**Design Document for Project 1**

Grant Robertson – 15 October, 2019

**User Story 1:** “As a user, I want to add a new product into the system.”

Use Case 1: Successfully adding a new product.

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| **Actor** | **System** |
| 1. User Selects the Add New Product Button from the main screen.  Main Screen: | 2. Add Product Screen appears for user to enter information about their product.  Add Product Screen: |
| 3. User inputs information and then selects the add product button.  Add Product Screen with Information: | 4. Display confirmation page.  Confirmation Page: |
| 5. User clicks okay button, and then adds another product (return to step 3) or closes the add product window by hitting the cancel button. | 6. User is finished adding products, and returns to Main Screen. |

Use Case 2: User attempts to add a product with a price not recognizable as a double.

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| **Actor** | **System** |
| 1. User Selects the Add New Product Button from the main screen.  Main Screen: | 2. Add Product Screen appears for user to enter information about their product.  Add Product Screen: |
| 3. User inputs information (entering a Product price that cannot be parsed into a double) and then selects the add product button.  Add Product Screen with Information: | 4. Display error page indicating an invalid price.  Error Page: |
| 5. User clicks okay button, is returned to the Add Product window, and then may modify the price and other product information, or press the cancel button and exit the window and return to the main screen. | 6. User exited Add Product Window and returned to Main Screen. |

**User Story 2:** “As a user, I want to add a new customer into the system.”

Use Case 1: User successfully adds customer to the system.

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| **Actor** | **System** |
| 1. User Selects the Add New Customer Button from the main screen.  Main Screen: | 2. Add Customer Screen appears for user to enter information about the new customer.  Add Customer Screen: |
| 3. User inputs Information and then selects the add customer button.  Add Customer Screen with Information: | 4. Display confirmation page.  Confirmation Page: |
| 5. User clicks okay button, and then adds another customer (return to step 3) or closes the add customer window by hitting the cancel button. | 6. User is finished adding customers, and returns to the Main Screen. |

Use Case 2: User attempts to add duplicate customer.

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| **Actor** | **System** |
| 1. User Selects the Add New Customer Button from the main screen.  Main Screen: | 2. Add Customer Screen appears for user to enter information about the new customer.  Add Customer Screen: |
| 3. User inputs information (using a Customer ID already in use) and then selects the add customer button.  Add Customer Screen with Information: | 4. Display error page indicating the given Customer ID is already in use.  Error Page: |
| 5. User clicks okay button, is returned to the Add Customer window, and then may modify the Customer ID and other customer information, or press the cancel button and exit the window and return to the main screen. | 6. User is finished adding customers, and returns to the Main Screen. |

**User Story 3:** “As a user, I want to add a purchase from a customer into the system.”

Use Case 1: User successfully records purchase.

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| **Actor** | **System** |
| 1. User Selects the Add New Purchase Button from the main screen.  Main Screen: | 2. Add Purchase Screen appears with current date and time for user to enter information about their product.  Add Purchase Screen: |
| 3. User creates a unique Purchase ID, inputs the relevant Product and Customer IDs, and inputs the quantity of product purchased.  Add Purchase Screen with Information: | 4. System automatically populates the Customer Name, Product Name, Individual Product Price, Cost, Tax, and Total Cost.  Add Purchase Screen with populated information: |
| 5. User clicks add button. | 6. System displays success page.  Confirmation Page: |
| 7. User clicks okay button. | 8. System generates and displays receipt.  Receipt: |
| 9. User clicks okay button, and then adds another purchase (return to step 3) or closes the add purchase window by hitting the cancel button. | 10. Return User to the Main Screen. |

Use Case 2: User attempts to use an invalid Customer ID to complete purchase.

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| **Actor** | **System** |
| 1. User Selects the Add New Purchase Button from the main screen.  Main Screen: | 2. Add Purchase Screen appears with current date and time for user to enter information about their product.  Add Purchase Screen: |
| 3. User creates a unique Purchase ID, and enters an invalid Customer ID.  Add Purchase Screen with Information: | 4. System automatically generates a warning of an invalid Customer ID.  Customer ID Warning |
| 5. If user attempts to continue without changing the Customer ID, they will finish adding information to the page.  Add Purchase Screen with faulty Customer ID: | 6. System displays a message saying the Customer ID is invalid. The system will not attempt to add the purchase to the database without a valid Customer ID.  Error Page: |
| 7. User is returned to the add purchase screen, and can either edit the information to use a correct Customer ID (user then follows step 3 of Use Case 1), or click the cancel button and return to the main screen.  User returned to Add Purchase screen: | 10. Return User to the Main Screen. |