIPTION [PR1]

This project will result in the development of the Lyst: Recipe system, a system where users may enter a list of ingredients that they have available and will be given a list of recipes they could make with said ingredients. The user will select from abridged lists of ingredients to avoid validating user entry, and will be subject to several criteria such as food groups (meat, grain, vegetable, fruit, dairy), meal type (breakfast, lunch, dinner, appetizer, dessert), and required preparation time.

The Lyst: Recipe system is built on the concept of being a social network in that its content is heavily user-based. Recipes will initially be sourced by developers to ensure trusted content, but will eventually be more self-regulating by its users as the consumer base grows. This is done by allowing users to submit their own recipes as well as comment and rate existing ones. Recipes entered by developers from known sources (such as Food Network, allrecipes.com, or McCormick) will be marked as trusted, and user submissions will require a certain number of positive ratings to be marked as trusted in order to ensure a certain level of quality.

The scope of the Lyst: Recipe project includes the planning, design, development, and testing of a prototype iteration of the system. For the prototype iteration, recipes in the database will be primarily sourced from hardcoding by the project development team. These recipe database entries will be automatically marked as trusted to serve as a starting point for the system's audience.

1.4 TESTING RISKS, ASSUMPTIONS, & CONSTRAINTS [PR10]

The primary identifiable constraints for testing are time restrictions due to the CSCE 4901 course. A single term project involving deliverables and development results in less time available to allocate specifically to testing. This assumption will cause system testing to occur concurrently with development. Potential risks include less adherence to a specific testing schedule. Mitigation plans involve prioritizing critical and high issues, and allowing exemption of medium and low ones. Assumptions made for testing to be successfully executed include an initially filled database of recipes populated by developers.

1.5 DOCUMENT CONVENTIONS

This document follows standard MLA Format. Bold-faced and capitalized text is used to indicate section and sub-section headings. Italics are used to reference sections within the document or other documents related to the project. Tables are used to organize the test cases in a way that can be quickly referenced.

1.6 INTENDED AUDIENCE

This document is intended to be read by the project team and Project Sponsor. It is organized in such a way that all the testing procedures should be easily understood by all project team members including the Team Lead, Team Scribe, individual deliverable leads, and developers. This document should give all readers a clear understanding of the expected testing procedures of the Lyst: Recipe system in order to produce and validate a successful system.

1.7 REFERENCES

This document should be used in conjunction with the *Project Management Plan*, *Software Requirements Specification*, and *Design Document* deliverables created earlier during the spring semester.

2. TEST STRATEGY [PR4, PR7]

2.1 SYSTEM TESTING (SOFTWARE/HARDWARE)

System testing involves the execution of the system against the *Software Requirements Specification* and *Design Document* deliverables in order to validate that the software requirements are validated.

2.1.1 UNIT TESTING

Unit testing is defined as developer testing of a specific module against functional design specifications. All project team members are responsible for unit testing.

2.1.2 INTEGRATION TESTING

Integration testing is defined as system testing as a single entity to ensure developed interactions are functioning properly. System capability will be tested by executing the integration test cases in order as listed in *section 6* below. All project team members are responsible for integration testing.

2.2 REGRESSION TESTING

Regression testing is defined as retesting portions of the system after modifications are made to ensure no other errors were introduced through the fixes. All project team members are responsible for regression testing in the case that modifications are made during the integration testing phase.

2.3 USER ACCEPTANCE TESTING

User acceptance testing is performed by functional end user representatives to ensure that the end users can use the system as designed per the *Software Requirements Specification* and *Design Document* deliverables. Due to time and personnel resource constraints, project team members will serve as functional end users to perform this testing phase.

3. TEST PREPARATION & PLANNING [PR7]

3.1 TEST SCHEDULE [PR4]

Testing of this system will occur in three phases, as defined above: system (unit and integration), regression, and user acceptance testing. Unit testing will occur concurrently with development. Integration testing will occur after system development. If any modifications are introduced after this phase, regression testing will occur to validate said changes. Finally, user acceptance will occur last.

3.2 TEST PERSONNEL

Role	Name	Comment
Team Lead	Tristan Dang	Responsible for project management in relation to schedules and milestones
Test Lead / Test Case Developer	Cassiee Latshaw	Responsible for developing test cases as well as overseeing overall testing
Functional Tester	Eddy Rodriguez	Responsible for functional testing of the system
Functional Tester	Dilip Shah	Responsible for functional testing of the system
Project Sponsor	David Struble	Responsible for validating system completeness at the end of the semester term

3.3 TEST CASE PREPARATION

3.3.1 TEST CASE DEVELOPMENT

Test cases are defined in section 6 below of this deliverable. They are developed by the project team personnel and are mapped to the *Software Requirements Specifications* deliverable and Requirements Trace Matrix to ensure complete test coverage of the requirements.

