**Use case analysis**

The following user stories are to be supported in Iteration 2:

1. As a user (cashier or manager), I want to log in the system  
2. As a user, I want to change my login password  
3. As a user, I want to change my display/profile photo  
4. As a cashier, I want to check out an order  
5. As a manager, I want to add a new product into the system's database  
6. As a manager, I want to update a current product in the system's database  
7. As a manager, I want to create a new user, assign role (e.g. manager or cashier), generate a default password for a new user  
8. As a manager, I want to view and sort the business report: e.g., what products are sold, how many units, how much revenue...

Task: Write a detailed use case for each user story. At each step, a prototyped screen should be provided, sketching how the system might look and work.

Use Case 1: Logging in

Description: As a User (Manager or Cashier), I want to log in to the system.

Actors: Manager, Cashier

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| Step 1: When the System is booted / loaded, a login screen is displayed with a Username and Password field, along with a clickable button to log in to the system. The Password field is obfuscated – i.e. is not shown in plaintext. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: When a username and password are entered, the system checks them against valid usernames and passwords stored in the backend. If the credentials match a single entry, they are logged in with the appropriate role.  The Manager’s ‘Main Screen’ view is displayed to the right, Cashier’s view should only contain the ‘Checkout’, ‘Sign Out’, and ‘Manage Accounts’ buttons. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager Screen.png |

Use Case 2: Password Change

Description: As a User (Manager or Cashier), I want to add a new product into the system’s database

Actors: Manager, Cashier

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| Step 1: A User should enter their Username and Password to login to the account on which the password is to be changed. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: Upon successful login, the User clicks ‘Manage Accounts’ | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Add Product.png |
| Step 3: A Manager would press ‘Manage Accounts’ on the following screen, a Cashier would not see this screen. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manage Accounts Screen.png |
| Step 4-1: A Cashier sees a screen with only a field for managing their own account’s password. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Cashier New Password Screen.png |
| Step 4-2: A Manager sees a screen with a list of all accounts, with the ability to manage them. The manager does not see any passwords. Only a field for them to enter a new password for themselves.  A manager may not remove themselves. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager New Password Screen.png |
| Step 5: The User then ‘Confirm’s their changes. A password field left blank is an unchanged password. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager New Password Screen - Confirm.png |
| Step 6: The User is returned to the main screen when all edited accounts have been updated in the system. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Successfully Added Screen.png |

Use Case 3: New Photo

Description: As a User, I want to change my display/profile photo.

Actors: Manager, Cashier

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| Step 1: A User should enter their Username and Password to login to the account on which the photo is to be changed. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: Upon successful login, the User clicks ‘Manage Accounts’ | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Add Product.png |
| Step 3: A Manager would press ‘Manage Accounts’ on the following screen, a Cashier would not see this screen. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manage Accounts Screen.png |
| Step 4-1: A Cashier now presses ‘New Photo’ on this screen. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Cashier New Password Screen - New Photo.png |
| Step 4-2: A Manager would press the same ‘New Photo’ button. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager New Password Screen - New Photo.png |
| Step 5: The following screen depends on the implementation of the system:  If we are working on an embedded system, this function is only available on systems with a camera. And as such the view of the Camera would be loaded, allowing the user to touch the screen to take a photo.  If this program is running as an application, then we simply browse for an image file. A size and filetype limit should be imposed on the file selected. | https://cdn.tenforums.com/geek/gars/images/2/types/thumb_14670028780Explorer.pnghttp://shop.waayoo.com/image/data/sensors/camera/uCamRS232.jpg |
| Step 6: The image is processed and resized to appropriate dimensions to be displayed as a profile photo, stored within a database of profile photos, each entry linked to a User. |  |

Use Case 4: Checkout

Description: As a Cashier, I want to check out a customer’s order.

