

# **Online Examination System (C Programming Project)**

Course Code: CSEG1041

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# Introduction

This project is a simple **command-line based online examination system** written in C.

It allows users to **register, log in, and attempt a multiple-choice exam.**

The program demonstrates concepts of **modular programming, file handling, functions, and decision-making.**

# Objectives

- To create a functional examination system using basic C programming.
- To design an MCQ exam system with scoring.
- To implement **registration & login** using file storage.
- To use **multiple modules (.c / .h files)** for clean coding.

# Project Features

**User Registration**

**User Login**

(credentials stored in users.txt)

**5 Multiple-Choice Questions**

**Score calculation**

**Modular code with separate files**

**Simple and beginner-friendly structure**

# System Architecture / File Structure

main.c → menu + control flow

exam.c/.h → exam questions + scoring

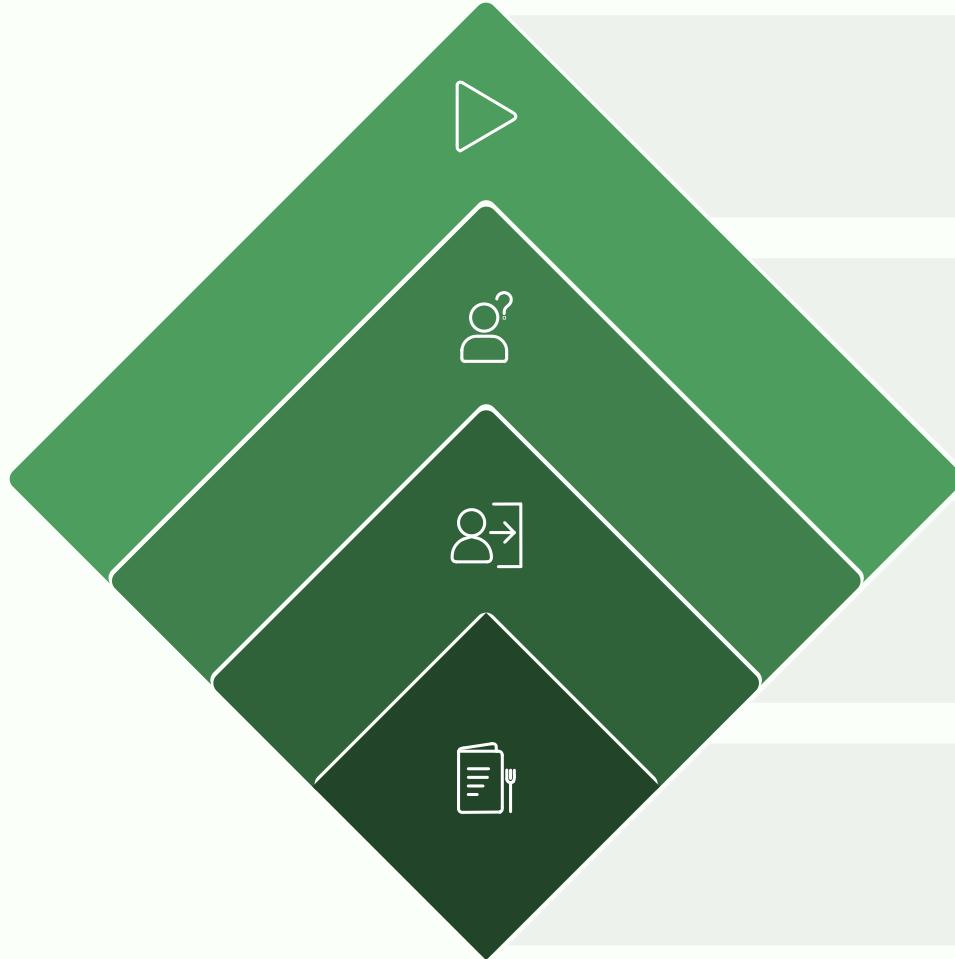
user.c/.h → register + login (file handling)

utils.c/.h → helper functions (clear screen)

users.txt → auto-created for saved users

Flow: Register/Login → Start Exam → Calculate Score → Display Result

# Flowchart



## Start Exam

Begin the assessment

## Login Success?

Decision: proceed or error

## Register / Login

User authentication entry

## Show Menu

Display options to user

(You can insert a simple flowchart image)

# Core Concepts Used

- Functions in C
- Header files (.h)
- File Handling (fopen, fprintf, fscanf)
- Conditional statements
- Switch case
- Modular Programming
- Loops and input handling

# Code Snippets (Screenshots)

Add screenshots from:

- registerUser()
- loginUser()
- startExam()
- main menu in main.c

(You can take from VS Code)

# Output / Testing

## Test Cases:

- Register user → Success
- Login (correct) → Allowed
- Login (wrong) → “Invalid username/password”
- Exam attempt → Score out of 5

## Conclusion:

Program executed correctly with no errors.

(Add 1-2 screenshots of running program)

# Conclusion & Future Work

## Conclusion:

- Successfully implemented an exam system using C.
- Learned file handling, functions, modular coding & menu-driven programs.

## Future Enhancements:

- Admin panel
- Add question bank from file
- Timer-based exam
- Randomized MCQs
- Store scores for all students