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UE21CS352B - Object Oriented Analysis & Design using Java

Mini Project Report

"Course Management"

Submitted by:

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6th Semester F Section

Prof. Bhargavi
Designation

January - May 2024

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
FACULTY OF ENGINEERING
PES UNIVERSITY
(Established under Karnataka Act No. 16 of 2013)
100ft Ring Road, Bengaluru – 560 085, Karnataka, India

Problem statement

Developing a Course Management System in Java to streamline administrative tasks, facilitate student enrollment, manage course schedules, and automate grading processes, addressing the inefficiencies and complexities associated with manual course management procedures.

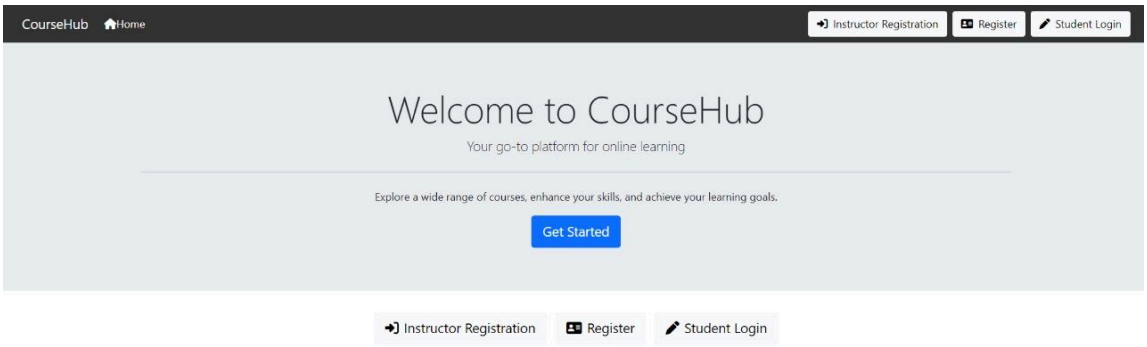
Github link to the Codebase (Repository should be public and accessible to all)

https://github.com/Nandan-N/OOAD-course-project

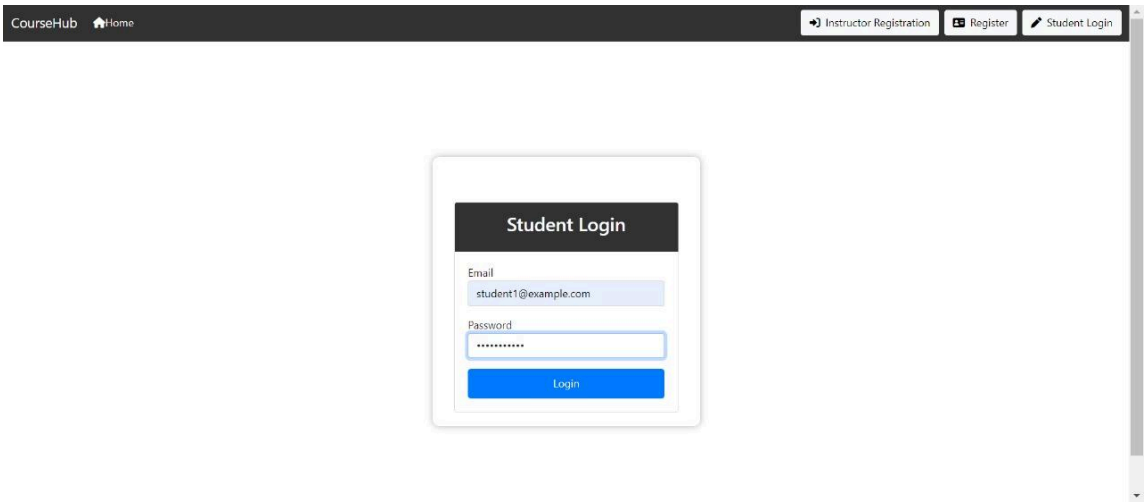
Contribution of each team members

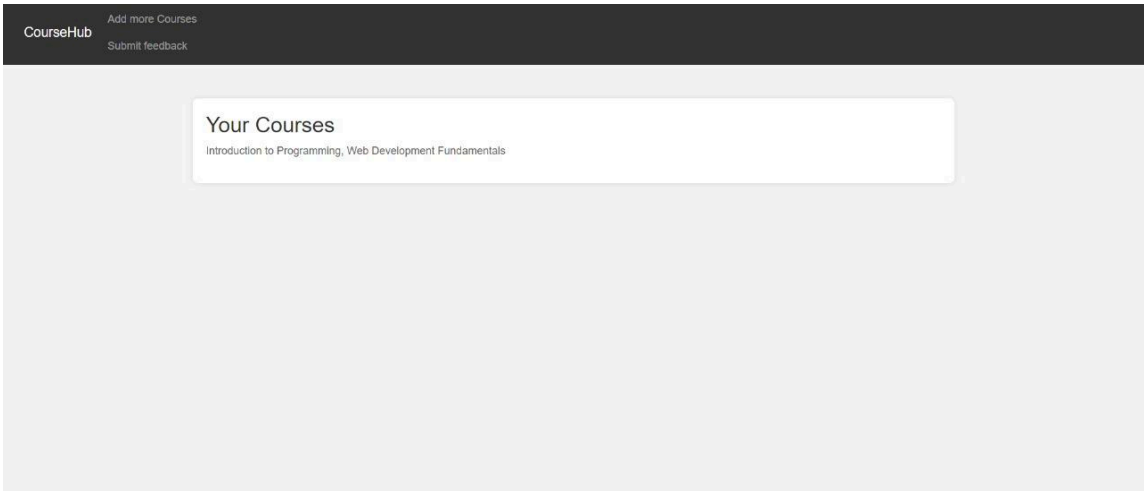
Nasam Saimani - Implementation of the code and Design principles.
Mahima - Implementation of the code and frontend
Mridvi - Project implementation, architecture diagrams and models
Nandan - Writing the report.

