Test ID	Description	Expected Results	Actual Results
Setup **testID: setupTheEnvironment** **Description: Complete this before beginning the rest of the tests.** **If you are unsure how to do this go to the UC2 and UC7 black box tests.**	**Steps:** 1. Add the following ingredients from the "Add Ingredient" page: • Name: "Coffee", Amount: "10" • Name: "Milk", Amount: "10" • Name: "Sugar", Amount: "5" • Name: "Syrup", Amount: "20" • Name: "Cinnamon", Amount: "15" 2. Add the following recipes from the "Add Recipe" page • Name: "Black Coffee", Price: "15", Ingredients: "Coffee, Amount:15; Sugar, Amount: 20" • Name: "Mocha", Price: "20", Ingredients: "Coffee, Amount:5; Milk, Amount:100" • Name: "Kitchen Sink", Price: "1000", Ingredients: "Cinnamon, Amount: 1000; Milk, Amount: 1000; Sugar, Amount: 1000; Syrup, Amount: 1000; Coffee, Amount: 1000" 3. Make sure that the following recipes show up in the Make "Coffee" page	The 3 recipes should be added to the system and can be seen in the Make Coffee page.	The recipes were correctly added and appear in the Make Coffee page.

Test #1 **testID: testEditRecipeRemove** **[UC4][Remove Ingredient]** **Description: Edit a recipe by removing an ingredient.**	**Preconditions:** 1. The user has started the CoffeeMaker Application and completed the setup test **Steps:** 2. Select the "Edit Recipe" page from the home menu 3. Click the dropdown that says "Select a recipe" and pick the "Black Coffee" and click the select recipe button 4. The ingredients in the recipe should be displayed below. Delete Sugar from the recipe and the box should disappear after selecting delete. 5. Select the submit button and make sure a success message appears. 6. The form should be cleared. Select "Black Coffee" from the recipe dropdown again and make sure Coffee is the only ingredient appearing.	Clicking the delete ingredient button for sugar will make the sugar text field disappear and add sugar back to the add ingredient dropdown. After clicking submit and reselecting Black Coffee the only ingredient should be Coffee which did not change value.	The sugar ingredient was successfully deleted from the Black Coffee recipe. The recipe also now only shows Coffee as its only ingredient.

Test #2 **testID: testEditRecipeEditUnits** **[UC4] [Edit Price][Edit Units]** **Description: Edit a recipe by changing the units and price.**	**Preconditions:** • The user has started the CoffeeMaker Application and completed the setup test **Steps:** 1. Select the "Edit Recipe" page from the home menu 2. Click the dropdown that says "Select a recipe" and pick the "Kitchen Sink" and click the select recipe button 3. The ingredients in the recipe should be displayed below 4. Change the amount for every ingredient to "500" and change the price to "500" 5. Select the submit button and make sure a success message appears. 6. Then reselect "Kitchen Sink" to make sure the recipe's changes stayed.	The amounts for each ingredient should be changed to 500 and the price should be changed to 500.	The amounts for every ingredient and the price was altered to 500 after submitting. Reselection confirmed that the price and ingredient amounts did change.

Test #3 **testID: testEditAddIngredient** **[UC4] [Add Ingredient]** **Description: Edit a recipe by adding an ingredient.**	**Preconditions:** • The user has completed the setup test **Steps:** 1. Select the "Edit Recipe" page from the home menu 2. Click the dropdown that says "Select a recipe" and pick the "Mocha" and click the select recipe button 3. The ingredients in the recipe should be displayed below 4. Change the amount for "Milk" to 10 From the dropdown menu with "Select An Ingredient" pick "Sugar" and click add ingredient 5. A sugar text field should appear. Enter "2" in as the amount 6. Then click submit recipe with these 3 ingredients and make sure a success message appears. 7. The form should be cleared. Select "Mocha" from the recipe dropdown again and make sure all the changes appear on reselection	Selecting the Sugar ingredient from the dropdown should add sugar to the recipe and create a text box for the user to enter values. After clicking submit and reselecting Mocha all the changes should appear.	The Sugar ingredient was successfully added to the recipe and the amounts for Milk and Sugar both updated to 10 and 2 respectively.

