

Course Enrolment System

The deadline for the assignment is on Monday 24th of June 10 : 00 a.m.

Develop a windows application for students to enrol to courses. The application should use the student's subjects and corresponding grades to check for eligibility of the given courses. Students can then choose one of the available courses and register with their appropriate details.

The UI mockup is contained within a rectangular frame. At the top left is a dark grey rounded rectangle labeled 'Title'. Below it are five rows, each consisting of a dark grey rounded rectangle labeled 'Dropdown A' through 'Dropdown E' and a white rounded rectangle for grade entry. To the right of these is a table titled 'Available Course'. The table has two columns and three rows. The first row contains 'Course A' and a blue 'Register' link. The second and third rows are empty. At the bottom right of the frame are two dark grey rounded buttons labeled 'Get Course' and 'Clear'.

Available Course	
Course A	Register

The above UI will allow the student to do the following:

1. Select 5 subjects in the dropdowns
2. Enter their corresponding grades
3. Get the eligibles courses (Get Course)
4. Register to a preferred course available in the grid.
5. Clear Button (**Nice to have**)

1. Subject Dropdown

- a. Values displayed on the dropdown should be of the following:
 - i. Computer Science
 - ii. Maths
 - iii. English
 - iv. French
 - v. Accounts
 - vi. Physics
- b. When Get Course button is clicked, if any of the dropdown is not populated, highlight the border in red. (Nice to have)

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2. Grades Dropdown

a. Should consist of the following values:

- i. A
- ii. B
- iii. C
- iv. D
- v. E
- vi. F

b. When Get Course button is clicked, if any of the dropdown is not populated, highlight the border in red. (Nice to have)

3. Get Course Button

a. Each Course has a prerequisite as follows:

Course	Min number of points	Number of seats	Fulltime Cost	Part time Cost
BSc Computer Science	40	10	25000	30000
BSc Accounting	35	20	25000	30000
BSc Software Engineering	38	25	25000	30000
BSc Law	40	5	25000	30000
BSc Mechanical Engineering	36	15	25000	30000

Course	Prerequisites
BSc Computer Science	Computer Science
BSc Accounting	Maths and Accounts
BSc Software Engineering	Computer Science and Maths
BSc Law	English and French
BSc Mechanical Engineering	Maths and Physics

b. For each prerequisite subject for a course, the student should at least have the grade D or above.

c. A student's total grades point should be greater or equal to a course's minimum number of points to be eligible.

Grade	Number of Points
A	10
B	8
C	6
D	4
E	2
F	0

d. A course should have at least one open seat.

e. All the course that matches the above requirements should be displayed on the grid.

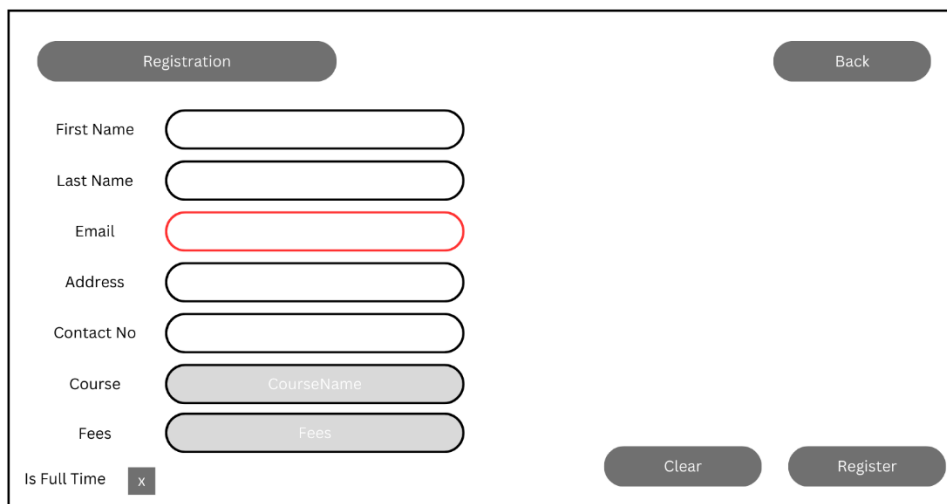
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- f. If no course matches the above requirements, update the title of the grid to “No Available Courses”.
4. Register to a course
 - a. Beside each eligible course, display a hyperlink/button that redirects the student to a registration page, with course already selected.
5. Clear button
 - a. Clear button should clear all the populated dropdowns as well as the Course grid.

The Registration View

In the UI below, the student enters his details and registers for the selected course.

1. Student Details
 - a. Add input boxes and checkboxes as shown in the above diagram.
 - b. All values entered should be validated to ensure that they conform to the correct format. (when Register Button is clicked)
 - i. Eg: Email should have @ .something
 - c. Input box border should be in red in case value is invalid (nice to have)
 - d. Course should be populated from the previous page.
 - e. Course input box should be disabled.
 - f. The fees to paid needs to be calculated and displayed. The fees textbox should be disabled.
 - i. If student opts for part time, no discount
 - ii. If student opts for full time and calculated grade point is more 45, then a 10% discount is provided.



The diagram shows a registration form with the following elements:

- Registration** (header button)
- Back** (header button)
- First Name** (input field)
- Last Name** (input field)
- Email** (input field with a red border, indicating validation error)
- Address** (input field)
- Contact No** (input field)
- Course** (disabled input field with value **CourseName**)
- Fees** (disabled input field with value **Fees**)
- Is Full Time** (checkbox with value **x**)
- Clear** (button)
- Register** (button)

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2. Register Button
 - a. Validate all the input field
 - b. Add the student details as well as the calculated fees to the database
 - c. Update the number of seats left to be decremented by one.
 - d. Show a popup to indicate data has been saved properly or failed.
 - e. Redirect student to Initial View
3. Clear Button
 - a. Clear button should clear all the populated fields except for the Course and fees field.
4. Back Button
 - a. Redirects the student to the initial screen
 - b. No need to retain subjects and grade values.

Please ensure that assignment should cover the following:

- OOP
- SOLID
- Validations
- CRUD Operations
- Some logic/Calculations
- Unit Test
- Exception Handling
- Flow of logic
- Windows Application