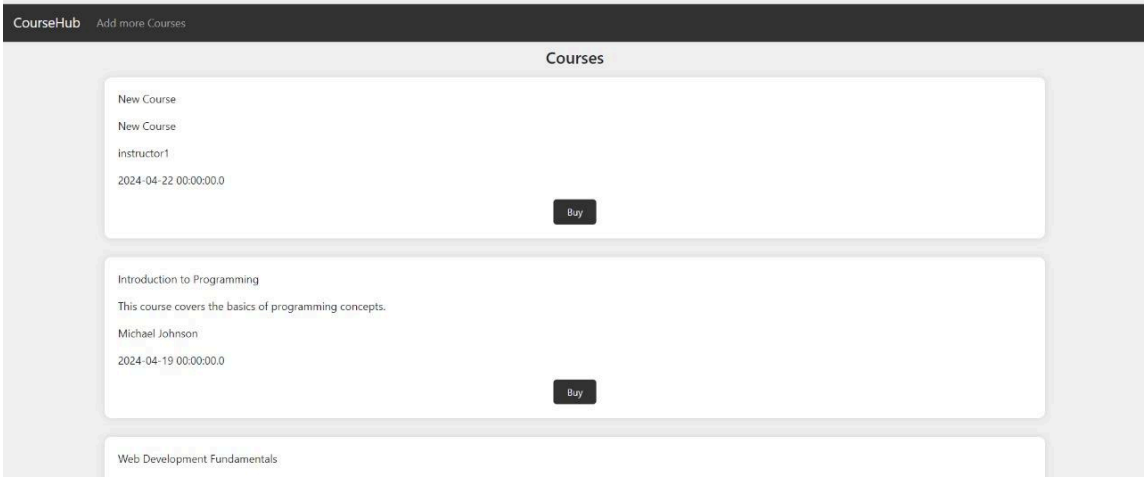
Screenshots with input values populated and output shown (Use white background screens).

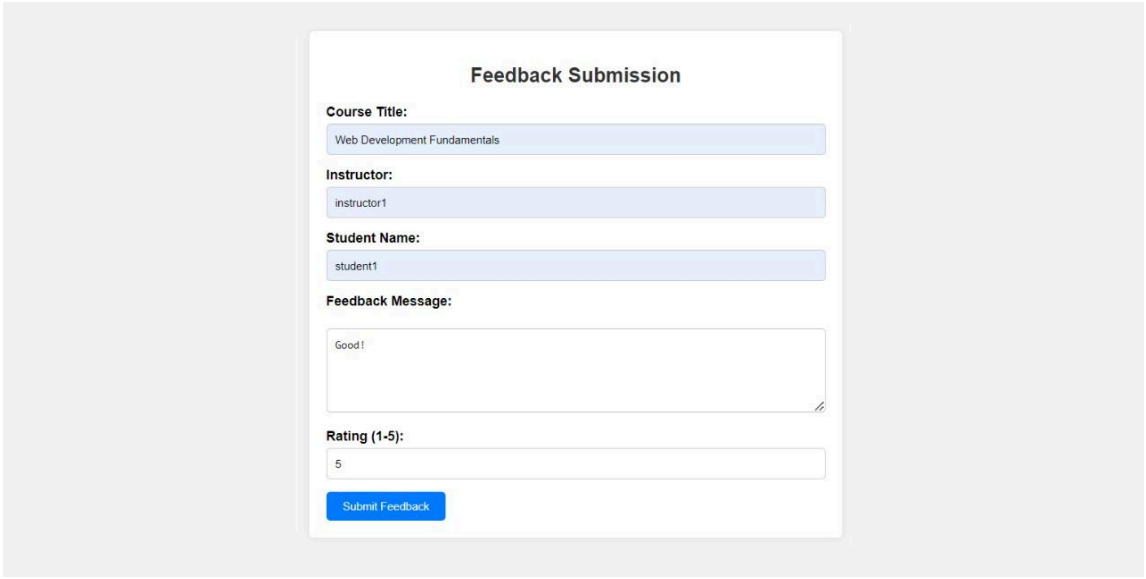

CourseHub
Home
Instructor Registration
Register
Student Login
Welcome to CourseHub
Your go-to platform for online learning
Explore a wide range of courses, enhance your skills, and achieve your learning goals.
Get Started

