



PROPOSAL

Project Title: *NADRA*

Course Title: Software Construction & Development

Department: Computing (*Software Engineering*)

Submitted To: Islam Abbasi

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Introduction

The National Database and Registration Authority (NADRA) plays a critical role in managing Pakistan's citizen identity system by issuing CNICs, renewals, and related services. The digital transformation of NADRA has made these services more accessible, but various challenges still exist in usability, performance, and accessibility.

The proposed **Digital Identity & CNIC Management System** aims to provide a smooth, error-free, and efficient user experience for both citizens and NADRA staff. Key features include smart data reuse (autofill), customizable delivery addresses, online document verification, real-time application tracking, and multilingual support.

This SRS is designed for academic purposes, based on real-life stakeholder interviews, application testing, and user feedback. The document covers the functional and non-functional requirements of the system, identifies key stakeholders, and outlines future enhancements to improve efficiency and transparency.

Ultimately, the project envisions a citizen-centered digital ecosystem that eliminates redundant manual processes, reduces waiting times, improves error handling, and ensures accessibility for elderly and non-technical users. By implementing these improvements, NADRA can strengthen citizen trust and serve as a model of digital governance.

Stakeholders

Stakeholder	Role in the System
Receptionist	First point of contact at NADRA centers. Guides citizens, checks documents, issues tokens.
Data Entry Officer	Handles data entry, updates citizen records, and verifies biometric information.
Technical Officer (IT)	Maintains system performance, handles errors, manages database, and ensures data security.
Operations Supervisor	Oversees staff productivity, system usage, and manages application flow.
Citizen (Public User)	Engages with NADRA through physical visits and the digital system (website/app).

Functional Requirement

- **Citizens (Public User)**

FR No.	Requirement
FR-01	The system shall allow users to apply for a new CNIC online.
FR-02	The system shall allow users to renew their CNIC using previously saved data.
FR-03	The system shall allow partial CNIC detail updates (e.g., address) without requiring full re-entry.
FR-04	The system shall allow users to upload documents and validate their format, size, and clarity.
FR-05	The system shall pre-verify if required documents are complete before submission. <i>(New from user observation)</i>
FR-06	The system shall track application progress and notify users via SMS and app alerts.
FR-07	The system shall allow the user to choose or modify their CNIC delivery address.
FR-08	The system shall allow users to save progress and resume an incomplete application later.

FR-09	The system shall show specific, helpful error messages instead of generic errors.
FR-10	The system shall support login with CNIC number and OTP for secure access.
FR-11	The system shall support Urdu and English language toggle.
FR-12	The system shall auto-fill user data from NADRA's existing citizen database.
FR-13	The system shall allow fingerprint & biometric verification at NADRA centers.
FR-14	The system shall work only with internet; however, a draft/offline fill mode shall be available. (<i>Important observation</i>)
FR-15	The system shall allow feedback collection after application completion. (<i>Citizen complaint</i>)

- **Receptionist**

FR No.	Requirement
FR-16	The system shall allow the receptionist to generate a token for walk-in citizens.
FR-17	The system shall allow the receptionist to view citizen appointment status.
FR-18	The system shall allow the receptionist to verify a basic documents checklist before forwarding to Data Entry Officer.

- **Data Entry Officer**

FR No.	Requirement
FR-19	The system shall allow NADRA staff to view, edit, verify, or reject submitted records.
FR-20	The system shall restrict app data entry access to approved NADRA devices only. <i>(From data entry officer)</i>

- **Operations Supervisor**

FR No.	Requirement
FR-21	The system shall provide real-time dashboards for supervisors to monitor performance.
FR-22	The system shall allow the admin to escalate urgent/priority applications. <i>(From Supervisor feedback)</i>

- **Technical Officer (IT)**

FR No.	Requirement
FR-23	The system shall log system errors and make them visible to technical staff. <i>(From IT officer)</i>

