

Retail Inventory Management Test Plan

CSCE 361 Spring 2018

Group 2

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1. Introduction

This phase covers all aspects relating to the testing of the software. The first section of this document details all of the system requirements that were validated during the testing process. This section resembles the system requirements that were displayed in *Phase 1* of the development process. Some slight modifications have been made to some of the requirements to accommodate for changes and adjustments that have been made in the system since the initial planning stage.

The second section of this document details all of the test cases that were applied, and their method of execution. The variety of test cases that were conducted are designed to cover all possible scenarios of the system, and highlight any errors or areas that need more attention in our system. The test cases were executed from the user's perspective, and the observed result was compared with the desired result, and any differences were noted. All differences noted can be found in the *Testing Report* document.

2. Testing Requirements

2.1 Application Startup

2.1.1 RS 3.2.1.2.4

Launch the application, starting at the login page.

2.2 Login Page

2.2.1 RS 3.2.1.2.4

Invoke login with no arguments for username and password fields.

2.2.2 RS 3.2.1.2.4

Invoke login with correct, registered username and password pair.

2.2.3 RS 3.2.1.2.4

Invoke login by using an argument that is not a registered username for username field

2.2.4 RS 3.2.1.2.4

Invoke login by using an argument that is not a valid password for a the password field

2.3 Inventory Overview Page

2.3.1 RS 3.2.2.2.2

Attempt to add an item to the inventory without specifying a name.

2.3.2 RS 3.2.2.2.2

Attempt to add an item to the inventory without specifying a type.

2.3.3 RS 3.2.2.2.2

Attempt to add an item to the inventory without including a description.

2.3.4 RS 3.2.2.2.2

Attempt to add an item to the inventory without specifying a price.

2.3.5 RS 3.2.2.2.2

Attempt to add an item to the inventory without specifying a supplier.

2.3.6 RS 3.2.2.2.2

Attempt to add an item to the inventory with a duplicate name.

2.3.7 RS 3.2.2.2.2

Attempt to add an item to the inventory with a duplicate id.

2.3.8 RS 3.2.2.2.2

Attempt to add an item to the inventory with all fields properly specified.

2.3.9 RS 3.2.2.2.3

Attempt to select an item and view further details regarding this item.

2.3.10 RS 3.2.2.2.3

Attempt to select an item that does not exist in the inventory.

2.3.11 RS 3.2.2.2.11

Attempt to sort the list of items in the inventory by name.

2.3.12 RS 3.2.2.2.11

Attempt to sort the list of items in the inventory by type

2.3.13 RS 3.2.2.2.11

Attempt to sort the list of items in the inventory by quantity (least to greatest)

2.3.14 RS 3.2.2.2.11

Attempt to sort the list of items in the inventory by price (least to greatest)

2.3.15 RS 3.2.2.2.11

Attempt to sort the list of items in the inventory by supplier

2.4 Item Details Page

2.4.1 RS 3.2.2.2.8

Attempt to add an item to the cart.

2.4.2 RS 3.2.2.2.8

Attempt to add an item to the cart that is out-of-stock.

2.4.3 RS 3.2.2.2.2

Attempt to stock an item given a quantity by which the stock will be increased from the *manager* perspective.

2.4.4 RS 3.2.2.2.3

Attempt to stock an item given a quantity by which the stock will be increased from the *employee* perspective.

2.4.5 RS 3.2.2.2.2

Attempt to stock an item given a negative quantity by which the stock will be increased from the *manager* perspective.

2.4.6 RS 3.2.2.2.2

Attempt to update the price of an item to a positive value from the *manager* perspective.

2.4.7 RS 3.2.2.2.2

Attempt to update the price and quantity of an item from the *employee* perspective

2.5 View Cart Page

2.5.1 RS 3.2.2.2.9

Attempt to remove an item from a cart given its corresponding rank in cart.

2.5.2 RS 3.2.2.2.9

Attempt to remove an item from a cart given rank that does not correspond to an item in the cart.

2.5.3 RS 3.2.2.2.10

Attempt to check-out a cart storing items.

