**Case Study A: Test Questions Management System**

**1. Academic Admin**

1. **User Story: Admin Login**
   * **As an** Academic Admin
   * **I want** to log in to the system using my username and password
   * **So that** I can access the admin functionalities
   * **Acceptance Criteria:**
     + Admin can log in with a valid username and password.
     + Only three login attempts are allowed; after three failed attempts, the account is locked.
2. **User Story: Assign New Lecturer and Exam Unit Personnel**
   * **As an** Academic Admin
   * **I want** to assign new lecturers and exam unit personnel with a username and password
   * **So that** they can log in and perform their respective duties
   * **Acceptance Criteria:**
     + Admin can create new user accounts for lecturers and exam unit personnel.
     + Admin assigns a username and password to new users.
     + New users receive their login credentials.
3. **User Story: Add Lecturer Profile**
   * **As an** Academic Admin
   * **I want** to add a new lecturer's profile with their name, address, contact number, etc.
   * **So that** I can keep track of lecturer information
   * **Acceptance Criteria:**
     + Admin can enter and save a lecturer’s profile information.
4. **User Story: Modify/Update/Edit Lecturer Profile**
   * **As an** Academic Admin
   * **I want** to modify or update a lecturer’s profile information
   * **So that** the records remain accurate and up-to-date
   * **Acceptance Criteria:**
     + Admin can edit and save changes to a lecturer’s profile information.
5. **User Story: Add Subjects and Topics**
   * **As an** Academic Admin
   * **I want** to add new subjects and topics
   * **So that** lecturers can create relevant questions
   * **Acceptance Criteria:**
     + Admin can add at least three subjects.
     + Admin can add at least three topics under each subject.
6. **User Story: Delete Existing Lecturer and Exam Unit Personnel**
   * **As an** Academic Admin
   * **I want** to delete existing lecturers and exam unit personnel
   * **So that** their accounts are removed from the system
   * **Acceptance Criteria:**
     + Admin can select and delete user accounts for lecturers and exam unit personnel.

**2. Registered Lecturer**

1. **User Story: Lecturer Login**
   * **As a** Lecturer
   * **I want** to log in to the system using my username and password
   * **So that** I can access the lecturer functionalities
   * **Acceptance Criteria:**
     + Lecturer can log in with a valid username and password.
     + Only three login attempts are allowed; after three failed attempts, the account is locked.
2. **User Story: Change Username and Password**
   * **As a** Lecturer
   * **I want** to change my username and password
   * **So that** I can maintain the security of my account
   * **Acceptance Criteria:**
     + Lecturer can update their username and password.
3. **User Story: Add New Questions and Answers**
   * **As a** Lecturer
   * **I want** to add new questions and answers based on the subject and topic
   * **So that** the questions can be used for tests and exams
   * **Acceptance Criteria:**
     + Lecturer can select a subject and topic.
     + Lecturer can add new questions and corresponding answers.
4. **User Story: Modify/Update/Edit Questions and Answers**
   * **As a** Lecturer
   * **I want** to modify or update existing questions and answers
   * **So that** they remain accurate and relevant
   * **Acceptance Criteria:**
     + Lecturer can edit and save changes to questions and answers.
5. **User Story: View Questions and Answers**
   * **As a** Lecturer
   * **I want** to view questions and answers based on subject and topic
   * **So that** I can review the content
   * **Acceptance Criteria:**
     + Lecturer can select a subject and topic to view all related questions and answers.

**3. Exam Unit Personnel**

1. **User Story: Exam Unit Personnel Login**
   * **As** Exam Unit Personnel
   * **I want** to log in to the system using my username and password
   * **So that** I can access the exam unit functionalities
   * **Acceptance Criteria:**
     + Exam unit personnel can log in with a valid username and password.
     + Only three login attempts are allowed; after three failed attempts, the account is locked.
2. **User Story: Change Username and Password**
   * **As** Exam Unit Personnel
   * **I want** to change my username and password
   * **So that** I can maintain the security of my account
   * **Acceptance Criteria:**
     + Exam unit personnel can update their username and password.
3. **User Story: Create Exam Papers**
   * **As** Exam Unit Personnel
   * **I want** to create two sets of exam papers: Set 1 and Set 2
   * **So that** different exam versions are available
   * **Acceptance Criteria:**
     + Exam unit personnel can create two exam sets (Set 1 and Set 2).
     + Each set has two sections (Section A with at least 5 multiple-choice questions, Section B with 3 subjective questions).
4. **User Story: Add Questions to Exam Papers**
   * **As** Exam Unit Personnel
   * **I want** to add questions into Set 1 and Set 2 exam papers
   * **So that** the exam papers are complete
   * **Acceptance Criteria:**
     + Exam unit personnel can select and add questions to each set and section.
5. **User Story: Modify/Update/Edit Exam Papers**
   * **As** Exam Unit Personnel
   * **I want** to modify or update existing exam papers
   * **So that** they remain accurate and relevant
   * **Acceptance Criteria:**
     + Exam unit personnel can edit and save changes to exam papers.
6. **User Story: View Exam Papers**
   * **As** Exam Unit Personnel
   * **I want** to view Set 1 and Set 2 exam papers
   * **So that** I can review the content
   * **Acceptance Criteria:**
     + Exam unit personnel can view both sets of exam papers and their contents.

These user stories provide a clear and detailed description of what each type of user needs to accomplish within the Test Questions Management System (TQMS). These stories can guide the development process, ensuring that all requirements are met

and the system is user-friendly and functional.