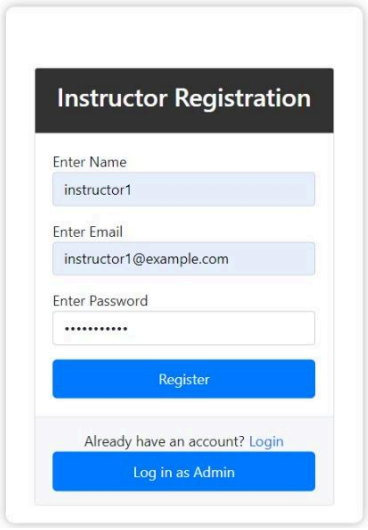
Instructor Registration
Register
Student Login

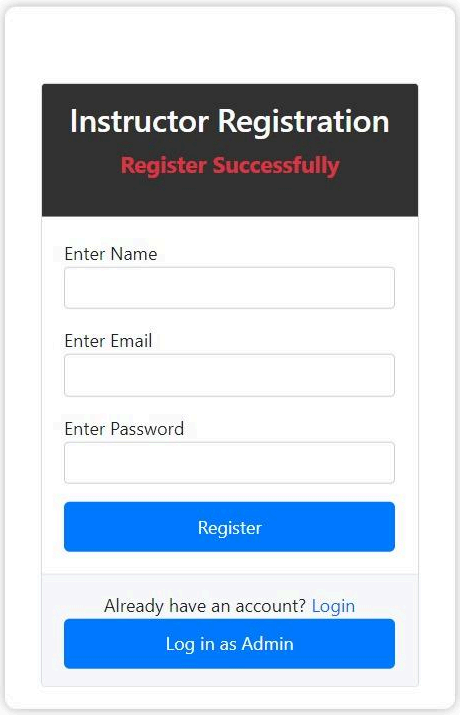

CourseHub
Home
Instructor Registration
Register
Student Login
Student Login
Email
student1@example.com
Password
Login


CourseHub
Add more Courses
Submit feedback
Your Courses
Introduction to Programming, Web Development Fundamentals

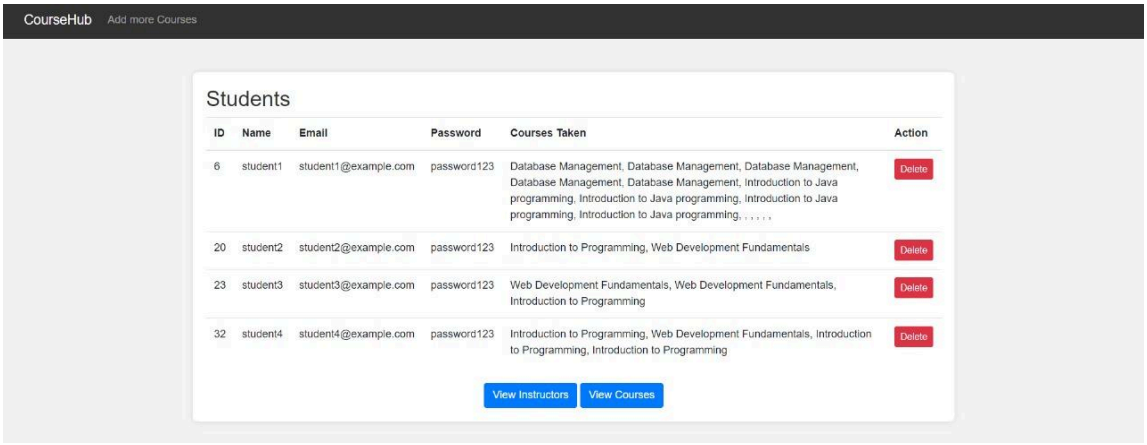

CourseHub
Add more Courses
Courses
New Course
New Course
instructor1
2024-04-22 00:00:00.0
Buy
Introduction to Programming
This course covers the basics of programming concepts.
Michael Johnson
2024-04-19 00:00:00.0
Buy
Web Development Fundamentals

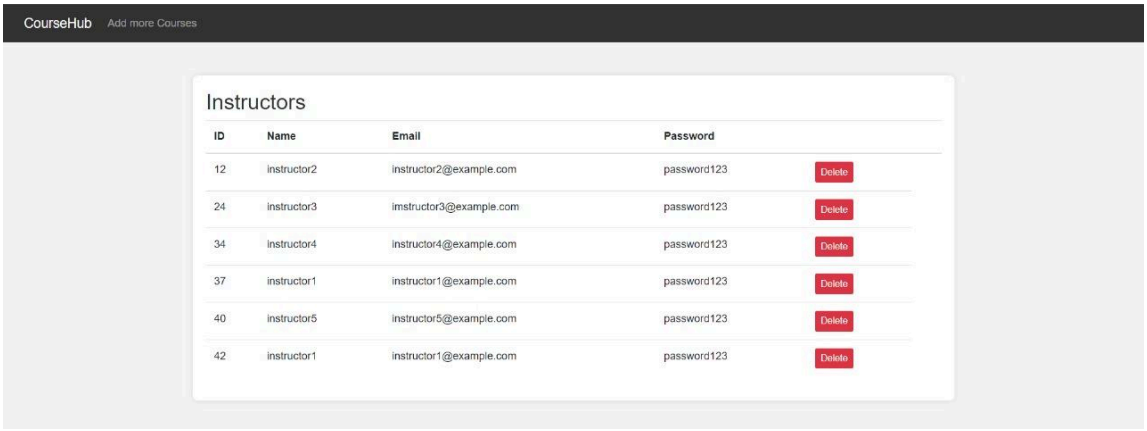

Feedback Submission
Course Title:
Web Development Fundamentals
Instructor:
instructor1
Student Name:
student1
Feedback Message:
Good!
Rating (1-5):
5
Submit Feedback