3.3.2 TEST AUTOMATION

No phases of testing will be automated. The project team personnel are responsible for the development and execution of testing during development.

3.3.3 TEST CASE VALIDATION

All test cases will be dry run for finalization during the development stage, prior to the integration test period. Corrections to the test cases will be made as required.

3.4 TEST ENVIRONMENT [PR8]

3.4.1 FACILITIES

There are no restrictions for any testing phase in terms of available facilities or special accommodations. System testing will occur by the project team personnel anywhere there is PC access and an available internet connection.

3.4.2 HARDWARE & SOFTWARE

The only hardware and software components required for system testing includes a working PC with internet connectivity. The entirety of the system is hosted on AlterVista.org and therefore requires a stable internet connection for any and all testing phases. This software may be run in all of the popular web browsers including Google Chrome, Mozilla Firefox, Internet Explorer, Safari, and Opera. It may be run on Windows, OS X, and Linux operating systems.

3.4.3 SENSITIVE DATA

No sensitive data is used during the development or testing of the Lyst: Recipe system.

4. TEST EXECUTION [PR7]

4.1 TESTING WORKFLOW

All project team personnel are responsible for the development and execution of testing during development. All testing will occur as defined in *section 3.1* above.

4.2 TEST ENTRANCE CRITERIA

This section defines the specific entrance criteria for the beginning of testing.

4.2.1 INTEGRATION TESTING ENTRANCE CRITERIA

- Initial development and system testing have been completed
- All required hardware/system components within the test environment have been initialized
- All required network connectivity between devices have been completed
- All user acceptance test cases have been documented, reviewed, and validated
- All required data entry, database population, and system configuration have been completed

4.2.2 REGRESSION TESTING ENTRANCE CRITERIA

- Integration testing has been completed
- Modifications have been introduced after the integration testing phase

4.2.3 USER ACCEPTANCE TESTING ENTRANCE CRITERIA

- Integration testing has been completed
- Regression testing has been completed, as necessary

4.3 TEST CASE SEQUENCING

System test cases will be executed in order of development. Integration and user acceptance testing will be executed in order of test case, as listed below. Regression testing will occur in order of priority, critical issues being first.

4.4 TEST RESULTS DOCUMENTATION [PR6, PR9]

Test results will be captured and tracked during the integration test phase. Metrics tracked are defined in *section 5.3* below. Pass/fail results, based on the expected results section of each test case, will be recorded in the requirements trace matrix. This documentation will be located in a Google Doc accessible by the project team members.

5. TEST REVIEW & REPORTING [PR7]

5.1 TEST EXIT CRITERIA [PR10]

This section defines the specific exit criteria for the beginning of testing.

5.1.1 INTEGRATION TESTING EXIT CRITERIA

This section defines the specific exit criteria for testing completion.

- All system test cases are executed
- All user acceptance test cases are executed

5.1.2 REGRESSION TESTING ENTRANCE CRITERIA

- All high or critical issues discovered during integration testing are fixed
- All remaining medium or low issues discovered during integration testing are identified and logged

5.1.2 USER ACCEPTANCE TESTING ENTRANCE CRITERIA

- All system test cases are executed
- All user acceptance test cases are executed
- All test results are reviewed and approved by the team members and sponsor

5.2 TEST COMPLETION SIGN-OFF

All project team members are responsible for test completion sign-off. The team lead will meet with the project sponsor to validate that testing was sufficient and complete during the user acceptance testing phase.

5.3 METRICS

The following list of metrics will be tracked and updated during integration testing:

- Number of test cases planned
- Number of tests executed
- Number of tests passed
- Total number of requirements
- Number of requirements passed
- Number of requirements failed
- Number of defects found
- Issue level
 - Critical: Does not satisfy software requirements, must be corrected before deployment
 - High: Impacts system or user functionality negatively, should be corrected but at a lower priority than critical issue
 - Medium: Issue that doesn't impact system functionality, correction not required
 - Low: Aesthetic issues, correction not required
- Plan to correct issue

5.4 TEST DELIVERABLES

Document	Filename/Location	Owner	Description/Purpose
Test Results		Project Team	Capture and summarize results and metric from user acceptance test procedure execution

6. TEST SCENARIOS & CASES [PR5]

6.1 SYSTEM TEST CASES [PR2, PR3]

6.1.1 RECIPE SEARCH

Test Case Number	T001
Test Case Name	Recipe Search
Requirements Fulfilled	R001, R002, R003, and R004
Object, Function, or Procedure Under Test	Recipe Search Module
Setup	<ul style="list-style-type: none">• Access the Lyst: Recipes home page.• User clicked "Search."

