

COURSE MANAGEMENT SYSTEM

By, Team 06:

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SOFTWARE ENGINEERING PROJECT PROPOSAL

EC6060 SOFTWARE ENGINEERING

DEPARTMENT OF COMPUTER ENGINEERING

UNIVERSITY OF JAFFNA

Problem Statement

Course management is one of the most important factors in a university. Because it seems like the backbone of whole academic activities. it is a little bit complicated. So, it is hard to handle manually.

Faculty of Engineering, University of Jaffna haven't an automated course management system. But they use online systems for the course and exam registration, course approval, etc. These systems depend on expensive third-party services and these are not well integrated with each other.

Solution Statement

To overcome these problems, our team will develop a reliable course management system following are the key features.

- Didn't depend on third-party services.
- Well integrated with other services
- Efficient and user-friendly interface

Vision

Providing a smooth and user-friendly web application that can handle the course management and displaying process for the Faculty of Engineering, University of Jaffna.

Stakeholders

- Dean
- Head of the department
- Managing Assistant
- System Administrator
- Systems that fetch the data from our system (course registration system etc.)
- Other users

Functional Requirements

- The system administrator will allow permission for each user in the following activities.
 - Adding/Updating courses
 - Approving courses
 - Scheduling courses
 - Changing the status of a course (approved or not)

- API ports will create to support the following functionalities
 - To fetch the list of courses for each semester
 - To fetch any data relevant to a course
 - Pre-requires
 - Coordinators
- So, the course registration system can fetch the list of courses offered for each semester through our API.
- Every user can see the scheduled courses for all semesters. They can filter out and can view what they need. For example, if you need to see what are the courses for the 6th semester of 20/21 academic year we can filter and view them.
- Every user can see all relevant data for any course. (Syllabus, references etc.)
- Works among the users will be distributed according to their permission level. HOD has the authority of approving, and change the status of a course.
- Adding a new course can be done manually the authority to add a new course will be with HOD. But he can ask the system administrator to hand over the permission for his managing assistant.
- Scheduling courses will be done by HOD.
- Approved courses are not allowed to update. But HOD can change the coordinator and status.
- Through the dean's account an approved course can be modified.

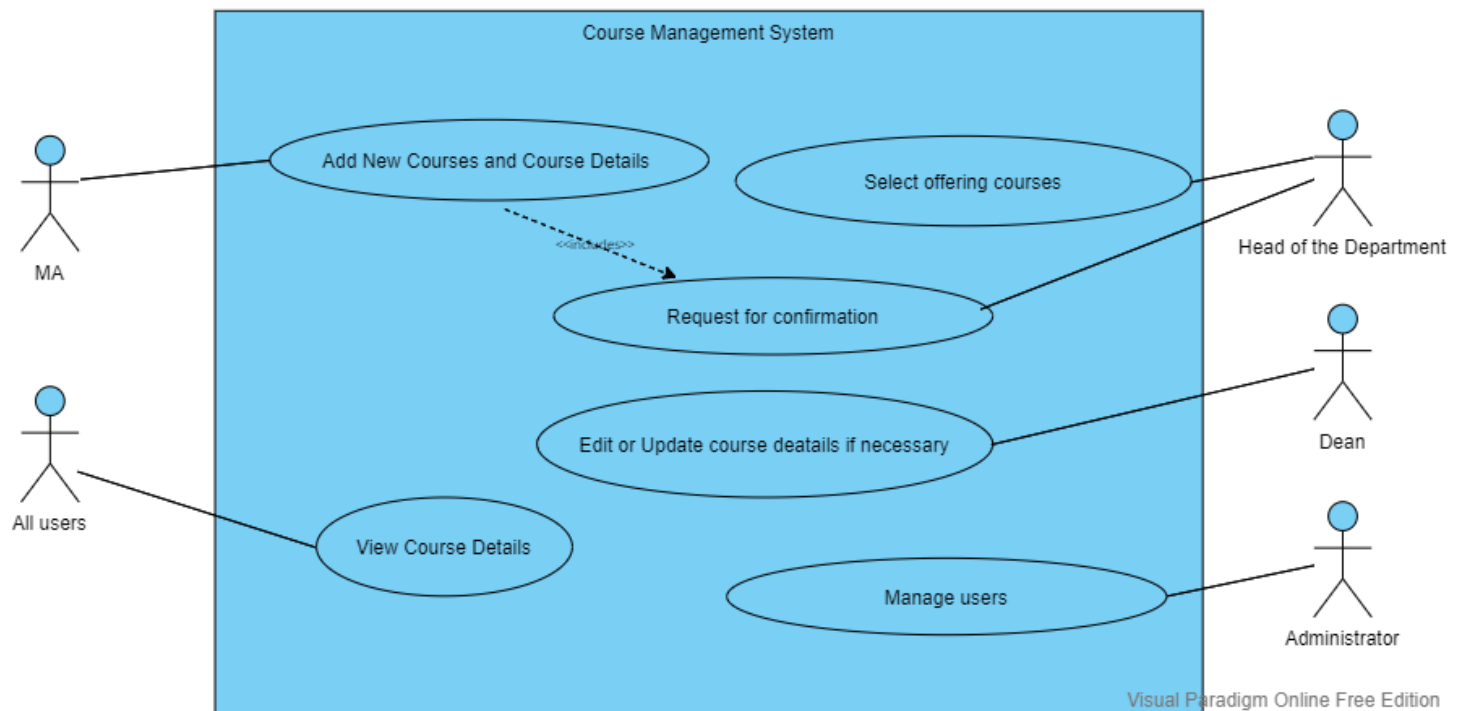
Non-Functional Requirements

- Security
- Reliability
- Responsiveness
- Cost-effective

Tools/frameworks

- HTML/CSS/JAVASCRIPT/REACT: for front end
- NODE JS: for back end
- VS code: for the development process
- Github: version control
- MS teams/ whatsapp: for team communication
- My-SQL for database

Use Case Diagram



Action Plan

ACTION	ASSIGNED TO	STATUS
Requirement gathering	Dharmasena, Munasingha	Finished
Analyze Requirements	Dharmasena	Finished
Project Plan	Dharmasena, Maduranga	Finished
Design ER, Use case and Sequence diagrams	Maduranga, Venuja	Finished
Design UI	Munasingha	In Progress
Create database, add dummy data	Maduranga, Dharmasena	Finished
Write procedures (database)	Dharmasena	In Progress
Backend development	Maduranga, Venuja	In Progress
Analyze test cases	Venuja	Upcoming
Frontend development	Munasingha	Upcoming
Apply test cases	Venuja, Maduranga	Upcoming
Final report	Venuja, Munasingha	Upcoming
Finalize the project	Venuja, Munasingha	Upcoming

Revision History

DATE	VERSION	REASON FOR CHANGE	AUTHOR
08/06/2022	1.0	Initial	Team 06
22/06/2022	1.1	Gathering more requirements from the client (Dr. Thananjeyan)	Dharmasena, Maduranga, Venuja
12/07/2022	1.2	Requirements only focused on head of department, not considered managing assistant.	Team 06
18/07/2022	2.0	Misunderstanding with the client (Finalized the requirements)	Dharmasena, Minasingha