**Case Study B: Clinic Management System**

**User Stories**

**Receptionist**

1. **Receptionist Login**
   * As a receptionist, I want to log in using my username and password, so that I can access the CMS securely.
2. **Register New Patient**
   * As a receptionist, I want to register new patient information (ID/passport number, name, address, date of birth, current age, contact number, nationality, gender), so that new patients can be added to the system.
3. **Register Patient's Family Members**
   * As a receptionist, I want to register patient's family members' information (spouse and dependents), so that their details are available for reference.
4. **Add Patient’s Medication History**
   * As a receptionist, I want to add a patient's medication history (kidney disease, heart problem, high blood pressure, diabetes, and other chronic diseases), so that the doctor can view the patient's medical background.
5. **Edit/Update Patient Information**
   * As a receptionist, I want to edit, modify, or update existing patient information, so that records remain accurate.
6. **View Patient Information**
   * As a receptionist, I want to view specific patient's information, medical history, and family members' information, so that I can provide accurate details to the doctor.
7. **Delete Patient**
   * As a receptionist, I want to delete or terminate patients who have not visited the clinic for more than one year, so that the database remains current.
8. **View Patient Medical Certificate (MC)**
   * As a receptionist, I want to view a patient's medical certificate (MC), so that I can provide it when needed.
9. **Search and Queue Patients**
   * As a receptionist, I want to search for a patient and add them into the waiting queue, so that they are seen in an orderly manner.
10. **Indicate Patient Status in Queue**
    * As a receptionist, I want to clearly indicate the patient's status in the queue (waiting, dispensary, cashier, complete), so that workflow is organized.

**Doctor**

1. **Doctor Login**
   * As a doctor, I want to log in using my username and password, so that I can access patient records securely.
2. **Search Patient by ID/Passport**
   * As a doctor, I want to search for a patient by ID or passport number, so that I can quickly access their records.
3. **View Patient Visit and Medication History**
   * As a doctor, I want to view a patient's visit and medication history, so that I can make informed decisions about their treatment.
4. **View Previous Drug Prescriptions**
   * As a doctor, I want to view previous drug prescriptions, so that I can avoid prescribing conflicting medications.
5. **Add New Medical Results**
   * As a doctor, I want to add new medical results (blood pressure, sickness, drug prescription, temperature, additional information), so that patient records are up-to-date.
6. **Add/View Medical Certification (MC)**
   * As a doctor, I want to add and view new medical certifications (MC), so that patients receive proper documentation.

**Pharmacy / Dispensary**

1. **Pharmacist Login**
   * As a pharmacist, I want to log in using my username and password, so that I can manage drug inventory securely.
2. **Register New Drug Categories**
   * As a pharmacist, I want to register new drug categories (general drug, vaccine, poisonous, psychotropic, others), so that drugs are organized properly.
3. **Register Drug Information**
   * As a pharmacist, I want to register drug information (date, quantity, supplier name, cost per unit, total cost, expiry dates), so that inventory records are accurate.
4. **Update Drug Information**
   * As a pharmacist, I want to update, edit, or modify drug information, cost price & selling price, and reorder levels, so that inventory is managed efficiently.
5. **Delete Drugs**
   * As a pharmacist, I want to delete drugs that are no longer being supplied, so that the inventory list remains current.
6. **Expiry Warning**
   * As a pharmacist, I want to receive warnings about drug expiries, so that expired drugs are not dispensed.
7. **View Stock Balance**
   * As a pharmacist, I want to view stock balance based on drug categories, so that I can manage inventory levels.
8. **View Reorder Level Reports**
   * As a pharmacist, I want to view reports for drugs that fall into reorder level, so that I can restock as needed.

**Cashier**

1. **Cashier Login**
   * As a cashier, I want to log in using my username and password, so that I can perform transactions securely.
2. **Add Data Entry and Cash Collection**
   * As a cashier, I want to add comprehensive data entry and cash collection, so that all transactions are recorded accurately.
3. **Accept Various Payment Modes**
   * As a cashier, I want to accept cash, cheque, credit card, debit card, and other payment modes, so that patients have multiple payment options.
4. **On-Demand Receipt Printing**
   * As a cashier, I want to print receipts on demand, so that patients receive proof of payment.
5. **End-of-Day Cash Collection**
   * As a cashier, I want to perform end-of-day cash collection, so that daily financial records are accurate and complete.

**Group Member 1:**

1. **Introduction**
   * Brief overview of the system being developed
   * Purpose and scope of the program
   * Key functionalities of the system
2. **Assumptions**
   * List of assumptions made during the development process
   * Explanation of each assumption and its impact on the system
3. **System Design**
   * Detailed flowcharts representing the overall system design
   * Description of each flowchart to explain the logic and flow of the program

**Group Member 2:**

1. **Programming Concepts Applied**
   * **Storage Types**: Explanation and sample code for:
     + Lists
     + Tuples
     + Dictionaries
     + Text files
   * **Control Structures**:
     + **Selective Structures**: if.. else, nested if
       - Explanation with sample code
     + **Iteration Structures**: for loop, while loop
       - Explanation with sample code
   * **Exception Handling**: Use of Try … Except
     + Explanation with sample code
   * **Validation**: Methods used to ensure data accuracy
     + Explanation with sample code

**Group Member 3:**

1. **Function Flows**
   * Detailed explanation and flowchart for:
     + Add Function
     + Update/Modify/Edit Function
     + Delete Function
     + Generating Reports
2. **Additional Features**
   * Description of any extra features added to the system
   * Explanation and sample code
3. **Sample Input/Output**
   * Screenshots of sample input/output
   * Explanation of each screenshot
4. **Conclusion**
   * Advantages of the developed system
   * Identified limitations
   * Suggestions for overcoming limitations and further enhancement
5. **References**
   * List of all references used in APA format
6. **Appendix**
   * **Workload Matrix**: Distribution of tasks among group members