Procedure	<ol style="list-style-type: none"> 1. Check number of unique ingredients added. 2. Check meal type drop-down menu selected option. 3. Check maximum preparation time drop-down menu selected option. 4. Query recipe database for all recipes that satisfy the user's criteria. 5. Display list of all recipes that satisfy the user's criteria.
Expected Results	<ol style="list-style-type: none"> 1. System stores all unique ingredients added, and counts the number of ingredients added. If the number of ingredients is less than 5, the system displays an error message saying "Recipe search must have at least 5 different ingredients" and the system skips the following steps. 2. System stores the meal type drop-down menu selected option. 3. System stores the maximum preparation time drop-down menu selected option. 4. The system checks each entry in the recipe database and adds the recipe to a list if it contains all of the ingredients, matches the meal type, and the maximum preparation time is less than or equal to the maximum preparation time input. 5. System displays each entry in the recipe list that satisfies all the user's criteria.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.1.2 REGISTER

Test Case Number	T002
Test Case Name	Register
Requirements Fulfilled	R006
Object, Function, or Procedure Under Test	User Authentication Module
Setup	<ul style="list-style-type: none"> • Must not be logged in. • Access the Register page. • User clicked "Register."
Procedure	<ol style="list-style-type: none"> 1. Check if username already exists. 2. Check if "Password" and "Password Confirmation" fields match. 3. Check if email is already used in another account. 4. Add user to user database.
Expected Results	<ol style="list-style-type: none"> 1. System checks each user in the user database to see if the username already exists. If it does, the system displays an error message

	<p>saying “Username already exists” and the system skips the following steps.</p> <ol style="list-style-type: none"> If the “Password” and “Password Confirmation” fields don’t match, the system displays an error message saying “Password and Password Confirmation fields must match” and the system skips the following steps. System checks each user in the user database to see if the entered email already exists. If it does, the system displays an error message saying “Email already exists” and the system skips the next step. The system creates a new user entry with the entered username, password, and email to the user database.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.1.3 LOGIN

Test Case Number	T003
Test Case Name	Login
Requirements Fulfilled	R007
Object, Function, or Procedure Under Test	User Authentication Module
Setup	<ul style="list-style-type: none"> Must not be logged in. Access the Login page. User clicked “Log In.”
Procedure	<ol style="list-style-type: none"> Check if username or email exists. Check if password matches username. Log user in to their account.
Expected Results	<ol style="list-style-type: none"> System checks each user in the user database to see if the username or email exists. If found, the system returns that user’s entry. If it doesn’t, the system displays an error message saying “Username or email not found” and the system skips the following steps. System checks the returned user entry’s password member to see if it matches the entered password. If it doesn’t, display an error message saying “Incorrect Password” and the system skips the next step. Set \$logged-in to true, \$user to username, and display the user’s profile page.
Observed Results	

Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.1.4 LOGOUT

Test Case Number	T004
Test Case Name	Logout
Requirements Fulfilled	R008
Object, Function, or Procedure Under Test	User Authentication Module
Setup	<ul style="list-style-type: none"> • Must be logged in. • Access any Lyst: Recipes page. • User clicked “Logout.”
Procedure	1. Log out current user.
Expected Results	1. Set \$logged-in to false, \$user to NULL, and display the Lyst: Recipes home page.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.1.5 SUBMIT RECIPE

Test Case Number	T005
Test Case Name	Submit Recipe
Requirements Fulfilled	R009
Object, Function, or Procedure Under Test	Submit Recipe Module
Setup	<ul style="list-style-type: none"> • Must be logged in. • Access to Submit Recipe page. • User clicked “Submit.”
Procedure	<ol style="list-style-type: none"> 1. Store recipe name. 2. Store recipe description.

