PROJECT SPECIFICATION VERSION 1
24/03/2025

Ibhayi Pharmacy is a pharmacy in the Nelson Mandela Bay metro. The pharmacy only dispenses prescriptions, they do not sell over-the counter medications. For the ONP400 2025 SD project you will be developing a web-based prescription management system for the pharmacy. The system will allow staff to load prescriptions, dispense medication, and keep track of stock levels. Customers can load their prescriptions and order medication to collect at the pharmacy. Consider the notes below to determine the functionality for the system.

The system will have three types of users:

- Pharmacy Manager
- Pharmacist
- Customer

You will work in groups of 3 and each group member will be responsible for one of the above user sub-systems.

Consider this breakdown of the system functionality when developing the system:

1) All users are required to log into the system using their username and password. If they forgot their password they should be able to re-set it or have it e-mailed to them. Passwords should be encrypted in the database.

2) The Pharmacy Manager user is responsible for the following functionality:
   a. Manage pharmacy details. The following details should be stored for the pharmacy:
      - Name
      - Health Council Registration Number
      - Physical address
      - Contact number
      - E-mail address

- Website URL
- Responsible pharmacist (selected from one of the pharmacists on record).

b. MANAGE active ingredient records.

c. MANAGE dosage form records.

d. MANAGE medication supplier records. The supplier name, as well as the name of the contact person and their e-mail should be stored.

e. MANAGE medication records. Medication is sold per unit (for example per tablet). Each medication should have the following details stored:
    - Name (should be unique to avoid confusion)
    - Schedule (0 to 6)
    - Dosage form
    - Active ingredients and strength of each ingredient
    - Current sales price
    - Supplier
    - Re-order level
    - Quantity on hand

f. MANAGE doctor records (this is the doctor that prescribed a prescription). For each doctor the following should be stored:
    - Name
    - Surname
    - Practice number
    - Contact number
    - E-mail

g. MANAGE pharmacist users. For each pharmacist the following details must be stored:
    - Name
    - Surname
    - ID Number
    - Cellphone Number
    - Health Council Registration Number
    - E-mail address

        o Password (Auto generated and e-mailed to pharmacist when user is created. First time pharmacist logs in they need to change their password.)

h. Manage medication stock. For each medication the pharmacy manager should be able to see the stock level. The quantity of stock on hand should also be managed by the pharmacy manager. They should be able to set it at a specific quantity (for example after a stock take) or increment it by a specific quantity (for example when receiving stock).

i. Order medication stock. The pharmacy manager should be able to order stock when necessary. They should be able to easily identify stock that is at or close to the re-order level (within 10 units). When placing an order all medication from a specific supplier should be grouped together and an e-mail sent to that supplier listing the stock and the quantity ordered. An order number should be assigned to the order. The pharmacy manager should be able to view orders and indicate when an order has been received.

j. Generate a PDF report indicating selected medication with their stock level and quantity on hand that can be printed and used during a stock take. The report can be grouped by dosage form, schedule, or supplier.

3) The Customer can do the following on the system:

a. Register as a new user. When registering as a new user the customer should provide the following information:

- Name
- Surname
- ID Number
- Cellphone Number
- E-mail address (used as username)
- Allergies to any active ingredients

b. Load a prescription and request that it be dispensed for them to collect once it is ready. Prescriptions should be uploaded as PDF files. Customer should be notified via e-mail once the prescription is ready to be collected. Customers pay when they collect the medication. Payment

processing is not handled by the system, but amount due should be calculated. They should also be able to request repeats of the prescription to be packed for them when needed.

   c. Manage repeats. The patient should be able to see how many repeats of a specific medication on a prescription they have left.

   d. Generate a PDF report for a specific date range detailing all their dispensed prescriptions and orders. The report can be grouped by patient, doctor, or medication.

4) The Pharmacist can do the following on the system:

   a. Load a prescription. For each prescription the following should be captured:

- A PDF containing the prescription (this could have been e-mailed from the doctor or customer or scanned in when the customer brings the prescription into the pharmacy).
- Prescription date
- Doctor (Doctor that wrote the prescription – if the doctor does not exist on the system the pharmacist can add the doctor)
- Patient ID number
- For each medication prescribed the following should be captured:
  - Name (selected from available medication)
  - Qty
  - Instructions
  - Number of repeats
- When loading a prescription an alert should be signalled if the patient is allergic to any of the ingredients in the medication.

   b. Dispense a prescription. Prescriptions can be dispensed when a customer walks in and asks for it to be dispensed or when the customer places an order requesting that the prescription be dispensed. When dispensing medication an alert should be signalled if the patient is allergic to any of the ingredients in the medication. For repeat prescriptions the pharmacist should only be allowed to dispense the medication if the customer still have repeats left.

Prescriptions should be packed and customer notified via e-mail that the order is ready for collection.

c. Generate a PDF report for a specific date range of all medication dispensed by that pharmacist for that date range. The report can be grouped by patient, medication, or schedule.