2.5.4 RS 3.2.2.2.10

Attempt to check-out an empty cart.

2.5.5 RS 3.2.2.2.11

Attempt to clear all items from a cart.

2.6 Accounts Page

2.6.1 RS 3.2.1.2.1

Attempt to create a new account while logged into an *employee* account.

2.6.2 RS 3.2.1.2.1

Attempt to create a new account while logged into a *manager* account with a username argument that does not correspond to a pre-existing account in the system and password.

2.6.3 RS 3.2.1.2.1

Attempt to create a new account while logged into a *manager* account with a username argument that corresponds to a pre-existing account in the system and password.

2.6.4 RS 3.2.1.2.1

Attempt to create a new account while logged into a *manager* account with no arguments for username and password fields.

2.6.5 RS 3.2.1.2.6

Attempt to view details about one's own account.

2.6.6 RS 3.2.1.2.7

Attempt to view details about another's account from the *employee* perspective.

2.6.7 RS 3.2.1.2.7

Attempt to view details about another's account from the *manager* perspective.

2.6.8 RS 3.2.1.2.8

Attempt to update one's own credentials with a valid password.

2.6.9 RS 3.2.1.2.9

Attempt to update another's account credentials from the *employee* perspective.

2.6.10 RS 3.2.1.2.9

Attempt to update another's account credentials from the *manager* perspective.

2.7 Other

2.7.1 RS 3.2.1.2.10

Attempt to log out of one's account.

2.7.2 RS 3.2.1.2.11

Attempt to quit the application.

2.7.3 RS 3.2.2.2.7

Attempt to refresh the data stored in the system

2.6 Statistics Page

3. Test Cases

The test cases below make up the Retail Inventory Management System test suite. The purpose and setup procedure of each test case has been outlined. The expected output must be observed for the test case to pass.

3.1 Application Startup

3.1.1 Test 1

Purpose:

Test the startup or launch of the application.

Setup:

Launch the application by clicking on the run button in an IDE.

Inputs and Expected Outputs

Input	Expected Output
Launch the App	Login Page is displayed

Testing Requirements Covered:

Testing Requirement 2.1.1

3.2 Login Page

3.2.1 Test 2

Purpose:

Test logging in with no arguments for username and password fields.

Setup:

Launch the application or navigate to the login page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
username	-	false	Alert: Login failed
password	-	false	Alert: Login failed

Testing Requirements Covered:

Testing Requirement 2.2.1

3.2.2 Test 3

Purpose:

Test logging in with a correct, registered username and password pair.

Setup:

Launch the application or navigate to login page

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
username	cmbog	true	Login user and navigate to Inventory Overview page.
password	pass	true	Login user and navigate to Inventory Overview page.

Testing Requirements Covered:

Testing Requirement 2.2.2

3.2.3 Test 4**Purpose:**

Test logging in with a username that is not registered.

Setup:

Launch the application or navigate to login page

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
username	michaeljackson	false	Alert: Wrong Credentials
password	pass	-	-

Testing Requirements Covered:

Testing Requirement 2.2.3

3.2.4 Test 5**Purpose:**

Test logging in with an invalid password.

Setup:

Launch the application or navigate to login page

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
username	cmbog	true	-
password	wrongpass	false	Alert: Wrong Credentials

Testing Requirements Covered:

Testing Requirement 2.2.4

3.3 Inventory Overview Page

3.3.1 Test 6

Purpose:

Test adding an item to the inventory without specifying a name.

Setup:

Navigate to inventory overview page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
name	-	false	Must specify item name
type	iPhone	-	-
price	\$600.00	-	-
supplier	Apple	-	-
description	Smart Phone	-	-

Testing Requirements Covered:

Testing Requirement 2.3.1

3.3.2 Test 7

Purpose:

Test adding an item to the inventory without specifying a type.

Setup:

Navigate to the inventory overview page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
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name	iPhone 5s	true	-
type	-	false	Must specify item type
price	\$600.00	-	-
supplier	Apple	-	-
description	Smart Phone	-	-

Testing Requirements Covered:

Testing Requirement 2.3.2

3.3.3 Test 8

Purpose:

Test adding an item to the inventory without specifying a price..