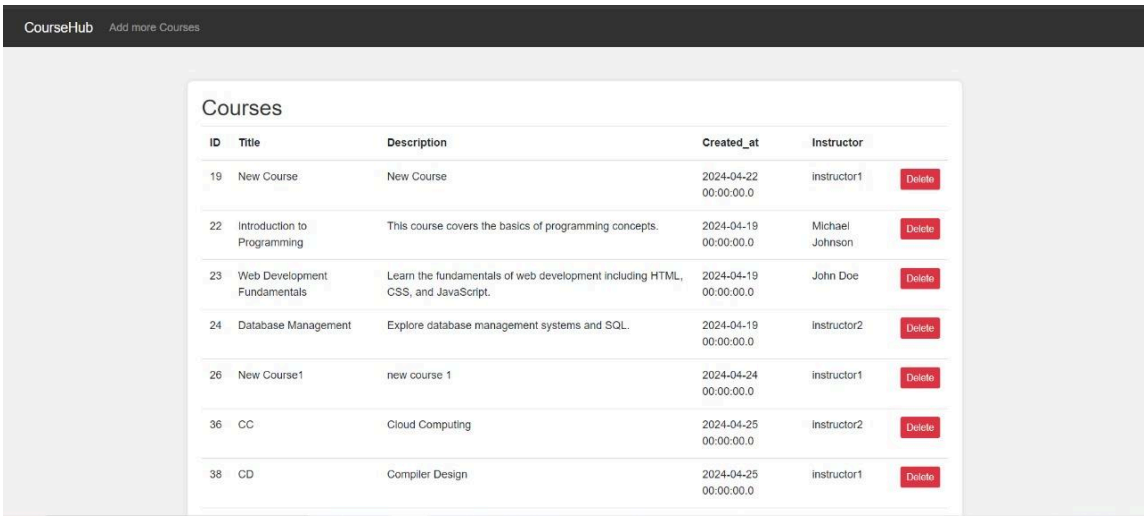

Instructor Registration
Enter Name
instructor1
Enter Email
instructor1@example.com
Enter Password
Register
Already have an account? Login
Log in as Admin

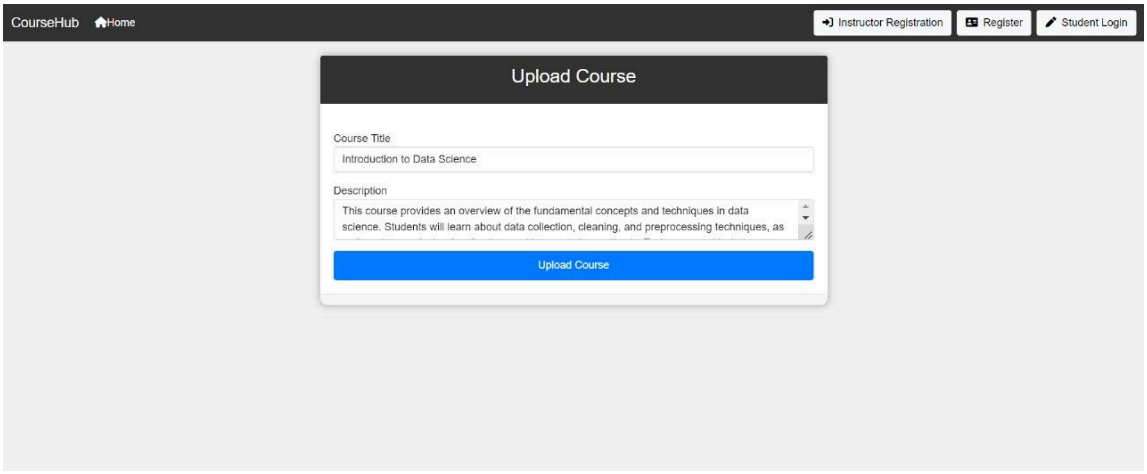

Instructor Registration
Register Successfully
Enter Name
Enter Email
Enter Password
Register
Already have an account? Login
Log in as Admin

