

C++ Programming **Project:** Educational Management System

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Educational Management System

- Let's build a system to help **Doctors** to set **Assignments** in created **Courses** for **students**. Students can submit **Solutions** and get **Grades** back.
- Each one of the logged-in users has its own system View
- The main view per user shows Main menu options
 - With each option, there might be other menus to display
 - Back option: gets you to the previous menu
 - User can log-out

User: Doctor

- Main menu: List Courses, Create course, View Course
- View Course Menu: List/Create/View Assignments
- View Assignment: Print Content, Grades Report, List/View Solutions
- For a solution: Print Content, Set Grade, Set Comment

User: Student

- Logic Data: ID, Name, Email
- Main Menu: Register in course, List My Courses, View course, Grades Report
- Register in course: List all other courses to select one
- View registered course:
 - Course info
 - List Assignments report (status: submitted / not submitted)
 - Options to unregister or submit assignment solution

Student Login

Please make a choice:

- 1 - Login
- 2 - Sign up
- 3 - Shutdown system

Enter Choice: 1

Please enter user name and password:

User Name: s001

Password: s001

Welcomme Sayed Mostafa. You are logged in

Please make a choice:

- 1 - Register in Course
- 2 - List My Courses
- 3 - View Course
- 4 - Grades Report
- 5 - Log out

Enter Choice:

View Course CS111

Enter Choice: 3

My Courses list:

- 1) Course Prog 1 - Code CS111
- 2) Course Prog 2 - Code CS112
- 3) Course Math 1 - Code CS123
- 4) Course Math 2 - Code CS333
- 5) Course Prog 3 - Code CS136
- 6) Course Stat 1 - Code CS240
- 7) Course Stat 2 - Code CS350

Which ith [1 - 7] course to view? 1

Course Prog 1 with Code CS111 - taught by Doctor Hani

Course has 5 assignment

Assignment 1 submitted - NA / 23

Assignment 2 submitted - 34 / 41

Assignment 3 submitted - 5 / 37

Assignment 4 NOT submitted - NA / 52

Assignment 5 submitted - NA / 56

Please make a choice:

- 1 - UnRegister from Course
- 2 - Submit solution
- 3 - Back

Enter Choice:

Unregister from CS111 course

Please make a choice:

- 1 - UnRegister from Course
- 2 - Submit solution
- 3 - Back

Enter Choice: 1

Please make a choice:

- 1 - Register in Course
- 2 - List My Courses
- 3 - View Course
- 4 - Grades Report
- 5 - Log out

Enter Choice: 2

My Courses list:

- 1) Course Prog 2 - Code CS112
- 2) Course Math 1 - Code CS123
- 3) Course Math 2 - Code CS333
- 4) Course Prog 3 - Code CS136
- 5) Course Stat 1 - Code CS240
- 6) Course Stat 2 - Code CS350

View Course CS123

Please make a choice:

- 1 - Register in Course
- 2 - List My Courses
- 3 - View Course
- 4 - Grades Report
- 5 - Log out

Enter Choice: 3

My Courses list:

- 1) Course Prog 2 - Code CS112
- 2) Course Math 1 - Code CS123
- 3) Course Math 2 - Code CS333
- 4) Course Prog 3 - Code CS136
- 5) Course Stat 1 - Code CS240
- 6) Course Stat 2 - Code CS350

Which ith [1 - 6] course to view?

2

Course Math 1 with Code CS123 - taught by Doctor Hani

Course has 3 assignment

Assignment 1 NOT submitted - NA / 42

Assignment 2 submitted - NA / 16

Assignment 3 NOT submitted - NA / 51

Submit assignment and Go Back

Please make a choice:

- 1 - UnRegister from Course
- 2 - Submit solution
- 3 - Back

Enter Choice: 2

Which ith [1 - 3] assignment to submit? 3

Enter the solution (no space)

12345

Please make a choice:

- 1 - UnRegister from Course
- 2 - Submit solution
- 3 - Back

Enter Choice: 3

Please make a choice:

- 1 - Register in Course
- 2 - List My Courses
- 3 - View Course
- 4 - Grades Report
- 5 - Log out

Enter Choice:

View Course CS123 again

Please make a choice:

- 1 - Register in Course
 - 2 - List My Courses
 - 3 - View Course
 - 4 - Grades Report
 - 5 - Log out
- Enter Choice: 3

My Courses list:

- 1) Course Prog 2 - Code CS112
- 2) Course Math 1 - Code CS123
- 3) Course Math 2 - Code CS333
- 4) Course Prog 3 - Code CS136
- 5) Course Stat 1 - Code CS240
- 6) Course Stat 2 - Code CS350

Which ith [1 - 6] course to view? 2

Course Math 1 with Code CS123 - taught by Doctor Hani

Course has 3 assignment

Assignment 1 NOT submitted - NA / 42

Assignment 2 submitted - NA / 16

Assignment 3 submitted - NA / 51

Print my current grades report

Please make a choice:

- 1 - Register in Course
 - 2 - List My Courses
 - 3 - View Course
 - 4 - Grades Report
 - 5 - Log out
- Enter Choice: 4

Course code CS111 - Total submitted 4 assignments - Grade 39 / 157
Course code CS112 - Total submitted 4 assignments - Grade 91 / 170
Course code CS136 - Total submitted 1 assignments - Grade 28 / 59
Course code CS240 - Total submitted 2 assignments - Grade 75 / 93
Course code CS350 - Total submitted 2 assignments - Grade 8 / 52

Logout and shutdown

Please make a choice:

- 1 - Register in Course
- 2 - List My Courses
- 3 - View Course
- 4 - Grades Report
- 5 - Log out

Enter Choice: 5

Please make a choice:

- 1 - Login
- 2 - Sign up
- 3 - Shutdown system

Enter Choice: 3

Guidelines

- Notes
 - Don't use file. All in memory
 - Fill the system with initial dummy data for all what you need
 - Start implementing the student view (as slides)
 - Use headers (split code)
 - Use structures & pointers, but don't care now about freeing memory
 - Don't use (using namespace std)
- Seems a lot and hard to code?
 - Think in a simpler version
 - Pick a small part and do it first (e.g. users login/logout)

Done with the system?

- Congratulation! Your building-project skill is growing up!
- Feel free to go more complex
 - More features per users
 - Add new Actor: Teaching Assistant
 - Use files
 - Parallel sessions
 - Password encryption? Email Validation?
 - Messaging/Inbox between users
 - Constraints: Deadline on courses registration? Deadlines on assignments?
- Come back later
 - You will learn more C++ syntax
 - Come back and **refactor** your code / Add what you learned

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”