Setup:

Navigate to the inventory overview page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
name	iPhone 5s	true	-
type	iPhone	true	-
price	-	false	Must specify item price.
supplier	Apple	-	-
description	Smart Phone	-	-

Testing Requirements Covered:

Testing Requirement 2.3.4

3.3.4 Test 9

Purpose:

Test adding an item to the inventory without specifying a supplier.

Setup:

Navigate to the inventory overview page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
name	iPhone 5s	true	-
type	iPhone	true	-
price	\$600.00	true	-
supplier	-	false	Must specify supplier.
description	Smart Phone	-	-

Testing Requirements Covered:

Testing Requirement 2.3.5

3.3.5 Test 10**Purpose:**

Test adding an item to the inventory without specifying a description.

Setup:

Navigate to the inventory overview page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
name	iPhone 5s	true	-
type	iPhone	true	-
price	\$600.00	true	-
supplier	Apple	true	-
description	-	false	Must specify item description.

Testing Requirements Covered:

Testing Requirement 2.3.3

3.2.6 Test 11**Purpose:**

Test adding an item to the inventory with a duplicate name.

Setup:

Navigate to the inventory overview page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
name	Iphone S 6	false	Item name already exists
type	iPhone	-	-
price	\$600.00	-	-
supplier	Apple	-	-
description	Smart Phone	-	-

Testing Requirements Covered:

Testing Requirement 2.3.6

3.2.7 Test 12**Purpose:**

Test adding an item to the inventory with all fields properly specified.

Setup:

Navigate to the inventory overview page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
name	iPhone 5s	true	Item successfully

			added to inventory.
type	iPhone	true	Item successfully added to inventory.
price	\$600.00	true	Item successfully added to inventory.
supplier	Apple	true	Item successfully added to inventory.
description	Smart Phone	true	Item successfully added to inventory.

Testing Requirements Covered:

Testing Requirement 2.3.8

3.2.9 Test 13

Purpose:

Test selecting an item to view further details.

Setup:

Navigate to inventory overview page.

Inputs and Expected Outputs

Input	Expected Output
5 (Dell Inspiron Laptop)	Details regarding the Dell Inspiron Laptop

Testing Requirements Covered:

Testing Requirement 2.3.9

3.2.10 Test 14

Purpose:

Test selecting an item that does not exist in the inventory.

Setup:

Navigate to inventory overview page.

Inputs and Expected Outputs

Input	Expected Output
55 (there is no item 55)	Item could not be found

Testing Requirements Covered:

Testing Requirement 2.3.10

3.2.11 Test 15

Purpose:

Test sorting inventory overview by name.

Setup:

Navigate to inventory overview page.

Input and Expected Outputs

Input	Expected Output
name	List of items in inventory sorted by name.

Testing Requirements Covered:

Testing Requirement 2.3.11

3.2.12 Test 16

Purpose:

Test sorting inventory overview by type.

Setup:

Navigate to inventory overview page.

Input and Expected Outputs

Input	Expected Output
type	List of items in inventory sorted by type.

Testing Requirements Covered:

Testing Requirement 2.3.12

3.2.12 Test 17

Purpose:

Test sorting inventory overview by quantity.

Setup:

Navigate to inventory overview page.

Input and Expected Outputs

Input	Expected Output
quantity	List of items in inventory sorted by quantity (least to greatest).

Testing Requirements Covered:

Testing Requirement 2.3.13

3.2.13 Test 18

Purpose:

Test sorting inventory overview my price.

Setup:

Navigate to inventory overview page.

Input and Expected Outputs

Input	Expected Output
price	List of items in inventory sorted by price (least to greatest).

Testing Requirements Covered:

Testing Requirement 2.3.14

3.2.14 Test 19

Purpose:

Test sorting inventory overview by supplier.

Setup:

Navigate to inventory overview page.

Input and Expected Outputs

Input	Expected Output
supplier	List of items in inventory sorted by supplier.

