<u>Manual/Customer End-To-End Test Instructions</u>

Rules that apply throughout the testing process:

- Heatlhcard# is 10 digits.
- Date of birth is in YYYYMMDD format.
- Phone number is 10 digits.

Important Note: The expected output is based on the default/initial state of data in our database (from our SQL script).

Guest:

SORT OVER-THE-COUNTER MEDICATION (**same feature for admins but for ALL medications**)

· Sort by Name (alphabetical):

1. On the main screen, click on the "Name" header at the top of the inventory display textbox (beside "ID" and below the search bar).

2. **Expected output**: Order of medications listed changed to IDs: 1, 3, 2, 4

3. Click the 'Refresh' button to reset the page.

· Sort by Quantity (lowest to highest):

1. On the main screen, click on the "Qty" header at the top of the inventory display textbox (beside "Name" and below the search bar).

2. **Expected output**: Order of medications listed changed to IDs: 2, 1, 3, 4

3. Click the 'Refresh' button to reset the page.

· Sort by Price (lowest to highest):

1. On the main screen, click on the "Price" header at the top of the inventory display textbox (beside "Qty" and below the search bar).

2. **Expected output**: Order of medications listed changed to IDs: 1, 3, 4, 2

3. Click the 'Refresh' button to reset the page.

SEARCH OVER-THE-COUNTER MEDICATION (**same feature for admins but for ALL medications**)

· Search by Name:

1. On the main screen, click on the drop-down menu, select 'Name'.

2. Type 'Advil' on the search bar, click the 'Search' button.

3. **Expected output**: 2 medications named 'Advil'

4. Click the 'Refresh' button to reset the page.

· Search by Type:

1. On the main screen, click on the drop-down menu, select 'Type'.

2. Type 'Cold' on the search bar, click the 'Search' button.

3. **Expected output**: 3 search results for type 'Cold'.

4. Click the 'Refresh' button to reset the page.

Testing Edge Cases

Search medication:
- Invalid input for type
  - Select drop down menu and select 'type'
  - click the search bar and type "Buckleys"
  - Should return "Merchandise Type is invalid. Please enter a valid Merchandise Type: Cough, Cold, Fever, Sinus" and display nothing in the textbox
  - Click 'OK'

Search medication:
- Type spelt wrong/invalid type
  - On the Patient page, select drop down menu and select 'type'
  - Click search bar and type "colddd"
  - Should return "Merchandise Type is invalid. Please enter a valid Merchandise Type: Cough, Cold, Fever, Sinus"
  - Click 'OK'

Owner/Admin:

ACCESS OWNER PROFILE:

· On the main screen, click on 'Login' Button.

· Log in using the following credentials:

  o Username: 1111

  o Password: 1111

· Expected output: Main screen should change to Owner screen

PATIENT MANAGEMENT SCREEN

Create New Patient Profile:

· On the Owner Screen, click on "Manage Patients".

· On the 'Patient Management" screen, input all the required fields with your desired values. Here are some suggested inputs:

- o Healthcard# [must be 10 digits]: 1234567890

- o Date Of Birth [should follow YYYYMMDD format]: 20000403

- o First name: Jaden

- o Last name: Smith

- o Phone# [must be 10 digits]: 5467982314

- o Address: 12 Main St.

· Click "Add" Button.

· Expected output: "Patient is added successfully" text should appear and the table of patients should now have the new patient in it.

Modify Existing Patient Details:

· On the Owner Screen, click on "Manage Patients".

· On the 'Patient Management" screen, input the required fields 'Healthcard#' and 'Date of Birth'. Suggested inputs:

- o Healthcard# [must be 10 digits]: 1111122222

- o Date Of Birth [should follow YYYYMMDD format]: 11111222

· Populate the fields you want to change. This can be just one field or multiple. For instance:

- o To change first name:

  - § Only fill out the 'First name' field: Jada

- o To change first name and phone#:

  - § Fill out the fields 'First name' and 'Phone#':

    - · First name: Jada

    - · Phone#: 1234567890

· Click "Modify" Button.

