Capstone Project – Modern Web Full Stack

Course Registration

[CSP – 009]

**REVISION HISTORY**

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| Nov-24-2017 | 1.0 | Initial Version | Modern Web Full-stack team |

# Course Registration

The proposed system should enable registered users to view the list of courses and register. The user interface to the system should be implemented using Angular or React. In order to manage the data required for the system, an Express Server interfacing with MongoDB should be used. The REST based Express backend will receive the requests from the client side Angular or React and store the necessary data or retrieve the data.

**Note:**

1. The features given below are the minimum basic features that are required to be implemented. But you need not limit yourself. You can try to make it as close to the real system and it is left to your imagination and the domain knowledge you possess.
2. To make the user interface better, you should use Bootstrap or Material.
3. Appropriate input fields should be used to make it user friendly. For example, where date is inputted, you should use a date field and not a string field.
4. Validations should be done, wherever applicable, and make it user friendly.
5. Wherever list of things are viewed, there should be Search filter provided to only display a subset of rows, so that user can quickly see it when there are many rows to be viewed (similar to how it was implemented in ILP).
6. While viewing, when different columns are displayed, customization should be provided to display only a subset of the columns (similar to how it was implemented in ILP).

Following modules should be implemented in the system.

1. Authentication Module
2. Admin Module
3. User Module

## Authentication Module

Refer the document, **AdditionalDocument\_AuthenticationModule.docx** for an explanation of the details to be implemented as part of the Authentication Module. It contains details related to User authentication as well as Admin authentication.

## Admin Module

Admin should be able to do the following operations.

1. View Course List
2. Add Course
3. Update Course
4. Delete Course
5. View course registrations
6. View Departments
7. Add Department
8. Update Department
9. Delete Department
10. Chart – Top registered courses (Overall)
11. Chart – Top registered courses (Department wise)

**View Course List**

The list of courses should be displayed. Buttons can be displayed to allow for update or delete a course.

**Add Course**

While adding the course, the following input details can be accepted.

* Course name
* Course description
* Number of credits
* Department (A list of departments should be displayed for admin to select – see below “Add Department” option )
* Total course registrations

Course ID can be auto generated.

**Update Course**

When the list of courses are displayed, one course can be selected to update at a time. The course name, course description, number of credits, department, total course registrations can be allowed to be updated. If a user has already registered for the course, it should NOT be allowed to be updated.

**Note:** Course ID should be used as the key to look for Course details and it cannot be modified.

**Delete Course**

When the list of courses are displayed, one course can be selected to delete at a time. There should be no registration associated with the course for the delete to succeed. If registrations are associated with the course, deletion of course should not be allowed.

**View course registrations**

The list of course registrations done by all registered users should be displayed.

**View departments**

The list of departments available should be displayed. Buttons can be displayed to allow for update or delete a department.

**Note:** Department could be like “Computer Science”, “Mechanical”, “Chemical” etc.

**Add department**

While adding department, the following input details can be accepted.

* Department Name
* Department Description

Department ID can be auto generated.

**Update department**

When the list of departments are displayed, department name and department description can be allowed to be updated. If the user has already registered a course in that department, it should NOT be allowed to be updated.

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**Delete department**

When the list of departments are displayed, one or more departments can be selected to delete at a time. If the user has already registered a course in that department, it should NOT be allowed to be deleted.

**Chart – Top registered courses (Overall)**

The top registered courses should be shown in a chart. It can be top 5, 10, etc, which should be customizable.

**Chart – Top registered courses (Department wise)**

The top registered courses for each department should be shown in a chart.

## User Module

User should be able to do the following operations.

1. View Courses
2. Register course
3. View course registration history

**View Courses**

The list of courses available for registration should be displayed.

**Register course**

On clicking the button to register course, if it does not exceed the total number of registrations, course registration should be done. Otherwise, an appropriate error message should be displayed. After course registration, make sure the total course registration count is reduced.

The feature mentioned here is a simple way of doing course registration. If you want it make it user friendly, you are free to make it more advanced.

**View course registration history**

Users should be able to view the list of courses they have registration. The details of each course registration should be displayed.

**Note:** This will only show the course registrations done by the signed in user. Only in Admin module, course registration of all registered users can be viewed.