Actors: Cashier

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| Step 1: A Cashier should enter their Username and Password to login to their account. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: The System then displays the main screen. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Cashier Main Screen.png |
| Step 3: The Cashier will press ‘Checkout’, taking the user to a separate, checkout screen. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Cashier Checkout - Main Screen.png |

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| Step 4: This step is dependent on the type of system being implemented.  On an embedded system, once on the checkout screen, the Cashier scans barcodes on the external scanner, sending info to the embedded system.  If the system is an application, an interface with a USB barcode reader could be implemented.  Alternatively, a manual barcode entry could be added (in either version) and supplement/replace the scanner. This allows the Cashier to, by hand, input an item whose barcode is un-readable or missing (following a product lookup). | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Checkout Empty.png |
| Step 5: For each item in the order, Step 4 is repeated. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Checkout Single Item.png |
| Step 6: Once the Cashier has scanned / input every item in the order, the Cashier should press ‘Done’.  The order is added to the Order Database for storage and further processing (namely financial.) | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Checkout Done Select.png |
| Step 7: Once processing is complete and a financial transaction has occurred (if needed) the Cashier is returned to the main screen.  If the system is embedded, a receipt would be printed. | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Receipt.png |

Use Case 5: Add new product to system database

Description: As a manager, I want to add a new product into the system’s database

Actors: Manager

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| Step 1: Login in as Manager | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: Display the Manager Main Screen | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager Screen.png |
| Step 3: User presses ‘Add Product’ | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Add Product.png |
| Step 4: A new display appears with text fields for all configurable fields of an item – ID is automatically filled in to avoid conflicts, Price and Name are the only mandatory fields | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\New Product.png |
| Step 5: User enters all relevant information on the new product | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\New Product Filled In.png |
| Step 6: User presses ‘Done’ | C:\Users\Chris\AppData\Local\Microsoft\Windows\INetCache\Content.Word\New Product Done Select.png |
| Step 7: The new item is added to the system, returning the user to the main screen with a success message | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Successfully Added Screen.png |

Use Case 6: Update current product in system database

Description: As a manager, I want to update a current product in the system’s database

Actors: Manager

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| Step 1: Sign in as a manager | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: Display the Manager Main Screen | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager Screen.png |
| Step 3: User presses ‘Update Existing Product’ | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Update Product.png |
| Step 4: A new display appears with a search bar asking the name or barcode number of product that is being updated. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Step 3.png |
| Step 5: User updates information that needs to be changed for product | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Step 4.png |
| Step 6: User presses ‘Done’ to save information | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Step 5.png |
| Step 7: The product is updated within the system. The user is then sent to main menu with a message saying product update was successful. | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Successfully Updated Screen.png |

Use Case 7: Create new user with default password

Description: As a manager, I want to create a new user, assign role (e.g. manager or cashier), generate a default password for a new user

Actors: Manager

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| Step 1: Sign in as a manager | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: Display the Manager Main Screen | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager Screen.png |
| Step 3: User presses “Manage Accounts” | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manage Accounts.png |

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| Step 4: A new display appears with two options: Change account settings, Create new Account.  Select Create new account | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Create Account.png |
| Step 5: Choose which account to create, Cashier or Manager | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Cashier-Manager Selection.png |
| Step 6: Input default username and password | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Default Info.png |
| Step 7: The new user is added to the system, returning the user to the main screen with a success message | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Account Success Screen.png |

Use Case 8: View and Sort Business Report

Description: As a manager, I want to view and sort the business report: e.g., what products are sold, how many units, how much revenue…

Actors: Manager

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| Step 1: Sign in as a manager | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Sign In Page.png |
| Step 2: Display the Manager Main Screen | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Manager Screen.png |
| Step 3: User presses “Business Report” | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Business Report.png |
| Step 4: Business Report Display appears with scroll down bars to select what to view and how to sort report by | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Business Report Screen.png |
| Step 5: Click Done button to return to main screen | C:\Users\hp\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Business Report Screen - Done.png |