· Expected output: "Patient is modified successfully. See below" text should appear and the patient detail should be modified in the table of patients.

Search Patients:

Patients can be searched by their first name, last name or full name.

· On the Owner Screen, click on "Manage Patients".

· To search by **first name**:

   o On the 'Patient Management" screen, click on the drop-down menu, select 'FirstName'

   o Enter "Smith" in the search field.

   o Click on the "Search" button.

   o Expected output: "See search results below" text should appear and the table should output only the details about 'Smith John'.

· To search by **last name**:

   o On the 'Patient Management" screen, click on the drop-down menu, select 'LastName'

   o Enter "John" in the search field.

   o Click on the "Search" button.

   o Expected output: "See search results below" text should appear and the table should output only the details about 'Smith John'.

· To search by **full name**:

   o On the 'Patient Management" screen, click on the drop-down menu, select 'FullName

   o Enter "Smith John" in the search field.

   o Click on the "Search" button.

   o Expected output: "See search results below" text should appear and the table should output only the details about 'Smith John'.

· Click on the 'Refresh' button after every search to reset the search results.

· Click on the 'Close' button once done testing the *Patient Management* screen.

Testing Edge Cases

- Empty fields
  - On Owner page press 'Manage Patients'
  - Leave any number of fields empty and press 'Add'
  - Should return, "HealthCardNumber, First name, Last name, Phone Number, and Address are required"
  - Press 'OK'
- Healthcard > 10 digits
  - On Owner page press 'Manage Patients'
  - Enter fields healthcard#: 12345678910, Date of birth: 20230404, First name: A, Last name: T, Phone#: 9059059905, Address: 12 street
  - Press 'Add'
  - Should return "Health Card Number must be a 10 digit number"
  - Click 'OK'
- health card < 10 digits
  - On Owner page press 'Manage Patients'
  - Enter fields healthcard#: 1, Date of birth: 20230404, First name: A, Last name: T, Phone#: 9059059905, Address: 12 street
  - Press 'Add'
  - Should return "Health Card Number must be a 10 digit number"
  - Click 'OK'
- Phone number < 10 digits
  - On Owner page press 'Manage Patients'
  - Enter fields healthcard#: 1234567891, Date of birth: 20230404, First name: A, Last name: T, Phone#: 905905990, Address: 12 street
  - Press 'Add'
  - Should return "Phone Number must be a 10 digit number"
  - Click 'OK'
- Phone number > 10 digits
  - On Owner page press 'Manage Patients'
  - Enter fields healthcard#: 1234567891, Date of birth: 20230404, First name: A, Last name: T, Phone#: 90590599, Address: 12 street
  - Press 'Add'
  - Should return "Phone Number must be a 10 digit number"
  - Click 'OK'
- Search Full Name: Only one name entered
  - On Owner page press 'Manage Patients'
  - Click on the drop-down menu beside the Search field, select 'FullName'
  - Enter 'Smith' in the search field and press "Search"
  - Should return "Please enter both a first and last name to search by Full Name"

MODIFY MEDICATION DETAILS

·   On the Owner Screen, click on "Modify Item".

·   Enter MerchandiseID. The options are:

  o 1, 2, 3, 4, 5 or 6

·   <u>To modify Name:</u>

  o Enter a new name in the name field **such that another medication with the same name, same type, same form AND same isOTC value does NOT already exist in the inventory (see edge case below)**, and click on the "Change name" button.

  o Expected output: "Name changed successfully".

  o Click on the "Exit" button.

  o Expected output: Name of the MerchandiseID entered should be updated in the table.

·   <u>To modify Description:</u>

  o Enter a new description in the large text box. and click on the "Change Description" button.

  o Expected output: "Description changed successfully".

  o Click on the "Exit" button.

  o Expected output: Description of the MerchandiseID entered should be updated in the table.

