

Project Report

CNIC Registration Web Application (Flask-Based)

Course: Computer Networks

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Project Overview

This project implements a CNIC Registration System as a web application using Flask (Python Web Framework). The platform allows users to register for a CNIC (Computerized National Identity Card) by submitting personal details such as full name, birthdate, CNIC type, address, and an image. The project showcases basic client-server interaction and file handling principles relevant to computer networks.

Objectives

- To simulate a real-world government registration system.
- To allow image file upload and validation.
- To apply client-server communication concepts using HTTP methods.
- To enforce form validation and age restrictions.
- To understand how Python-based web servers handle requests.

Technologies Used

- Frontend: HTML5, CSS (via linked stylesheets)
- Backend: Python (Flask Framework)
- Templating: Jinja2 (Flask's default template engine)
- Data Handling: HTTP POST requests, form-data parsing
- File Handling: File upload and secure storage

Flow Diagram

- User → accesses homepage → fills form.
- Form Submission → /submit route (POST)
- Backend:
 - Validates data & age
 - Verifies and saves image
 - Renders result page (cnic_detail.html)
- User → sees registration confirmation.

Screenshots:

CNIC Registration Platform

Full Name:

abdullh asif

Birthdate:

11/12/2003

CNIC Type:

New CNIC

Address:


house no 115 khayaban e rizwan dha phase 7 karachi

Upload Image:

Choose File dp.jpeg

Your CNIC Details

Name: abdullh asif
Birthdate: 2003-12-11
CNIC Type: New
Address: house no 115 khayaban e rizwan dha phase 7 karachi
Uploaded Image:



You will receive your CNIC in 7 days.

Learning Outcomes

- Understood web request methods and response rendering.

- Implemented secure file handling in a web context.
- Gained experience with server-side programming.
- Learned how client inputs can be validated both on frontend and backend.

Conclusion

This CNIC registration platform is a practical implementation of computer network principles using HTTP request handling, file transmission, and dynamic response generation. It serves as a stepping stone toward more complex, network-based applications.