Testing Requirements Covered:

Testing Requirement 2.3.15

3.4 Items Details Page

3.4.1 Test 20

Purpose:

Test adding an item to the cart..

Setup:

Navigate to item details view of a particular item.

Input and Expected Outputs

Input	Expected Output
add to cart	item successfully added to cart

Testing Requirements Covered:

Testing Requirement 2.4.1

3.4.2 Test 21

Purpose:

Test adding an item to the cart that is out-of-stock to the cart.

Setup:

Navigate to item details view of a particular item.

Input and Expected Outputs

Input	Expected Output
add to cart (item out of stock)	Insufficient Quantity! Item was not added to the cart.

Testing Requirements Covered:

Testing Requirement 2.4.2

3.4.3 Test 22

Purpose:

Test stocking an item given a quantity by which the stock will be increased.

Setup:

Log-in to *manager* account, navigate to item details view of a particular item.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Output
Quantity being added	7	True	Stock quantity increased by 7

Testing Requirements Covered:

Testing Requirement 2.4.3

3.4.4 Test 23

Purpose:

Test stocking an item given a quantity by which the stock will be increased from the *employee* perspective.

Setup:

Log-in to an *employee* account and navigate to the item details view.

Input Field	Input Value	Information Accepted	Expected Output
Quantity being added	18	False	Authorization warning

Testing Requirement Covered

Testing Requirement 2.4.4

3.4.5 Test 24

Purpose:

Test stocking an item given an invalid quantity by which the stock will be increased.

Setup:

Log-in to *manager* account, navigate to item details view of a particular item.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Output
Quantity being added	-7	False	Quantity must be a positive value, failed to restock item.

Testing Requirements Covered:

Testing Requirement 2.4.5

3.4.6 Test 25

Purpose:

Test updating the price of an item.

Setup:

Log-in to *manager* account, navigate to item details view of a particular item.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Output
Price	399.99	True	Price has been updated
Price	-700	false	Price must be a positive value
Price	string	False	Price must be a positive value

Testing Requirements Covered:

Testing Requirement 2.4.6

3.4.7 Test 26

Purpose:

Test updating the price of an item while logged into an *employee* account.

Setup:

Log-in to an employee account and navigate to the item details view.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Output
price	790.00	False	Update failed, not accessible to employee accounts.
Quantity	10	False	Update failed, not accessible to employee accounts.

Testing Requirements Covered:

Testing Requirement 2.4.7

3.5 View Cart Page

3.5.1 Test 27

Purpose:

Test removing an item with corresponding rank in cart.

Setup:

Add 5 items to cart and navigate to cart view

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Output
delete	5	True	Shows a new cart without item 5

Testing Requirements Covered:

Testing Requirement 2.5.1

3.5.2 Test 28**Purpose:**

Test removing an item from a cart with given rank that does not correspond to an item in the cart.

Setup:

Add 5 items to cart and navigate to cart view

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Output
delete	200	False	No such item in your cart

Testing Requirements Covered:

Testing Requirement 2.5.2

3.5.3 Test 29**Purpose:**

Test checking-out a cart of items.

Setup:

Add items to cart and navigate to cart view.

Inputs and Expected Outputs:

Inputs	Information Accepted	Outputs
checkOut	True	A receipt of all items checked out from cart and total price you spent for them

Testing Requirements Covered:

Testing Requirement 2.5.3

3.5.4 Test 30

Purpose:

Test checking-out an empty cart

Setup:

Navigate to cart view

Inputs and expected Outputs:

Inputs	Information Accepted	Outputs
checkOut	False	Your cart is empty Check out failed

Testing Requirements Covered:

Testing Requirement 2.5.4

3.5.5 Test 31

Purpose:

Test clearing all items in cart

Setup:

Add items into cart and navigate to cart view

Inputs and expected Outputs:

Inputs	Outputs
clear	Shows an empty cart

Testing Requirements Covered:

Testing Requirement 2.5.5

3.6 Accounts Page

3.6.1 Test 32

Purpose:

Test creating a new account while logged into an *employee* account.

Setup:

Log-in to an *employee* account and navigate to the accounts page.