·   <u>To modify Price:</u>

  o Enter a new price in the price field and click on the "Change Price" button.

  o Expected output: "Price changed successfully".

  o Click on the "Exit" button.

  o Expected output: Price of the MerchandiseID entered should be updated in the table.

·   To modify more than one field, enter all the details to modify and click each button accordingly, then click "Exit".

Testing Edge Cases:

- No merchandise ID input, change name
  - On Owner page press 'Modify Item'
  - Leave all fields empty except change name field to yes
  - Click 'Change name'

- ○ Should return "MedicationID is required. Please enter one".
- ○ Click 'OK'
- ● No merchandise ID input, change description
    - ○ On pharmacist page press 'Modify Item'
    - ○ Leave all fields empty except change name field to yes
    - ○ Click 'Change name'
    - ○ Should return "MedicationID is required. Please enter one".
    - ○ Click 'OK'
- ● Invalid input if merchandise id doesn't exist in list
    - ○ On Owner page press 'Modify Item'
    - ○ Set Merchandise ID as 8, change name field "test"
    - ○ Click "Change name"
    - ○ Expected output: Invalid input prompt - "Modification unsuccessful. No such medication currently exists in the inventory. See current inventory."

    - ○ Set Merchandise ID as 8, set "Change Description" field as "test".
    - ○ Click "change description".
    - ○ Expected output: Invalid input prompt - "Modification unsuccessful. No such medication currently exists in the inventory. See current inventory."

    - ○ Set Merchandise ID as 8, set "Change Price" field as "0".
    - ○ Click "change Price".
    - ○ Expected output: Invalid input prompt - "Modification unsuccessful. No such medication currently exists in the inventory. See current inventory."

ADD ORDER/REFILL AND ADD PRESCRIPTION FORMS

Add OTC order:

· On the Owner Screen, click on the "Add Order/Refill" button.

· Enter the patient's health card number in the 'Health Card#' field – 1111122222

· Enter the merchandise ID in the 'Merchandise ID' field.

   o Available merchandise IDs that are OTC: 1, 2, 3, 4

· Enter the desired quantity in the 'Qty Bought' field. Note that this number should be lower than the quantity available. Please refer to the 'Qty' column in the inventory table on the main Owner screen.

· Click on the 'Add OTC order' button.

· Expected output: On the 'Add Order' screen, 'OTC order successfully added!' text should appear. Upon clicking on 'Cancel' button, followed by clicking on the 'Refresh' button in the main owner screen, the quantity of the medication should decrease by the number entered.

<u>Add Prescription Form:</u>

·   On the Owner Screen, click on "Add Rx Form".

·   Enter the patient's health card number in the 'Health Card#' field – 1111122222

·   Enter the merchandise ID in the 'Merchandise ID' field.

   o   Available merchandise IDs that are prescription-based: 5,6, 7

·   Enter the number of refills in the 'Prescribed Refills' field. Note that this number does not depend on the quantity in stock for the medication. Please refer to the 'Qty' column in the inventory table on the main Owner screen.

·   Click on the 'Add Prescription form' button.

·   Expected output: On the 'Add Prescription' screen, 'Prescription form successfully added!' text should appear.

<u>Give refill for a prescription:</u>

·   On the Owner Screen, click on "Add Order/Refill".

·   Enter the patient's health card number in the 'Health Card#' field – 1111122222

·   Enter the merchandise ID in the 'Merchandise ID' field. Ensure the patient has the merchandise ID in their prescription form by referring to 'See Orders'.

   o   Available merchandise IDs that are Prescription-based for the health card number '1111122222': 6

·   Enter the desired quantity in the 'Qty Bought' field. Note that this number should be lower than the quantity available. Please refer to the 'Qty' column in the inventory table on the main Owner screen.

·   Click on the 'Give refill for a prescription' button.

·   Expected output: On the 'Add Order' screen, 'Refill (Rx order) successfully added!' text should appear. Upon clicking on the 'Cancel' button, followed by clicking on 'Refresh' button in the main owner screen, the quantity of the medication should decrease by the number entered.