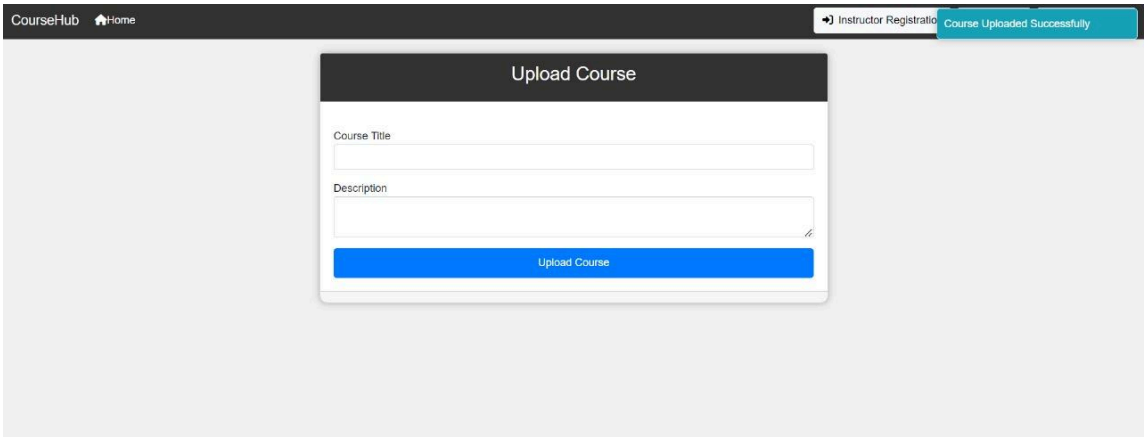
Admin Login
Email:
admin@example.com
Password:
Login

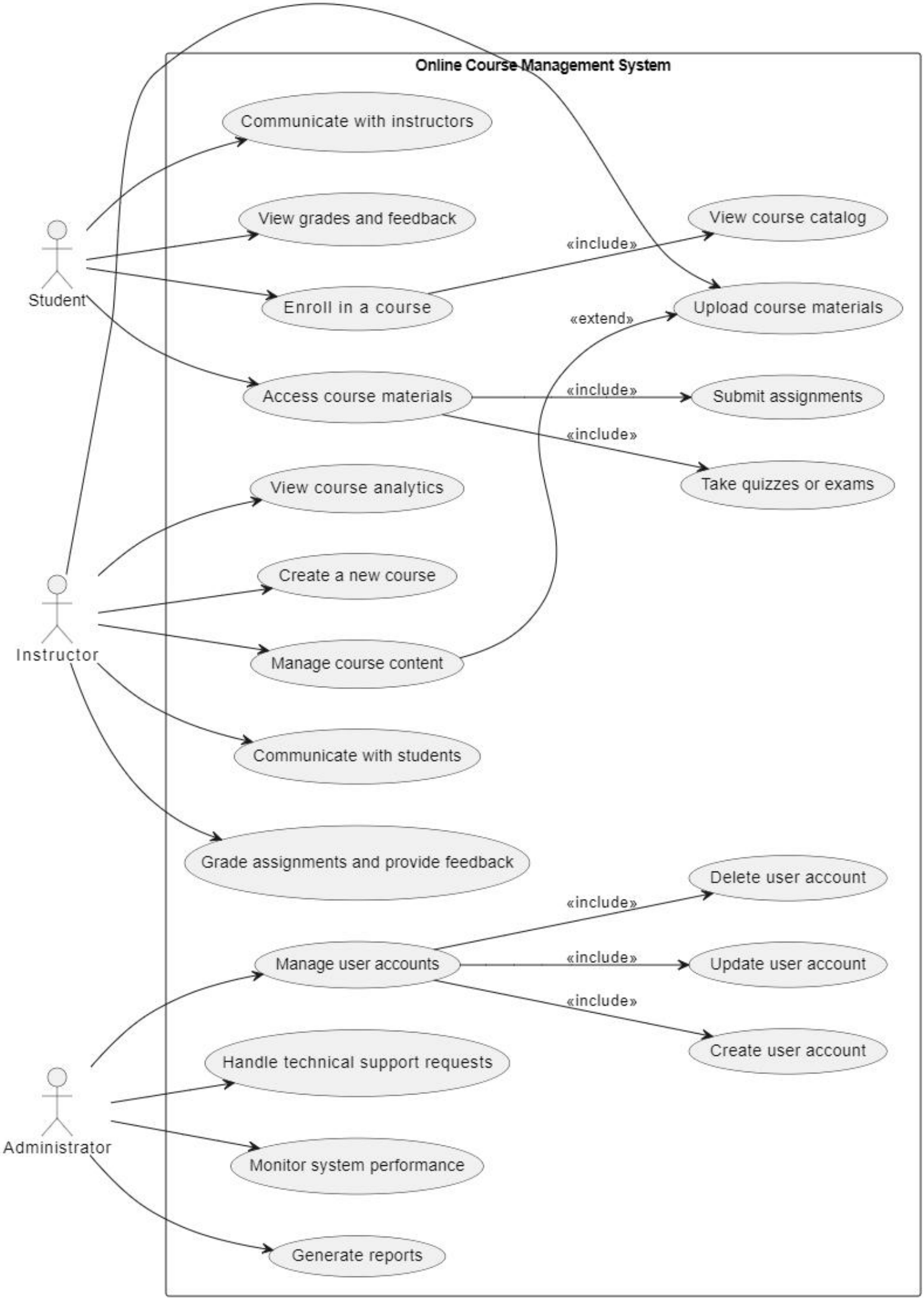

CourseHub
Add more Courses
Students
ID
Name
Email
Password
Courses Taken
Action
6
student1
student1@example.com
password123
Database Management, Database Management, Database Management, Database Management, Database Management, Introduction to Java programming, Introduction to Java programming, Introduction to Java programming, Introduction to Java programming, , , , ,
Delete
20
student2
student2@example.com
password123
Introduction to Programming, Web Development Fundamentals
Delete
23
student3
student3@example.com
password123
Web Development Fundamentals, Web Development Fundamentals, Introduction to Programming
Delete
32
student4
student4@example.com
password123
Introduction to Programming, Web Development Fundamentals, Introduction to Programming, Introduction to Programming
Delete
View Instructors
View Courses

