

## C2:

### Task / Exercise C2 ( Product & Sprint Backlogs) [30 minutes] :

Your software team decided to compete against “IBN Hamza” to develop a “Medical Management Software” as a generic desktop software product to sell to individual doctors in Algeria in order to digitize simple activities.

- Choose who is the Product owner for this project.
- The product owner in collaboration with the team need to ( **Pen and Paper** ) :
  - Write down all possible features, user stories, tasks/action, wish-to-have features for this software product.
  - Assign a score to reflect the perceived value for each task/feature
  - Estimate the duration of execution.
- For the first Sprint, Discuss:
  - Sprint Goal
  - what can be implemented and delivered to the customer.

#### 1. Product Owner Selection

- Given that everyone in the team has an engineering background, the ideal Product Owner (PO) should be the team member with the strongest understanding of end-user needs (i.e., doctors) and experience in healthcare or product planning. Based on these criteria, **the selected Product Owner is Eddalia Wissal.**

#### 2. Features, User Stories, Tasks, and Timeline

##### Feature Set 1: Patient Management

- **User Stories:**
  - *Doctor*: "As a doctor, I want to access patient history to make informed treatment decisions."
  - *Administrator*: "As an administrator, I want to update patient records to keep medical histories current."

- *Developer*: "As a developer, I want to build a secure database to store patient information, ensuring sensitive data is protected from unauthorized access."
- **Tasks:**
  - Design a database schema for patient details, medical history, and permissions.
  - Integrate security measures (encryption, access controls).
  - Develop RESTful APIs for patient CRUD (Create, Read, Update, Delete) operations.
  - Implement search and filtering functions for efficient record retrieval.
  - Set up role-based access control based on user roles (doctor, administrator).
  - Create a logging system to track modifications to patient records.
- **Perceived Value Score:** High
- **Estimated Duration:** Weeks 1-3

### Feature Set 2: Doctor Profiles and Scheduling

- **User Stories:**
  - *Doctor*: "As a doctor, I want to manage my profile and availability so patients can book appointments."
  - *Patient*: "As a patient, I want to book appointments based on doctors' available times."
  - *Administrator*: "As an administrator, I want to manage and adjust schedules for medical procedures."
- **Tasks:**
  - Design an interface for doctors to update profiles and availability.
  - Develop a scheduling module that shows available appointment slots.
  - Implement a booking system linking doctor availability with patient requests.
  - Add a calendar view for easier schedule visualization for doctors and patients.
  - Provide an admin interface to adjust schedules when needed.
- **Perceived Value Score:** High
- **Estimated Duration:** Weeks 2-5

### Feature Set 3: Appointment Booking

- **User Stories:**
  - *Administrator*: "As an administrator, I want to manage bookings to ensure appointments are organized."
  - *Patient*: "As a patient, I want to receive appointment reminders."
  - *Developer*: "As a developer, I want to create backend services to manage bookings, updates, and cancellations for efficient organization."
- **Tasks:**
  - Develop APIs for managing bookings, modifications, and cancellations.
  - Implement a notification system using email or SMS to remind patients and staff of appointments.
  - Create an admin dashboard with real-time booking data, sorting, and filtering options.

- Enable appointment status updates (e.g., scheduled, completed, canceled).
- Write algorithms to prevent double-booking and notify users of conflicts.
- **Perceived Value Score:** Medium
- **Estimated Duration:** Weeks 5-7

#### **Feature Set 4: Doctor Notes After Consultation**

- **User Stories:**
  - *Doctor:* "As a doctor, I want to write notes after consultations to track patient conditions and follow-up plans."
  - *Patient:* "As a patient, I want my doctor's notes to be recorded in my medical history."
  - *Developer:* "As a developer, I want to create a secure notes feature linked to patient profiles for record accuracy."
- **Tasks:**
  - Design an efficient note-taking interface for doctors.
  - Store notes securely with encryption and access controls.
  - Allow patients to securely view their consultation notes.
  - Create a versioning system to track changes to notes, with timestamps and user IDs.
- **Perceived Value Score:** Medium
- **Estimated Duration:** Weeks 7-9

### **3. Sprint Goal and Deliverables**

- **Sprint Goal:** Develop a functional prototype of the Medical Management Software to assist doctors in managing basic patient records, scheduling, and billing.
- **Deliverables for First Sprint:**
  - **User Interface Design**
  - **Patient Information Management:**
    - Implement a form to add and edit patient details.
    - Create a list view for displaying patient records.
    - Add a search function for quick profile retrieval.