Testing Edge Cases

● No input for 'Add OTC Order'
   ○ Click "Add Order/Refill".
   ○ On 'Add Order' screen, leave HealthCard# empty, set Merchandise ID as 2, quantity bought as 2
   ○ Click "Add OTC order"

- - Expected output: Invalid input prompt should appear with text "Patient Health Card Number and Medication ID are both required. Please fill them in."

  - Repeat with leaving 'Merchandise ID' field empty, 'Healthcard#' as '1111122222' and quantity as 2.
  - Expected output: Invalid input prompt should appear with text "Patient Health Card Number and Medication ID are both required. Please fill them in."

  - Repeat with leaving 'qty bought' empty, 'Healthcard#' as '1111122222' and Merchandise ID as 2.
  - Expected output: Invalid input prompt should appear with text "Qty Bought is required. Please fill it in."
- No input for 'Give refill for a prescription'
  - Click "Add Order/Refill".
  - On 'Add Order' screen, leave HealthCard# empty, set Merchandise ID as 2, quantity bought as 2.
  - Click "Give refill for a prescription'.
  - Expected output: Invalid input prompt should appear with text "Patient Health Card Number and Medication ID are both required. Please fill them in."

  - Repeat with leaving 'Merchandise ID' field empty, 'Healthcard#' as '1111122222' and quantity as 2.
  - Expected output: Invalid input prompt should appear with text "Patient Health Card Number and Medication ID are both required. Please fill them in."

  - Repeat with leaving 'qty bought' empty, 'Healthcard#' as '1111122222' and Merchandise ID as 2.
  - Expected output: Invalid input prompt should appear with text "Qty Bought is required. Please fill it in."
- Wrong health card number: 'patient doesn't exist'
  - Click "Add Order/Refill".
  - On 'Add Order' screen, set HealthCard# as '111', set Merchandise ID as 2, quantity bought as 2.
  - Click "Add OTC order'.
  - Expected output: Warning prompt should say "Patient doesn't exist!".

  - Repeat step 1 and click "Add refill for a prescription".
  - Expected output: Warning prompt should say "Patient doesn't exist!".

- Quantity bought > quantity available
  - Click "Add Order/Refill".
  - On Add Order Screen, set 'Healthcard#' as '1111122222' and Merchandise ID as 2 and Qty Bought as '6'.
  - Click "Add OTC Order'.
  - Expected Output: Warning prompt with text "Check quantity in stock for medication! Not enough!"
  - Click "Ok".

- ○ Set Merchandise ID as 7 and QTy Bought as 10001.
- ○ Click "Give refill for medication".
- ○ Expected output: "Not enough refills! Only have 100 refills left".

- ○ Using steps provided above, add 'Rx form' for healthcard# 1111122222, Merchandise ID 6 and refill 12.
- ○ On 'Add Order' Screen, set 'Healthcard#' as '1111122222' and Merchandise ID as 6 and Qty Bought as '11'.
- ○ Click "Add refill for a prescription'.
- ○ Expected Output: Warning prompt with text "Check quantity in stock for medication! Not enough!"

- Input merchandise id for Rx and click otc order
    - ○ Click "Add Order/Refill".
    - ○ On Add Order Screen, set 'Healthcard#' as '1111122222' and Merchandise ID as 2 and Qty Bought as '3'.
    - ○ Click "Give refill for medication".
    - ○ Expected output: "Not an Rx!" Use the Add OTC Order" button".

- Input merchandise id for otc and click refill button
    - ○ Click "Add Order/Refill".
    - ○ On Add Order Screen, set 'Healthcard#' as '1111122222' and Merchandise ID as 6 and Qty Bought as '2'.
    - ○ Click "Add OTC Order'.
    - ○ Expected output: "Not an OTC! Use the "give refill for a prescription" button".