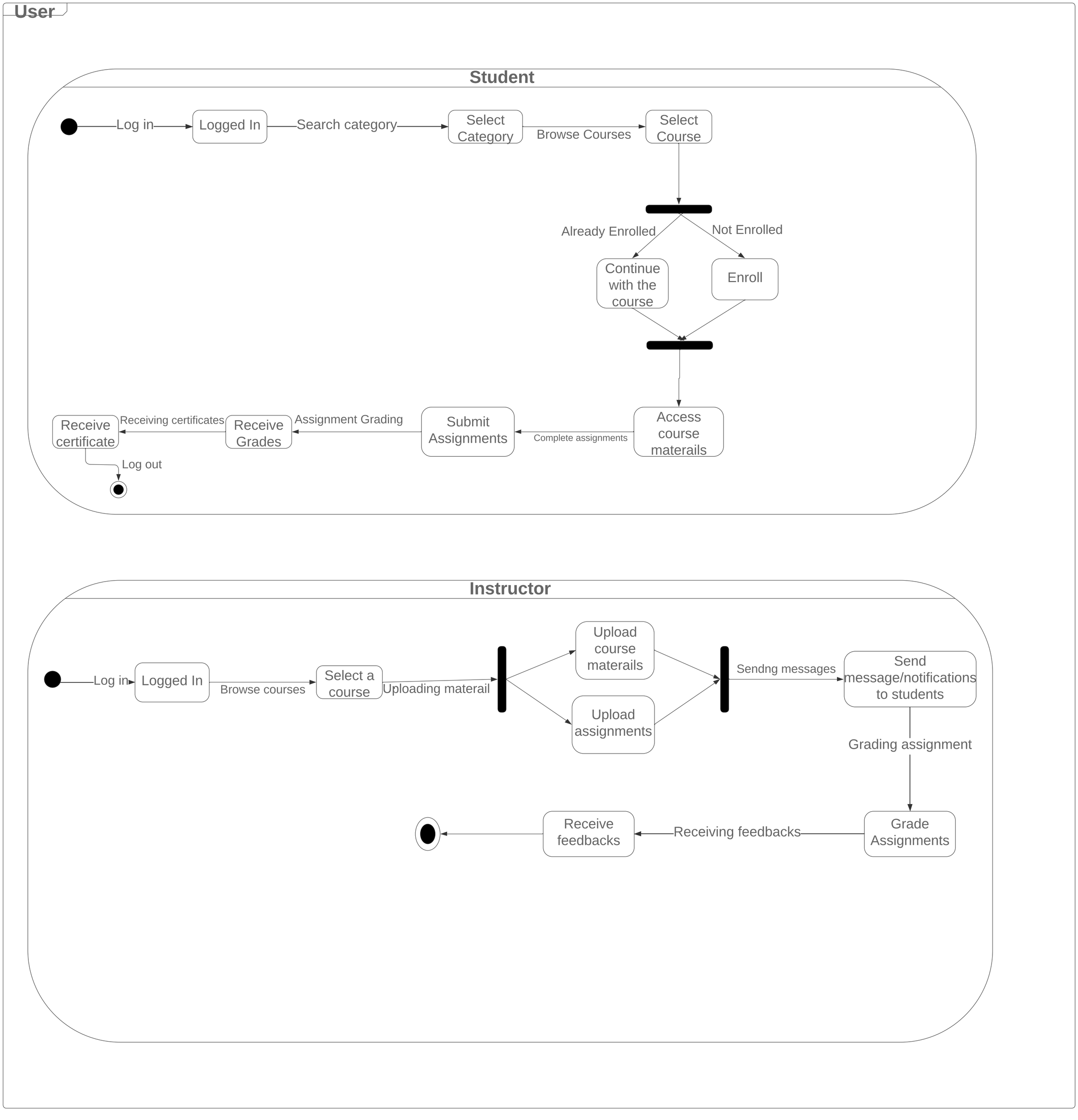

CourseHub
Add more Courses
Instructors
ID
Name
Email
Password
12
instructor2
instructor2@example.com
password123
Delete
24
instructor3
imstructor3@example.com
password123
Delete
34
instructor4
instructor4@example.com
password123
Delete
37
instructor1
instructor1@example.com
password123
Delete
40
instructor5
instructor5@example.com
password123
Delete
42
instructor1
instructor1@example.com
password123
Delete

