

**ASSIGNMENT 01**

Department of Computer Engineering

**COMSATS University Islamabad –**

Abbottabad Campus.

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| Name: | Registration Number |
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**SUBJECT: SOFTWARE ENGINEERING CONCEPTS**

TEACHER: **DR. GHULAM MUJTABA**

**Project Name: MediTrack: Smart Medicine Reminder App**

**1. Stakeholder Analysis**

* **Primary Users:** Patients managing daily medications
* **Secondary Users:** Caregivers, family members
* **Tertiary Stakeholders:** Doctors, pharmacists
* **Developers:** Software engineering team
* **Sponsors:** Healthcare providers or institutions

**2. Requirements Gathering Techniques**

* **Interviews:** Conducted with chronic illness patients and caregivers
* **Questionnaires:** Distributed online to collect common issues with medication adherence
* **Brainstorming:** Session with development team and health professionals
* **Observation:** Studied existing apps and patient routines

**3. Software Requirements Specification (SRS)**

**3.1 Introduction**

**Purpose:**

To develop a mobile application that reminds users to take medications on time, track dosage, notify caregivers, and maintain logs for consultations.

**Scope:**

"MediTrack" will be a cross-platform mobile app offering customizable reminders, schedule management, refill alerts, and optional caregiver notifications.

**Definitions:**

* **Reminder:** Push notification alerting the user to take medication.
* **Dosage:** Prescribed amount of medicine intake.

**References:**

* WHO adherence to long-term therapies report
* Android and iOS design guidelines

**3.2 Overall Description**

**Product Perspective:**

The app is standalone and uses cloud services for backup. It will sync across devices if users log into the same account.

**Product Functions:**

* Schedule medication reminders
* Track adherence history
* Alert caregivers if a dose is missed
* Export logs as PDF for medical reviews

**Assumptions and Dependencies:**

* Users have mobile internet access
* Mobile devices support Android 10+ or iOS 14+

**3.3 Specific Requirements**

**Functional Requirements:**

* FR1: Add/edit/delete medication entries
* FR2: Push notifications at scheduled times
* FR3: Record confirmation of dose taken
* FR4: Notify caregiver on missed doses
* FR5: Generate monthly adherence reports

**Non-functional Requirements:**

* Usability: Simple UI with accessibility options
* Reliability: 99.5% uptime for reminders
* Performance: Response time < 1s for local actions
* Security: Data encryption at rest and in transit

**External Interface Requirements:**

* UI: Touch-based interface with minimal text
* Hardware: Mobile sensors for optional motion-triggered logs
* Software: Firebase for cloud storage and notifications

**Constraints:**

* No ads or monetization in the MVP
* Offline access limited to next 24 hours of scheduled data

**3.4 Appendices**

**Glossary:**

* MVP: Minimum Viable Product
* UX: User Experience

**Supporting Documents:**

* Survey results (link or reference)
* Persona profiles for test users