Inputs and Expected Outputs

Inputs	Information Accepted	Outputs
create account	false	You do not have permission to add an account. Only Managers can do so.

Testing Requirements Covered:

Testing Requirement 2.6.1

3.6.2 Test 33

Purpose:

Test creating an account with a valid username and password.

Setup:

Log-in to a *manager* account and navigate to the accounts page.

Inputs and Expected Outputs:

Input Field	Input Value	Information Accepted	Expected Output
username	derrickrose	true	Account successfully created.
password	disappointment	true	Account successfully created.

Testing Requirements Covered:

Testing Requirement 2.6.2

3.6.3 Test 34

Purpose:

Test creating an account with a username that has already been taken.

Setup:

Log-in to an *manager* account and navigate to the accounts page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
username	cmbog	false	Username has already been taken
password	-	-	-

Testing Requirements Covered:

Testing Requirement 2.6.3

3.6.4 Test 35

Purpose:

Test creating an account with no arguments for username and password field.

Setup:

Log-in to an *manager* account and navigate to the accounts page.

Inputs and Expected Outputs

Input Field	Input Value	Information Accepted	Expected Output
username	--	false	Create account failed
password	--	false	Create account failed

Testing Requirements Covered:

Testing Requirement 2.6.4

3.6.5 Test 36

Purpose:

Test viewing one's own account detail.

Setup:

Log-in to an account and Navigate to inventory overview page.

Inputs and Expected Outputs

Inputs	Expected Outputs
account	Account overview of logged-in user

Testing Requirements Covered:

Testing Requirement 2.6.5

3.6.6 Test 37

Purpose:

Test viewing details about another's account from the *employee* perspective.

Setup:

Log-in to *employee* account and navigate to accounts page.

Inputs and Expected Outputs

Input	Expected Outputs
account	Invalid command

Testing Requirements Covered:

Testing Requirement 2.6.6

3.6.7 Test 38

Purpose:

Test viewing details about another's account from the *manager* perspective.

Setup:

Log-in to *manager* account and navigate to accounts page.

Inputs and Expected Outputs

Input Field	Input	Information Accepted	Expected Outputs
account	5	True	view of account details regarding Mayo Yung

Testing Requirements Covered:

Testing Requirement 2.6.7

3.6.8 Test 39

Purpose:

Test updating one's own credentials with a valid password.

Setup:

Log-in to an account and navigate to accounts page.

Inputs and Expected Outputs

Input Field	Input	Information Accepted	Expected Outputs
password	choc0l@te	True	password successfully changed

Testing Requirements Covered:

Testing Requirement 2.6.8

3.6.9 Test 40

Purpose:

Test updating another's account password from the *employee* perspective.

Setup:

Log-in to employee account, navigate to account page, and try to access others' account details

Inputs and Expected Outputs

Inputs	Expected Outputs
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account	Invalid command
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Testing Requirements Covered:

Testing Requirement 2.6.9

3.6.10 Test 41

Purpose:

Test updating another's account password from the *manager* perspective.

Setup:

Log-in to *manager* account and navigate to user 1 in from account page.

Inputs and Expected Outputs

Input Field	Input	Information Accepted	Expected Outputs
password	77788	True	Password successfully changed.

Testing Requirements Covered:

Testing Requirement 2.6.10

3.7 Other

3.7.1 Test 42

Purpose:

Test logging out of one's account.

Setup:

Can log out from any page in the system.

Inputs and Expected Outputs

Input	Expected Output
Logout of account	Login Page is displayed

Test Requirements Covered

Test Requirement 2.7.1

3.7.2 Test 43

Purpose:

Test refreshing the data stored in the system.

Setup:

Can refresh from any page of the system.

Inputs and Expected Outputs

Input	Expected Output
Refresh current page	Current page is refreshed

Testing Requirements Covered:

Testing Requirement 2.7.3

3.7.3 Test 44

Purpose:

Test quitting the application system.

Setup:

Can quit from any page of the system.

Inputs and Expected Outputs

Input	Expected Output
Quit out of system	System is terminated

Testing Requirements Covered:

Testing Requirement 2.7.2