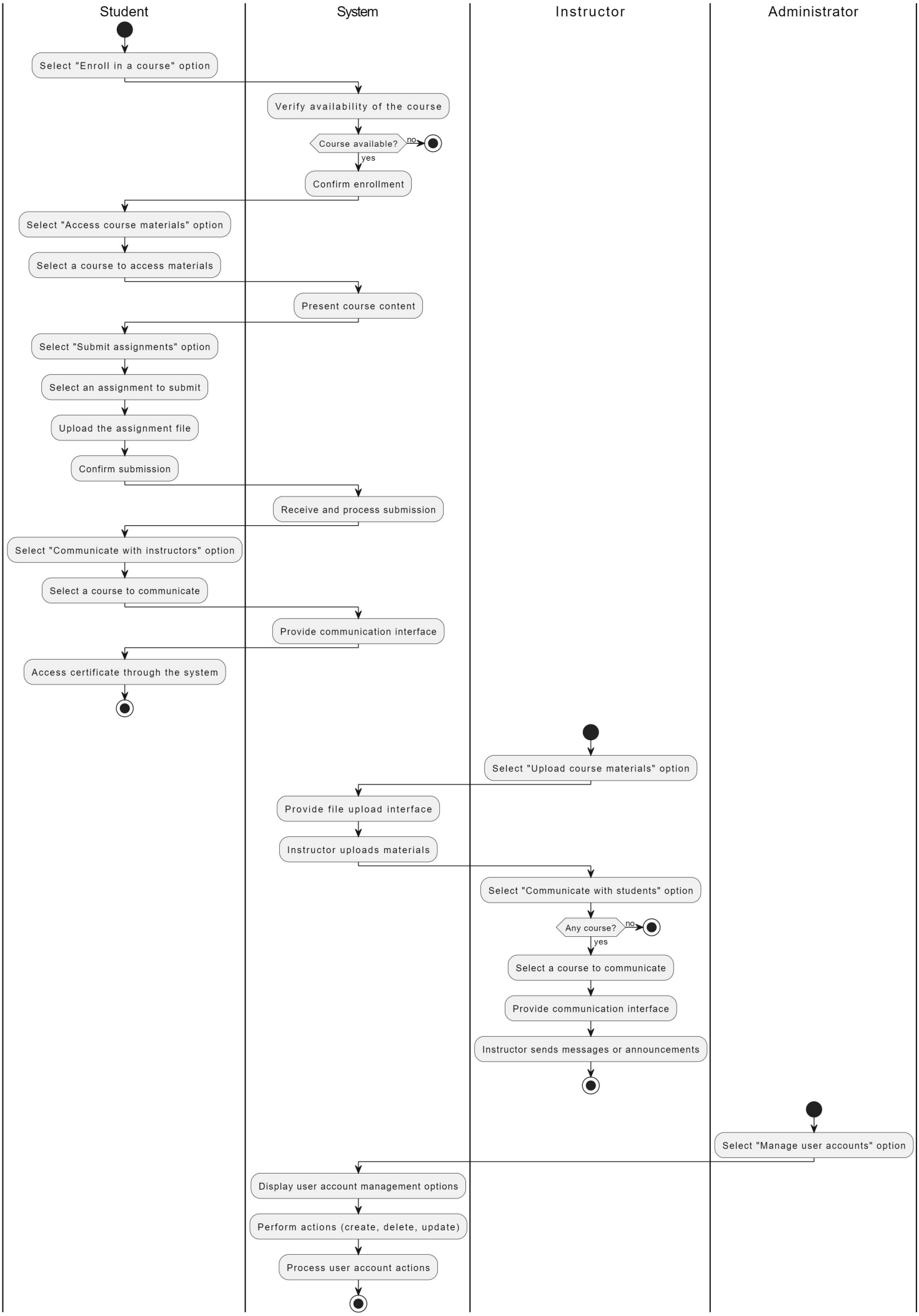

CourseHub
Add more Courses
Courses
ID
Title
Description
Created_at
Instructor
19
New Course
New Course
2024-04-22 00:00:00.0
instructor1
Delete
22
Introduction to Programming
This course covers the basics of programming concepts.
2024-04-19 00:00:00.0
Michael Johnson
Delete
23
Web Development Fundamentals
Learn the fundamentals of web development including HTML, CSS, and JavaScript.
2024-04-19 00:00:00.0
John Doe
Delete
24
Database Management
Explore database management systems and SQL.
2024-04-19 00:00:00.0
instructor2
Delete
26
New Course1
new course 1
2024-04-24 00:00:00.0
instructor1
Delete
36
CC
Cloud Computing
2024-04-25 00:00:00.0
instructor2
Delete
38
CD
Compiler Design
2024-04-25 00:00:00.0
instructor1
Delete