	<ol style="list-style-type: none"> 3. Store all unique ingredients added. 4. Store meal type drop-down menu selected option. 5. Store maximum preparation time drop-down menu selected option. 6. Store all instructions added. 7. Add recipe to recipe database. 8. Add recipe to the user's class.
Expected Results	<ol style="list-style-type: none"> 1. System stores the entered recipe name. 2. System stores the entered recipe description. 3. System stores all unique ingredients added, and counts the number of ingredients added. If no ingredients are added, the system displays an error message saying "Recipes must have at least one ingredient" and the system skips the following steps. 4. System stores the meal type drop-down menu selected option. 5. System stores the maximum preparation time drop-down menu selected option. 6. System stores all instructions added, and counts the number of instructions added. If no instructions are added, the system displays an error message saying "Recipes must have at least one instruction" and the system skips the following steps. 7. The system creates a new recipe entry with the entered name, description, ingredients, meal type, maximum preparation time, and instructions to the recipe database. 8. The system adds the new recipe entry to the user's recipe list.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.1.6 RATE RECIPE

Test Case Number	T006
Test Case Name	Rate Recipe
Requirements Fulfilled	R011
Object, Function, or Procedure Under Test	Rate Recipe Module
Setup	<ul style="list-style-type: none"> • Must be logged in. • User clicked "Rate."
Procedure	<ol style="list-style-type: none"> 1. Add new rating to recipe's class. 2. Check if recipe is trusted.
Expected Results	<ol style="list-style-type: none"> 1. System adds the rating to the recipe's rating list.

	2. System runs the Mark Trusted Rating algorithm (see section 6.1.7).
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.1.7 MARK TRUSTED RECIPE

Test Case Number	T007
Test Case Name	Mark Trusted Recipe
Requirements Fulfilled	R013
Object, Function, or Procedure Under Test	Mark Trusted Recipe Module
Setup	<ul style="list-style-type: none"> A user has rated a recipe.
Procedure	<ol style="list-style-type: none"> 1. Compute number of ratings the recipe currently has. 2. Compute recipe's average of stored ratings. 3. Check if the recipe has more than 5 ratings. 4. Check if the recipe's average rating is greater than or equal to 4. 5. Recipe trusted member is updated.
Expected Results	<ol style="list-style-type: none"> 1. System returns number of ratings for that recipe. 2. System returns recipe's average rating. 3. System returns true if the recipe has more than 5 ratings. 4. System returns true if the recipe's average rating is greater than or equal to 4. 5. System marks recipe as trusted if the recipe has at least 5 ratings and the average rating is greater than or equal to 4.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2 INTEGRATION / USER ACCEPTANCE TEST CASES [PR2, PR3]

6.2.1 RECIPE SEARCH

6.2.1.1 NORMAL STATE

Test Case Number	T008
Test Case Name	Recipe Search – Normal State
Requirements Fulfilled	R001, R002, R003, and R004
Object, Function, or Procedure Under Test	Recipe Search Module
Preconditions	<ul style="list-style-type: none">• None
Procedure	<ol style="list-style-type: none">1. Access Lyst: Recipes home page.2. Click on “Add Ingredient” under any of the food group categories.3. Select ingredient from the food group drop-down menu. Repeat steps 2 and 3 at least 5 times for all desired ingredients.4. Click “Remove” next to any selected ingredients to remove them from the search.5. Select meal type from the meal type drop-down menu.6. Select maximum preparation time from the maximum preparation time drop-down menu.7. Click “Search.”
Expected Results	<ol style="list-style-type: none">1. Home page displays.2. A drop-down menu from that food group appears above “Add Ingredient”.3. The ingredient drop-down menu changes its displayed option to the selected ingredient.4. The selected ingredient is removed from that food group’s ingredient list.5. The meal type drop-down menu changes its displayed option to the selected meal type.6. The maximum preparation time drop-down menu changes its displayed option to the selected maximum preparation time.7. System displays all of the recipes that satisfies the inputted criteria.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.1.2 INSUFFICIENT NUMBER OF INGREDIENTS

Test Case Number	T009
Test Case Name	Recipe Search – Insufficient Number of Ingredients

Requirements Fulfilled	R001, R002, R003, and R004
Object, Function, or Procedure Under Test	Recipe Search Module
Preconditions	<ul style="list-style-type: none"> None
Procedure	<ol style="list-style-type: none"> 1. Access Lyst: Recipes home page. 2. Click on “Add Ingredient” under any of the food group categories. 3. Select ingredient from the food group drop-down menu. Repeat steps 2 and 3 less than 5 times. 4. Click “Remove” next to any selected ingredients to remove them from the search. 5. Select meal type from the meal type drop-down menu. 6. Select maximum preparation time from the maximum preparation time drop-down menu. 7. Click “Search.”
Expected Results	<ol style="list-style-type: none"> 1. Home page displays. 2. A drop-down menu from that food group appears above “Add Ingredient”. 3. The ingredient drop-down menu changes its displayed option to the selected ingredient. 4. The selected ingredient is removed from that food group’s ingredient list. 5. The meal type drop-down menu changes its displayed option to the selected meal type. 6. The maximum preparation time drop-down menu changes its displayed option to the selected maximum preparation time. 7. System displays error message saying “Recipe search must have at least 5 different ingredients.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.2 DISPLAY RECIPE ENTRY