Add prescription form:
- No input
    - ○ Click 'Add Rx Form" .
    - ○ On 'Add Prescription' screen, leave HealthCard# empty, set Merchandise ID as 7, 'Prescribed Refills' as 2.
    - ○ Click "Add Prescription form'.
    - ○ Expected output: Invalid input prompt should appear with text "Patient Health Card Number and Medication ID are both required. Please fill them in."

    - ○ Repeat with leaving 'Merchandise ID' field empty, 'Healthcard#' as '1111122222' and 'Prescribed Refills' as 2.
    - ○ Expected output: Invalid input prompt should appear with text "Patient Health Card Number and Medication ID are both required. Please fill them in."

    - ○ Repeat with leaving 'qty bought' empty, 'Healthcard#' as '1111122222' and Merchandise ID as 7.
    - ○ Expected output: Invalid input prompt should appear with text "Prescribed Refills is required. Please fill it in."

- Wrong health card number: 'patient doesn't exist'
    - ○ Click 'Add Rx Form" .

- On 'Add Prescription' screen, set HealthCard# as '111', set Merchandise ID as 7, quantity bought as 2.
- Click "Add Prescription form".
- Expected output: Warning prompt should say "Patient doesn't exist!".

- Not a Prescription medication:
  - Click 'Add Rx Form".
  - On 'Add Prescription' screen, set HealthCard# as '111112222', set Merchandise ID as 2, quantity bought as 2.
  - Expected Output: Warning shows "Not an Rx! You can only add prescription forms for Rx Medications."

· On the Owner Screen, click on "See Orders".

· On the Orders Screen, enter the patient's health card number in the 'HealthCard#' field – 1111122222

· Click on the 'See All Orders' button.

· Expected output: The large display box should be populated with all the order history from a patient, including OTC and prescription refills. The 'Total Spent' field at the bottom should also be populated.

· Click on the 'Close' button to return to the main owner screen.

See Prescription Forms

· On the Owner Screen, click on "See Orders".

· On the Orders Screen, enter the patient's health card number in the 'HealthCard#' field – 1111122222

· Click on the 'See Prescription' button.

· Expected output: The large display box should be populated with all the prescription forms of the patient, with corresponding number of refills left.

· Click on the 'Close' button to return to the main owner screen.

Testing Edge Cases

- No input:
  - Click "See Orders"
  - On 'Orders Screen", leave "HealthCard#" empty.
  - Click "See All Orders"
  - Expected output: Invalid input prompt - "Please enter a health card number!"

- ○ Click 'OK"
- ○ Click "See Prescription"
- ○ Expected output: Invalid input prompt - "Please enter a health card number!"

- ● Invalid health card id
  - ○ Click "See Orders"
  - ○ On 'Orders Screen", set "HealthCard#" as 111.
  - ○ Click "See All Orders"
  - ○ Expected output: Invalid input prompt - "Please enter a10-digit health card number"
  - ○ Click 'OK"
  - ○ Click "See Prescription"
  - ○ Expected output: Invalid input prompt - "Please enter a10-digit health card number"

<mark>SEE REPORT</mark>

· On the Owner Screen, click on "See Report".

· Expected output, 'Report' screen should appear with the list of orders in the left display field and the list of sales history in the "Sales History" display field. Revenue field and Profit field should also be populated.

· Click on the 'Exit' button to return to the main owner screen.

<mark>BASIC INVENTORY CAPABILITIES</mark>

· At the bottom of the Owner Screen, fill out the required fields as follows:

· To add new medication:

- o Ensure the name, type and form aren't already in the table. For example:

  - ● Name: Robitussin
  - ● Type: Cold
  - ● Form: Liquid
  - ● Qty: 7
  - ● Select 'OTC'
  - ● Price: 5

- o Click on the 'Add' button.

- o Expected output: 'Add successful. See updated inventory' text should appear and the new medication should be displayed in the inventory table.

· To increase quantity:

  o Enter the required fields:

    ● ID: 1
    ● Qty: 5

  o Click on 'Increase' button.

  o Expected output: 'Increase successful. See updated inventory' text should appear and the qty of the medication should be updated to in the inventory table.