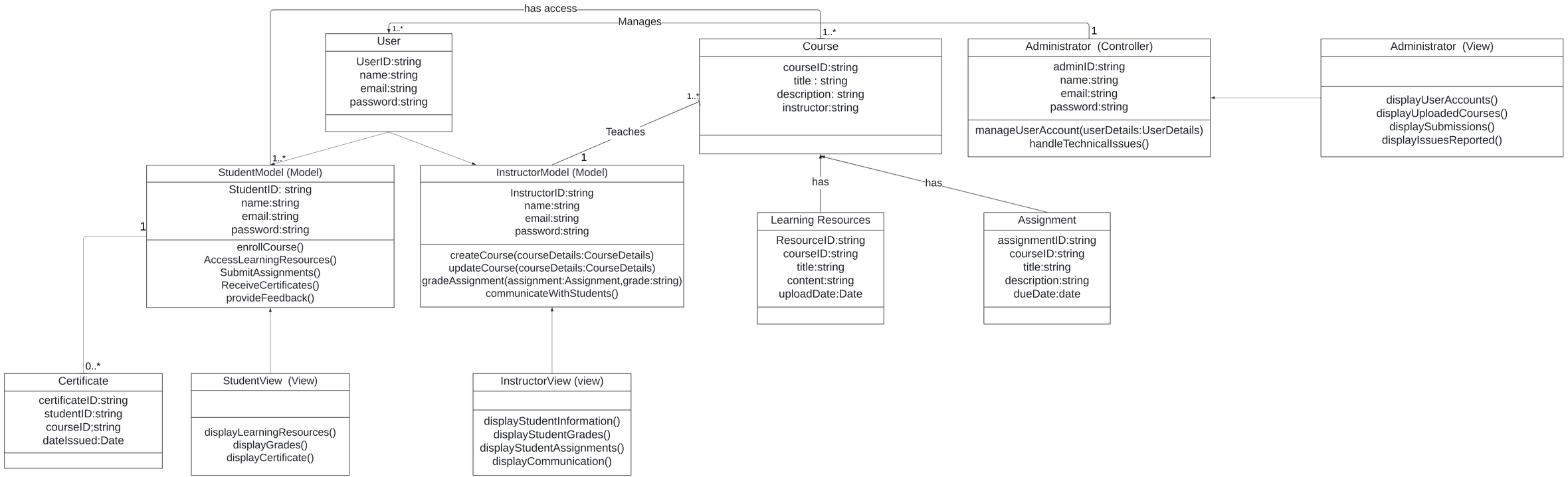

CourseHub
Home
Instructor Registration
Register
Student Login
Upload Course
Course Title
Introduction to Data Science
Description
This course provides an overview of the fundamental concepts and techniques in data science. Students will learn about data collection, cleaning, and preprocessing techniques, as
Upload Course


CourseHub
Home
Instructor Registratio
Course Uploaded Successfully
Upload Course
Course Title
Description
Upload Course


Online Course Management System
Communicate with instructors
View grades and feedback
View course catalog
«include»
Student
Enroll in a course
Upload course materials
«extend»
Access course materials
«include»
Submit assignments
«include»
Take quizzes or exams
View course analytics
Create a new course
Instructor
Manage course content
Communicate with students
Grade assignments and provide feedback
Delete user account
«include»
Manage user accounts
«include»
Update user account
«include»
Create user account
Handle technical support requests
Administrator
Monitor system performance
Generate reports


User
Student
Log in
Logged In
Search category
Select Category
Browse Courses
Select Course
Already Enrolled
Not Enrolled
Continue with the course
Enroll
Access course materails
Complete assignments
Submit Assignments
Assignment Grading
Receive Grades
Receiving certificates
Receive certificate
Log out
Instructor
Log in
Logged In
Browse courses
Select a course
Uploading materail
Upload course materails
Upload assignments
Sendng messages
Send message/notifications to students
Grading assignment
Grade Assignments
Receiving feedbacks
Receive feedbacks


Student
System
Instructor
Administrator
Select "Enroll in a course" option
Verify availability of the course
Course available?
no
yes
Confirm enrollment
Select "Access course materials" option
Select a course to access materials
Present course content
Select "Submit assignments" option
Select an assignment to submit
Upload the assignment file
Confirm submission
Receive and process submission
Select "Communicate with instructors" option
Select a course to communicate
Provide communication interface
Access certificate through the system
Select "Upload course materials" option
Provide file upload interface
Instructor uploads materials
Select "Communicate with students" option
Any course?
no
yes
Select a course to communicate
Provide communication interface
Instructor sends messages or announcements
Select "Manage user accounts" option
Display user account management options
Perform actions (create, delete, update)
Process user account actions


has access
Manages
1..*
1..*
1
User
UserID:string
name:string
email:string
password:string
Course
courseID:string
title : string
description: string
instructor:string
Administrator (Controller)
adminID:string
name:string
email:string
password:string
manageUserAccount(userDetails:UserDetails)
handleTechnicalIssues()
Administrator (View)
displayUserAccounts()
displayUploadedCourses()
displaySubmissions()
displayIssuesReported()
1..*
Teaches
1
1..*
StudentModel (Model)
StudentID: string
name:string
email:string
password:string
enrollCourse()
AccessLearningResources()
SubmitAssignments()
ReceiveCertificates()
provideFeedback()
InstructorModel (Model)
InstructorID:string
name:string
email:string
password:string
createCourse(courseDetails:CourseDetails)
updateCourse(courseDetails:CourseDetails)
gradeAssignment(assignment:Assignment,grade:string)
communicateWithStudents()
has
has
Learning Resources
ResourceID:string
courseID:string
title:string
content:string
uploadDate:Date
Assignment
assignmentID:string
courseID:string
title:string
description:string
dueDate:date
1
0..*
Certificate
certificateID:string
studentID:string
courseID;string
dateIssued:Date
StudentView (View)
displayLearningResources()
displayGrades()
displayCertificate()
InstructorView (view)
displayStudentInformation()
displayStudentGrades()
displayStudentAssignments()
displayCommunication()