Test Case Number	T010
Test Case Name	Display Recipe Entry
Requirements Fulfilled	R005
Object, Function, or Procedure Under Test	Recipe Search Module

Preconditions	<ul style="list-style-type: none"> Query recipe database
Procedure	1. Click on the recipe's name.
Expected Results	1. The specified recipe's description page displays.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.3 REGISTER

6.2.3.1 NORMAL STATE

Test Case Number	T011
Test Case Name	Register – Normal State
Requirements Fulfilled	R006
Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> Must not be logged in.
Procedure	<ol style="list-style-type: none"> Access Lyst: Recipes home page. Click "Login." Click "Click here" at the bottom of the Login form. Type the test username in the "Username" field. Type the test password in the "Password" field. Type the test password again in the "Confirm Password" field. Type in the test email in the "Email" field. Click "Register."
Expected Results	<ol style="list-style-type: none"> Home page displays. Login page displays. Registration page displays. Text box accepts numbers, letters, and symbols. Text box accepts numbers, letters, and symbols. Text box accepts numbers, letters, and symbols. Text box accepts numbers, letters, and symbols. System accepts registration, changes the navigation bar options, and displays created user's profile page.
Observed Results	

Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.3.2 USERNAME ALREADY EXISTS

Test Case Number	T012
Test Case Name	Register – Username Already Exists
Requirements Fulfilled	R006
Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> • Must not be logged in. • User with test username already exists.
Procedure	<ol style="list-style-type: none"> 1. Access Lyst: Recipes home page. 2. Click “Login.” 3. Click “Click here” at the bottom of the Login form. 4. Type a test username that has already been registered in the “Username” field. 5. Type the test password in the “Password” field. 6. Type the test password again in the “Confirm Password” field. 7. Type in the test email in the “Email” field. 8. Click “Register.”
Expected Results	<ol style="list-style-type: none"> 1. Home page displays. 2. Login page displays. 3. Registration page displays. 4. Text box accepts numbers, letters, and symbols. 5. Text box accepts numbers, letters, and symbols. 6. Text box accepts numbers, letters, and symbols. 7. Text box accepts numbers, letters, and symbols. 8. System displays error message saying “Username already exists.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.3.3 PASSWORDS DON'T MATCH

Test Case Number	T013
Test Case Name	Register – Passwords Don't Match

Requirements Fulfilled	R006
Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> • Must not be logged in.
Procedure	<ol style="list-style-type: none"> 1. Access Lyst: Recipes home page. 2. Click “Login.” 3. Click “Click here” at the bottom of the Login form. 4. Type the test username in the “Username” field. 5. Type the test password in the “Password” field. 6. Type in a different test password in the “Confirm Password” field. 7. Type in the test email in the “Email” field. 8. Click “Register.”
Expected Results	<ol style="list-style-type: none"> 1. Home page displays. 2. Login page displays. 3. Registration page displays. 4. Text box accepts numbers, letters, and symbols. 5. Text box accepts numbers, letters, and symbols. 6. Text box accepts numbers, letters, and symbols. 7. Text box accepts numbers, letters, and symbols. 8. System displays error message saying “Password and Password Confirmation fields must match.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.3.4 EMAIL ALREADY USED

Test Case Number	T014
Test Case Name	Register – Email Already Used
Requirements Fulfilled	R006
Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> • Must not be logged in. • User with test email already exists.
Procedure	<ol style="list-style-type: none"> 1. Access Lyst: Recipes home page. 2. Click “Login.” 3. Click “Click here” at the bottom of the Login form.

	<ol style="list-style-type: none"> 4. Type the test username in the “Username” field. 5. Type the test password in the “Password” field. 6. Type the test password in the “Confirm Password” field. 7. Type in test email that has already been registered in the “Email” field. 8. Click “Register.”
Expected Results	<ol style="list-style-type: none"> 1. Home page displays. 2. Login page displays. 3. Registration page displays. 4. Text box accepts numbers, letters, and symbols. 5. Text box accepts numbers, letters, and symbols. 6. Text box accepts numbers, letters, and symbols. 7. Text box accepts numbers, letters, and symbols. 8. System displays error message saying “Email already exists.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.4 LOGIN

6.2.4.1 NORMAL STATE

Test Case Number	T015
Test Case Name	Login – Normal State
Requirements Fulfilled	R007
Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> • Must not be logged in.
Procedure	<ol style="list-style-type: none"> 1. Access Lyst: Recipes home page. 2. Click “Login.” 3. Type the test username or test email in the “Username or Email” field. 4. Type the test password in the “Password” field. 5. Click “Log In.”
Expected Results	<ol style="list-style-type: none"> 1. Home page displays. 2. Login page displays. 3. Text box accepts numbers, letters, and symbols. 4. Text box accepts numbers, letters, and symbols. 5. System accepts login, changes the navigation bar options, and displays the user’s profile page.

Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.4.2 USERNAME OR EMAIL DOESN'T EXIST

Test Case Number	T016
Test Case Name	Login – Username or Email Doesn't Exist
Requirements Fulfilled	R007
Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> • Must not be logged in.
Procedure	<ol style="list-style-type: none"> 1. Access Lyst: Recipes home page. 2. Click "Login." 3. Type a test username or test email that has not been registered in the "Username or Email" field. 4. Type the test password in the "Password" field. 5. Click "Log In."
Expected Results	<ol style="list-style-type: none"> 1. Home page displays. 2. Login page displays. 3. Text box accepts numbers, letters, and symbols. 4. Text box accepts numbers, letters, and symbols. 5. System displays error message saying "Username or email not found."
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.4.3 INCORRECT PASSWORD

Test Case Number	T017
Test Case Name	Login – Incorrect Password
Requirements Fulfilled	R007

Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> • Must not be logged in. • User with the test username or test email already exists.
Procedure	<ol style="list-style-type: none"> 1. Access Lyst: Recipes home page. 2. Click “Login.” 3. Type the test username or test email in the “Username or Email” field. 4. Type a test password that is not registered with the test username in the “Password” field. 5. Click “Log In.”
Expected Results	<ol style="list-style-type: none"> 1. Home page displays. 2. Login page displays. 3. Text box accepts numbers, letters, and symbols. 4. Text box accepts numbers, letters, and symbols. 5. System displays error message saying “Incorrect Password.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.5 LOGOUT

Test Case Number	T018
Test Case Name	Logout
Requirements Fulfilled	R008
Object, Function, or Procedure Under Test	User Authentication Module
Preconditions	<ul style="list-style-type: none"> • Must be logged in.
Procedure	<ol style="list-style-type: none"> 1. Access any page on the Lyst: Recipes web interface. 2. Click “Logout.”
Expected Results	<ol style="list-style-type: none"> 1. Current Lyst: Recipes page displays. 2. System changes the navigation bar options and displays the home page.
Observed Results	

Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.6 SUBMIT RECIPE

6.2.6.1 NORMAL STATE

Test Case Number	T019
Test Case Name	Submit Recipe – Normal State
Requirements Fulfilled	R009
Object, Function, or Procedure Under Test	Submit Recipe Module
Preconditions	<ul style="list-style-type: none"> • Must be logged in.
Procedure	<ol style="list-style-type: none"> 1. Access any page on the Lyst: Recipes web interface. 2. Click “Submit Recipe.” 3. Type the recipe name in the “Name” field. 4. Type the recipe description in the “Description” field. 5. Click on “Add Ingredient” under any of the food group categories. 6. Select ingredient from the food group drop-down menu. Repeat steps 5 and 6 for all recipe ingredients. 7. Click “Remove” next to any selected ingredients to remove them from the recipe. 8. Select meal type from the meal type drop-down menu. 9. Select maximum preparation time from the maximum preparation time drop-down menu. 10. Click on “Add Instruction” under the Instructions section. 11. Type the instruction in the next available text field. Repeat steps 10 and 11 for all instructions. 12. Click “Remove” next to any instructions to remove them from the recipe. 13. Click “Submit.”
Expected Results	<ol style="list-style-type: none"> 1. Current Lyst: Recipes page displays. 2. Submit Recipe page displays. 3. Text box accepts numbers, letters, and symbols. 4. Text box accepts numbers, letters, and symbols. 5. A drop-down menu from that food group appears above “Add Ingredient”. 6. The ingredient drop-down menu changes its displayed option to the selected ingredient. 7. The selected ingredient is removed from that food group’s ingredient list. 8. The meal type drop-down menu changes its displayed option to the selected meal type.

