Trading Post
Test Specification

A Bartering System Web Application
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ABSTRACT

This document outlines quality characteristics and tests that correspond to specific quality and usage requirements of the Trading Post web application. There are several different levels of testing – module, integration, system, and acceptance testing – that will be addressed under suitable quality characteristics. These tests will either prove that the application satisfies the expected quality requirements of the system or will identify faulty aspects of the system that need to be addressed. Each test has the following attributes:

- *ID:* Test identification number for quick reference
- *Type:* Indicates what level of testing is being performed – module, integration, system, or acceptance testing.
- *Test description:* Briefly explains what the test is about.
- *Requirement reference:* Refers to one of the application's requirements that is directly related to the quality characteristic being tested.
- *Quality attribute:* Refers to the quality characteristic being tested.
- *Steps:* Lists the step-by-step instructions to perform the test.
- *Expected outcome:* Describes the expected outcome of the test indicating time constraints, number of users involved, or other metrics.
- *Actual outcome:* Describes the actual outcome of the test.
- *Pass/fail indication:* "Pass" is indicated if the test was successful and met the criteria for the expected outcome. "Fail" is indicated if the test did not succeed in meeting the criteria for the expected outcome.
- *Defect description:* Describes the defect in the application or potential source of the defect (if applicable) so the application can be improved.

QUALITY CHARACTERISTICS

A system must satisfy quality characteristics, or meet a degree of excellence, identified and implied by the stakeholder so that the system can provide value. Below are specific quality requirements that the Trading Post application must fulfill.

External Product Quality

External product quality is the measure of how the behavior of the system meets the stakeholder's requirements. The quality of the software can be affected by the system's speed performance, features or ease of use.

Performance

	Test Case
ID	1
Type	System Test
Description	The users should not have to wait more than 5 seconds to retrieve search results. Navigation should be of typical speeds.
Requirement Reference	Quality Requirement: Performance
Quality Attribute	Performance efficiency
Step(s)	Conduct this test with 10 users that will follow the steps described below: 1. Choose a category for goods/services 2. Enter good/service name in search bar 3. Enter a ZIP code in the search bar 4. Click search button
Expected Outcome	The results should display at a reasonable time, which should be 5 seconds or less. The 10 users that have conducted this test case should be able to see their search results within 5 seconds.
Actual Outcome	Search results for all 10 users were displayed within 5 seconds
Pass/Fail	Pass
Defect(s)	None

Usability

	Test Case
ID	2
Type	System Test
Description	The system should be easy to use even for new users or users who visit the application infrequently. This test will see if signed-up users will be able to make a successful trade within 30 seconds. This will show whether or not the system is intuitive enough for any user.
Requirement Reference	Quality Requirement: Usability
Quality Attribute	Usability
Step(s)	Conduct this test with 10 users that will follow the steps described below: 1. Click “trade” on an item/service (that was already searched) 2. System prompts user to trade item/service from inventory 3. User submits request
Expected Outcome	The system should prompt the 10 users that the trade requests have been submitted. The 10 users should be able to successfully submit a trade within 30 seconds.
Actual Outcome	The 10 users were prompted each time that a trade request was made. Each trade was successful and took less than 30 seconds.
Pass/Fail	Pass
Defect(s)	None

Internal Product Quality

Internal product quality is the measure of the maintainability, compatibility, and adaptability of the system. It refers to quality of implementation as opposed to what the user actually sees or experiences.

Portability

	Test Case
ID	3
Type	System Test
Description	The system should be able to transfer between different operating systems and major internet browsers with consistent functionality and layout styling.
Requirement Reference	Quality Requirement: Portability
Quality Attribute	Portability
Step(s)	1. Start computer in Linux, Mac OS X, Windows 7, or Windows 8 2. Use web application in Firefox, Chrome, or Internet Explorer 3. Repeat steps 1 and 2 until all browsers have been tested in each operating system
Expected Outcome	The website's layout and functionality is the same in all environments.
Actual Outcome	The website looked and worked the same in each browser and operating system.
Pass/Fail	Pass
Defect(s)	None

Maintainability

	Test Case
ID	4
Type	System Test
Description	Test whether the system is quick to update and a file depends on less than 5 other files to maintain.
Requirement Reference	Quality Requirement: Maintainability
Quality Attribute	Maintainability
Step(s)	1. Open the template file, recent posts, profile, about, and signup page 2. Update each file with new content 3. Save the updated changes onto the file
Expected Outcome	The files do not depend on more than 5 pages and update immediately with all functions intact.
Actual Outcome	The updates to the header file and were made immediately and reflected onto the screen. All functions were working properly.
Pass/Fail	Pass
Defect(s)	None

Data Quality

Data quality is the measure of data integrity, conciseness, and manageability. Data quality can be affected by how data is entered and stored in database. Following tests are to prevent redundancy and ensure that all stored information will be correct.

Non-duplication

	Test Case
ID	5
Type	System Test
Description	Users should be able to create a unique account that cannot be duplicated by anyone else. This test will show that the system restricts account duplication.
Requirement Reference	Quality requirement: Data integrity and functional suitability
Quality Attribute	Data integrity and functional suitability
Step(s)	1. Go to sign up page 2. Fill out a username for a user that already exists 3. Fill out the rest of the sign up form 4. Submit the information
Expected Outcome	The user performing this test should receive a message on the screen indicating that the username is already registered to another user.
Actual Outcome	The message “User already exists” displayed.
Pass/Fail	Pass
Defect(s)	None

Correctness

	Test Case
ID	6
Type	System Test
Description	Users should be only be able to create an account with an email address that is valid.
Requirement Reference	Quality requirement: Functional suitability
Quality Attribute	Functional suitability
Step(s)	1. Go to sign up page 2. Type in an incorrectly formatted email address 3. Submit the information
Expected Outcome	The user performing this test should receive a message on the screen indicating that the email address is not in the correct format. The system will indicate the required format for the email address.
Actual Outcome	The message “Please include an "@" in the email address” showed up.
Pass/Fail	Pass
Defect(s)	None

Quality In Use

Quality in use is the effectiveness, efficiency, and satisfaction users get from the system when they perform specific tasks in certain environments.

User Satisfaction

	Test Case
ID	7
Type	System Test
Description	This test is to see if the design is intuitive, easy to learn, and satisfying to use.
Requirement Reference	Quality Requirement: Usability
Quality Attribute	User Satisfaction
Step(s)	Conduct this test with 10 users: 1. Put user in front of application 2. See if user can figure out how to request a trade with an item that he or she searched. 3. Provide user with a survey to fill out to rate their degree of satisfaction with the system.
Expected Outcome	All 10 users should be able to accomplish this basic task. Based on the user's survey responses, the user should be satisfied with the system.
Actual Outcome	All 10 users were able to trade and fill out rating.
Pass/Fail	Pass
Defect(s)	None

Privacy

	Test Case
ID	8
Type	Module Test
Description	This test is to see if a user can access an account by using a wrong password. This will show whether or not the accounts are private.
Requirement Reference	Quality Requirement: Privacy
Quality Attribute	Privacy
Step(s)	Conduct this test with 10 users that will follow the steps described below: 1. Go to log in page 2. Input username and wrong password 3. See if user is logged in
Expected Outcome	None of the 10 users should be able to log in with the wrong password. There should be a message displayed on the screen indicating that an incorrect password or username was entered and that the user should try again.
Actual Outcome	The message “Try again. Wrong password or username” displayed.
Pass/Fail	Pass
Defect(s)	None