Software Engineering
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Deliverable 1: Project Proposal

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Project Title:
Mawid(موعد) : A Secure Scheduling App for Medical Center Appointments in Abu Dhabi.

Project Team:
- Project Lead: Fahad
- Technical Lead: Farhan
- Software Developer/QA Engineer: Kristina
- Design Lead: Douaa

Project Description:
The core purpose of this software is to provide a unified platform for small clinics in Abu Dhabi to offer their services and manage appointments. It aims to streamline healthcare access for patients by matching them with nearby clinics and doctors that cater to their specific needs.

Business Goals:
The primary business goal is to generate revenue by:
- Charging healthcare providers an onboarding fee and a nominal subscription fee.
- Collecting a nominal fee from the providers for each appointment booked through the platform.

It operates on a SaaS (Software as a Service) model and is scalable. Therefore, the long-term goals are:
- Expanding the geographical scope to all 7 Emirates.
- Marketing and establishing the app as the preferred platform for scheduling healthcare appointments.
- Partnering with leading healthcare insurance providers in the UAE (Daman for example) to incorporate insurance approval status for procedures.

Main Features for the Prototype:
1. User Registration and Login: Users should be able to register and create an account using their email address, phone number, or other accounts (Google, Facebook, AppleID).
2. Clinic/Doctor Search: Users should be able to search for nearby clinics based on their location and specific needs. Users should also be able to search for doctors directly by specialty.
3. Appointment Scheduling: Users should be able to schedule appointments with their chosen clinics. They should also be able to view available appointment slots, and upcoming appointments, or reschedule/cancel appointments. They also should receive notifications for appointment reminders, and booking/cancellation notices.
4. Scheduling Constraints: Healthcare providers should be able to impose booking constraints, including setting specific working hours for each doctor and the length of

each appointment. They also reserve the right to cancel or manually reschedule any of the appointments booked.

5. Medication Prescription: After consultations, healthcare providers should be able to prescribe medications through the application, and users should be able to view these prescriptions. Files are to be encrypted following industry standards.
6. Telehealth Interface: A basic, encrypted video calling interface should facilitate telehealth consultations from the user's chosen healthcare provider.
7. Medical Records Storage: Users should be able to upload and store their basic medical records securely on the app.
8. Clinic Analytics: Clinics/healthcare providers should be able to access a dedicated dashboard providing insights into key performance indicators, including total revenues, total volume, trends, cancellation/no-show rates, etc.
9. Payment Gateway: Users should be able to pay for their appointment bookings and other services through various online payment channels, such as credit/debit cards, e-wallets, or bank transfers.
10. Insurance Approval Module: The users should also be able to check for insurance eligibility and coverage, or submit claims and track the approval status.
11. Reporting and Analytics: This module will provide insights into user behavior, clinic performance, and other key metrics for the developers.

Scope:

The complete scope of the project is detailed in the context diagram (see appendix).

Stakeholders:

- ***Users:*** Patients, Clinic Staff, Doctors, and Healthcare Professionals.
- ***Administrators:*** Clinic Administrators to manage clinic-specific data and appointments, System Administrators.
- ***Customers:*** Clinic Owners or Managers, Patients.
- ***Compliance Authorities:*** Health Authorities in Abu Dhabi.

Constraints:

- ***Budget:*** Limited budget for development, given it is being developed free of cost.
- ***Time:*** Strict timeline for project completion, i.e., by the end of the semester.
- ***User Adoption:*** Patients or healthcare providers who are used to traditional appointment scheduling methods.
- ***Healthcare Provider Participation:*** Encouraging healthcare providers to use the platform.
- ***Limited Market Research and Beta Testing:*** Given the short timeline, conducting user research and usability testing is not possible.

Risks:

- ***User Privacy and Security:*** The risk of data breaches persists despite password protection and encryption. We employ access control measures to restrict unauthorized access to sensitive data and encrypt any files/data. The app needs to be compliant with the Personal Data Protection Act (PDPA) and other relevant regulations to be deployed in the UAE.
- ***Reliability and Technical Issues:*** The app may encounter bugs, crashes or downtime, affecting access and reliability. The app must ensure that it provides accurate, consistent, and updated information to healthcare providers and users, or might risk significant financial losses.

Appendix:

- Project Repository: https://github.com/FarhanKamrul/SWE_Group-Project
- Federal Law No. 2 of 2019 Concerning the Use of Information and Communication Technology (ICT) in Health Fields: https://mohap.gov.ae/app_content/legislations/php-law-en-77/mobile/index.html#p=1
- Electronic Transactions and Trust Services law (full script in Arabic only): https://u.ae/en/about-the-uae/digital-uae/regulatory-framework/electronic-transactions-and-trust-services-law
- ***Context diagram:***