	<ol style="list-style-type: none"> 9. The maximum preparation time drop-down menu changes its displayed option to the selected maximum preparation time. 10. A text field appears above “Add Instruction”. 11. Text box accepts numbers, letters, and symbols. 12. The selected instruction is removed from the recipe’s instruction list. 13. System accepts recipe submission and displays the new recipe’s description page.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.6.2 NO INGREDIENTS

Test Case Number	T020
Test Case Name	Submit Recipe – No Ingredients
Requirements Fulfilled	R009
Object, Function, or Procedure Under Test	Submit Recipe Module
Preconditions	<ul style="list-style-type: none"> • Must be logged in.
Procedure	<ol style="list-style-type: none"> 1. Access any page on the Lyst: Recipes web interface. 2. Click “Submit Recipe.” 3. Type the recipe name in the “Name” field. 4. Type the recipe description in the “Description” field. 5. Select meal type from the meal type drop-down menu. 6. Select maximum preparation time from the maximum preparation time drop-down menu. 7. Click on “Add Instruction” under the Instructions section. 8. Type the instruction in the next available text field. Repeat steps 10 and 11 for all instructions. 9. Click “Remove” next to any instructions to remove them from the recipe. 10. Click “Submit.”
Expected Results	<ol style="list-style-type: none"> 1. Current Lyst: Recipes page displays. 2. Submit Recipe page displays. 3. Text box accepts numbers, letters, and symbols. 4. Text box accepts numbers, letters, and symbols. 5. The meal type drop-down menu changes its displayed option to the selected meal type. 6. The maximum preparation time drop-down menu changes its displayed option to the selected maximum preparation time.

	<ol style="list-style-type: none"> 7. A text field appears above “Add Instruction”. 8. Text box accepts numbers, letters, and symbols. 9. The selected instruction is removed from the recipe’s instruction list. 10. System displays error message saying “Recipes must have at least one ingredient.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.6.3 NO INSTRUCTIONS

Test Case Number	T021
Test Case Name	Submit Recipe – No Instructions
Requirements Fulfilled	R009
Object, Function, or Procedure Under Test	Submit Recipe Module
Preconditions	<ul style="list-style-type: none"> • Must be logged in.
Procedure	<ol style="list-style-type: none"> 1. Access any page on the Lyst: Recipes web interface. 2. Click “Submit Recipe.” 3. Type the recipe name in the “Name” field. 4. Type the recipe description in the “Description” field. 5. Click on “Add Ingredient” under any of the food group categories. 6. Select ingredient from the food group drop-down menu. Repeat steps 5 and 6 for all recipe ingredients. 7. Click “Remove” next to any selected ingredients to remove them from the recipe. 8. Select meal type from the meal type drop-down menu. 9. Select maximum preparation time from the maximum preparation time drop-down menu. 10. Click “Submit.”
Expected Results	<ol style="list-style-type: none"> 1. Current Lyst: Recipes page displays. 2. Submit Recipe page displays. 3. Text box accepts numbers, letters, and symbols. 4. Text box accepts numbers, letters, and symbols. 5. A drop-down menu from that food group appears above “Add Ingredient”. 6. The ingredient drop-down menu changes its displayed option to the selected ingredient. 7. The selected ingredient is removed from that food group’s ingredient list.

	8. The meal type drop-down menu changes its displayed option to the selected meal type. 9. The maximum preparation time drop-down menu changes its displayed option to the selected maximum preparation time. 10. System displays error message saying “Recipes must have at least one instruction.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.7 DISPLAY USER PROFILE

Test Case Number	T022
Test Case Name	Display User Profile
Requirements Fulfilled	R010
Object, Function, or Procedure Under Test	User Profile Module
Preconditions	<ul style="list-style-type: none"> Must be logged in.
Procedure	1. Access any page on the Lyst: Recipes web interface. 2. Click “View Profile.”
Expected Results	1. Current Lyst: Recipes page displays. 2. User Profile page displays.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.8 RATE RECIPE

6.2.8.1 NORMAL STATE

Test Case Number	T023
Test Case Name	Rate Recipe – Normal State
Requirements Fulfilled	R011

Object, Function, or Procedure Under Test	Rate Recipe Module
Preconditions	<ul style="list-style-type: none"> • Must be logged in. • Access a recipe's description page.
Procedure	<ol style="list-style-type: none"> 1. Click "Rate Recipe." 2. Click on the rating slider and move slider to desired rating. 3. Click "Rate."
Expected Results	<ol style="list-style-type: none"> 1. Rate Recipe slider displays. 2. Rate Recipe slider displays the selected rating value. 3. System hides the Rate Recipe slider, displays a confirmation saying "Recipe rated", and displays current recipe rating.
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.8.2 ALREADY RATED RECIPE