Test #4 **testID: testEditNoIngredient** **[UC4] [No Ingredients]** **Description: Edit a recipe and make sure a recipe with no ingredients is not submittable.**	**Preconditions:** • The user has completed the setup test and test #1 **Steps:** 1. Select the "Edit Recipe" page from the home menu 2. Click the dropdown that says "Select a recipe" and pick the "Black Coffee" and click the select recipe button 3. The ingredients in the recipe should be displayed below 4. Click the remove ingredient button for the Coffee ingredient 5. There should now be 0 ingredients in the recipe and the submit button should become hidden 6. Click reset and reselect the "Black Coffee" recipe and see if everything has been restored for the recipe	The ingredient should be able to be removed, but the submit button will become hidden. After clicking reset form and reselecting "Black Coffee" the recipe's ingredients have been restored.	The Coffee ingredient was deleted and the form prevented submission since there were no ingredients in the recipe to submit. After reselecting the recipe the Coffee ingredient was still there and the recipe remained unchanged.

Test #5 **testID:** **testUpdateInventoryOne** **[UC5]** **Description: Test that we can add one ingredient and leave the rest of the ingredients alone on empty text fields.**	**Preconditions:** • The user has completed the setup test and tests 1 through 4 [UC4] **Steps:** 1. Go to the "Make Coffee" page with the current ingredient amounts in the inventory 2. Select the "Black Coffee" as the recipe and input 20 as the payment amount. Then click make coffee 3. An error message should display 4. Go to the home page then select the "Update Inventory" page 5. The current amounts of each ingredient should be displayed. Fill in 5 for Coffee to add 6. Click submit and verify the amount of Coffee increased to 20 and a success message is displayed. 7. Go back to "Make Coffee", select the "Black Coffee" recipe, and enter 20 for payment. A success message should appear with a message telling you your change is 5 8. Go back to "Update Inventory" and check the amount of Coffee in the Inventory has decreased	The "Black Coffee" recipe should not be purchasable since there is not enough Coffee in the inventory to make it. After submitting the form to Update the inventory only the amount of Coffee should increase by 5 from 10 to 15. The recipe should now be able to be made and receive change of 5. The inventory amount for Coffee should decrease from 15 to 0.	The recipe was unable to be made and an error message was displayed. The value of Coffee and only Coffee could be increased by the input amount of 5. The recipe was successfully purchased after updating the inventory and the inventory amount decreased to 0.

Test #6 **testID:** **testInventoryUpdateAll** **[UC5]** **Test updating the values for all the inventory ingredients.**	**Preconditions:** • The user has completed the setup test and tests 1 through 5 **Steps:** 1. Go to the "Make Coffee" page with the current ingredient amounts in the inventory 2. Select the "Kitchen Sink" as the recipe and input 500 as the payment amount. Then click make coffee 3. An error message should display 4. Go to the home page then select the "Update Inventory" page 5. The current amounts of each ingredient should be displayed. 6. Fill in the following amounts for each ingredient • Coffee 500 • Milk 490 • Sugar 495 • Syrup 480 • Cinnamon 485 7. Click submit and verify the amount of every ingredient has increased to 500 8. Go back to "Make Coffee", select the "Kitchen Sink" recipe, and enter 500 for payment. A success message should appear with a message telling you your change is 0 9. Go back to "Update Inventory" and check the amount of every ingredient is now 0	The "Kitchen Sink" should not be bought since there is not enough ingredients to make it. The form should update the inventory for all the ingredients. Every amount should be 500 after updating the inventory. The recipe should now be makable and give you 0 change. After going back to the update inventory page all the amounts for every ingredient should be 0.	The "Kitchen sink" recipe was not able to be made. Updating the inventory form changed the amounts for every ingredient to 500. The could now be purchased and the value for every ingredient decreased to 0 after the purchase.