

# Task 2: Build Web UI

## Overview

This report describes the basic UI project for finding the user credentials in the database. The project has been implemented using Flask's templating system with two main pages, the index and the result page. The backend of the application securely matches the email and password of the user with the database.

## Frontend Design

### Login Page (index.html)

- Clean HTML form interface
- Two input fields:
  - Email field
  - Password field
- Submit button to process the credential check

### Results Page (result.html)

- Displays whether the credentials were found in the database
- Shows query processing time

## Backend Implementation

### Web Server (Flask)

- Routes:
  - GET '/': Serves the login form
  - POST '/': Processes form submissions
- Processing Flow:
  - Receives credentials from form
  - Hashes both email and password using SHA-256
  - Queries database in Util function `get_user(email, password)`
  - Returns the query result and execution time to template

### Database Layer (`get_user(email, password)`)

- MySQL database connection
- Parameterized queries for security
- Proper connection handling and cleanup
- Execution time tracking

## Screenshots from the application

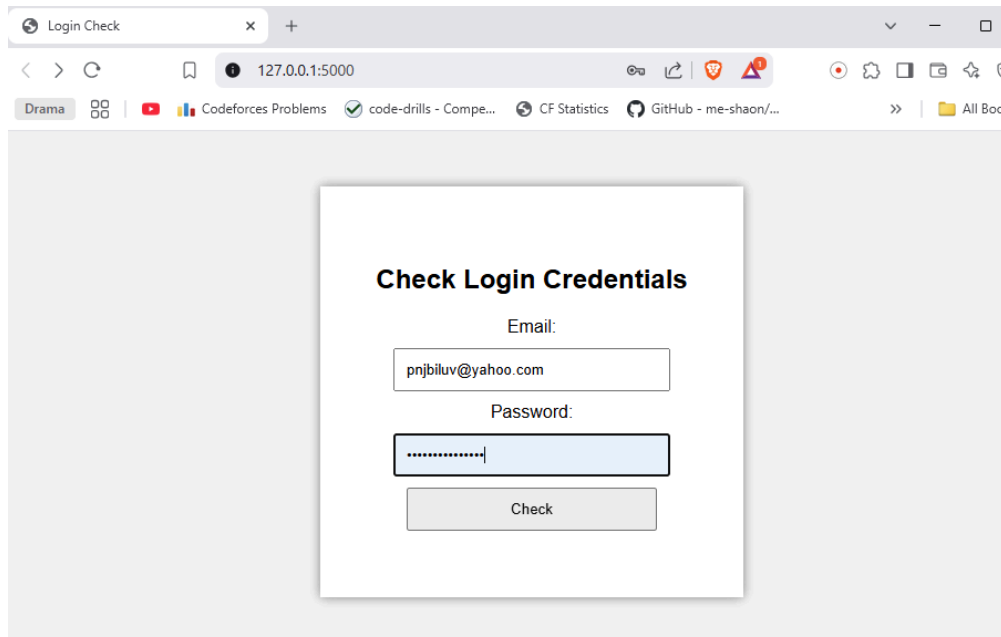


Fig. 1: Application basic index UI

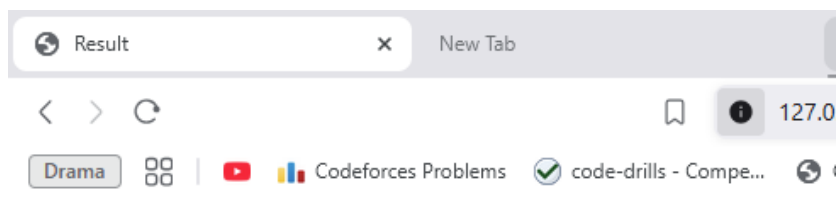


Fig. 2: Application result UI when user credentials found in database

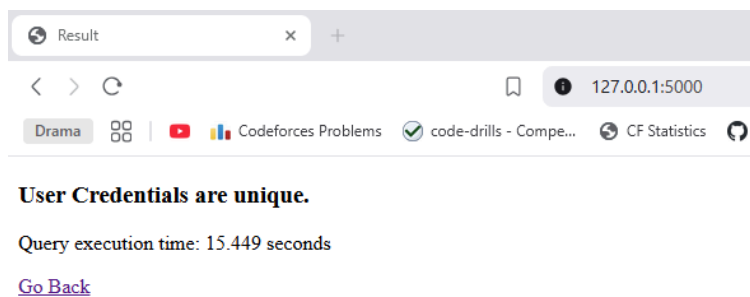


Fig. 3: Application result UI when user credentials are not found in database