Test Case Number	T024
Test Case Name	Rate Recipe – Already Rated Recipe
Requirements Fulfilled	R011
Object, Function, or Procedure Under Test	Rate Recipe Module
Preconditions	<ul style="list-style-type: none"> • Must be logged in. • Access a recipe's description page. • Must have already rated the displayed recipe.
Procedure	<ol style="list-style-type: none"> 1. Click "Rate Recipe."
Expected Results	<ol style="list-style-type: none"> 1. System displays error message saying "Recipe already rated."
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.8.3 RATE OWN RECIPE

Test Case Number	T025
Test Case Name	Rate Recipe – Rate Own Recipe
Requirements Fulfilled	R011
Object, Function, or Procedure Under Test	Rate Recipe Module
Preconditions	<ul style="list-style-type: none"> • Must be logged in. • Access a recipe’s description page that the logged in user has submitted.
Procedure	1. Click “Rate Recipe.”
Expected Results	1. System displays error message saying “Cannot rate own recipe.”
Observed Results	
Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

6.2.9 COMMENT ON RECIPE

Test Case Number	T026
Test Case Name	Comment on Recipe
Requirements Fulfilled	R012
Object, Function, or Procedure Under Test	Comment on Recipe Module
Preconditions	<ul style="list-style-type: none"> • Must not be logged in. • Access a recipe’s description page.
Procedure	<ol style="list-style-type: none"> 1. Click “Add Comment.” 2. Type the comment in the “Comment” field. 3. Click “Comment.”
Expected Results	<ol style="list-style-type: none"> 1. Recipe Comment input field displays. 2. Text box accepts numbers, letters, and symbols. 3. System hides the Recipe Comment field and displays the comment at the top of the recipe’s comment thread.
Observed Results	

Approved, Conditionally Approved, or Rejected	
Failure Type (Critical, High, Medium, Low)	

7. REQUIREMENTS TRACE MATRIX

RQMT ID	Text of RQMT	Requirement Source Doc	Requirement Implementation Site	Test Case #'s in Test Procedure	Test Approach (D, A, T, I)	PASS/ FAIL
R001	Users shall be able to select from an abridged list of ingredients categorized by food group.	Req. 1 & 2: “CSCE 4901 – Some Suggested Requirements for Recipe App” – Provided by Sponsor	Recipe Search	T001, T008, T009	T	
R002	Users shall be able to select a meal type.	Req. 3: “CSCE 4901 – Some Suggested Requirements for Recipe App” – Provided by Sponsor	Recipe Search	T001, T008, T009	T	
R003	Users shall be able to select a maximum preparation time.	Req. 4 & 5: “CSCE 4901 – Some Suggested Requirements for Recipe App” – Provided by Sponsor	Recipe Search	T001, T008, T009	T	
R004	System shall search the recipe database and display a list of all recipes that satisfy the query’s criteria.	Derived requirement by project team	Recipe Search	T001, T008, T009	I	
R005	Users shall be able to click on a recipe to view the	Derived requirement by project team	Recipe Page	T010	I	

	recipe's description page.					
R006	Users shall be able to register an account.	Derived requirement by project team	User Authentication	T002, T011, T012, T013, T014	T	
R007	Users shall be able to login to their account.	Derived requirement by project team	User Authentication	T003, T015, T016, T017	T	
R008	Registered users shall be able to logoff their account.	Derived requirement by project team	User Authentication	T004, T018	T	
R009	Registered users shall be able to submit recipes to the recipe database.	Derived requirement by project team	Submit Recipe	T005, T019, T020, T021	T	
R010	Registered users shall be able to view their profile page.	Derived requirement by project team	User Profile	T022	I	
R011	Registered users shall be able to rate recipes in the recipe database.	Derived requirement by project team	Rate Recipe	T006, T023, T024, T025	T	
R012	Registered users shall be able to comment on any recipe in the recipe database.	Derived requirement by project team	Comment on Recipe	T026	T	
R013	System shall check to see if a user's recipe qualifies to be marked as a trusted recipe.	Req. 6: "CSCE 4901 – Some Suggested Requirements for Recipe App" – Provided by Sponsor	Trusted Recipe Algorithm	T007	A	

(D)emonstration, (A)nalysis, T(est), or (I)nspection

8. APPROVAL

By signing, the individuals listed below have approved this test plan.

Name: Tristan Dang
Role: Team Lead

Name: Cassiee Latshaw
Role: Test Lead

Name: Eddy Rodriquez
Role: Functional Tester

Name: Dilip Shah
Role: Functional Tester

Name: David Struble
Role: Project Sponsor