· To decrease quantity:

  o Enter the required fields:

    ● ID: 1
    ● Qty [ensure number is lower than qty available, checkers in place]: 5

  o Click on 'Decrease button.

  o Expected output: 'Decrease successful. See updated inventory' text should appear and the qty of the medication should be updated to in the inventory table.

· To delete a medication:

  o Enter the required fields:

    ● ID: 1

  o Click on the 'Delete' button.

  o Expected output: 'Remove successful. See updated inventory' text should appear and the medication should disappear from the inventory table.

Testing Edge Cases

- No input and click 'add' -> invalid input
  - On Owner screen click add without filling any textboxes
  - Expected output: "name Qty, price, type, and form are required"
  - Click the 'Refresh' button to reset the page

- Add existing medication - identical details - should not be possible
  - Fill in fields by entering required information
  - Name: Advil, Type: cold, Form: liquid, OTC, Qty: 10, Price 5
  - Should return "Add unsuccessful. The medication (same name, type, form and OTC/Rx) already exists in inventory. See…"
  - Click the 'Refresh' button to reset the page

- No ID/qty and click increase
  - On Owner screen, leave Qty and ID as empty fields
  - Press increase
  - Should return "ID and Qty are required. Please enter both fields"
  - Press ok and refresh page
- No ID/qty and click decrease
  - On Owner screen, leave Qty and ID as empty fields
  - Press decrease
  - Should return "ID and Qty are required. Please enter both fields"
  - Press ok and refresh page
- No id and click delete
  - On Owner page leave ID empty
  - Click 'delete'
  - Should return, "ID is required. Please enter a medication ID"
  - Press 'OK' and "refresh"

Click on 'Logout' to return to the main screen.

Patient:

ACCESS A PATIENT'S PROFILE:

· On the main screen, click on 'Login' Button.

· Log in using the following credentials:

  o Username: 1111122222

  o Password: 19990101

· Expected output: Main screen should change to Patient screen

<mark>VIEW OWN PURCHASE HISTORY</mark>

· On the patient screen, click on the 'Purchase History' Button.

· Expected output: Text field at the bottom should populate with the patient's (who is logged in - in this case Smith John) orders and 'Total Spent' field should be populated by a float number.

· Click the 'Refresh' button to reset the page.

<mark>VIEW OWN PRESCRIPTION REFILLS</mark>

· On the patient screen, click on 'See Prescription History' Button.

· Expected output: Text field should be populated with the patient's (who is logged in - in this case Smith John) prescription forms in the database.

· Click the 'Refresh' button to reset the page.

VIEW PROFILE DETAILS

· On the patient screen, click on 'See profile' Button.

· Expected output: Text field should be populated with the patient's (who is logged in - in this case Smith John) profile details in the database.

· Click the 'Refresh' button to reset the page.

Logout:

· Click on 'Logout' Button to return to the main screen.

Pharmacist:

ACCESS PHARMACIST PROFILE

· On the main screen, click on 'Login' Button.

· Log in using the following credentials:

  o Username: 1234

  o Password: 1234

· Expected output: Main screen should change to Pharmacist screen

All features for the pharmacist have been tested in the Owner screen. There are only TWO difference between the Owner screen and the Pharmacist screen. First, the Pharmacist screen does not have the "See Report" button. Second, pharmacists do NOT have the "Total Spent" field displayed in the "See Orders" screen. This is because we believed that pharmacists should not have access to details related to the money earned by the pharmacy, since that should be unique to the Owner of the pharmacy.

OTHER GENERAL Edge Cases (that are repetitive)
● Negative number entered for quantity or price or phone number (and in some cases health card number)
  ○ Expected Output: "_____ must be a non-negative number".
● A non-integer number (number with a decimal point) entered for quantity, merchandise ID, health card number or phone number
  ○ Expected Output: "_____ must be an integer"