PES UNIVERSITY

(Established under Karnataka Act No. 16 of 2013)

Object Oriented Analysis and Design using Java (UE20CS352)

Mini Project

E-PAATHASHALA (E-LEARNING PLATFORM)

TEAM MEMBER DETAILS:

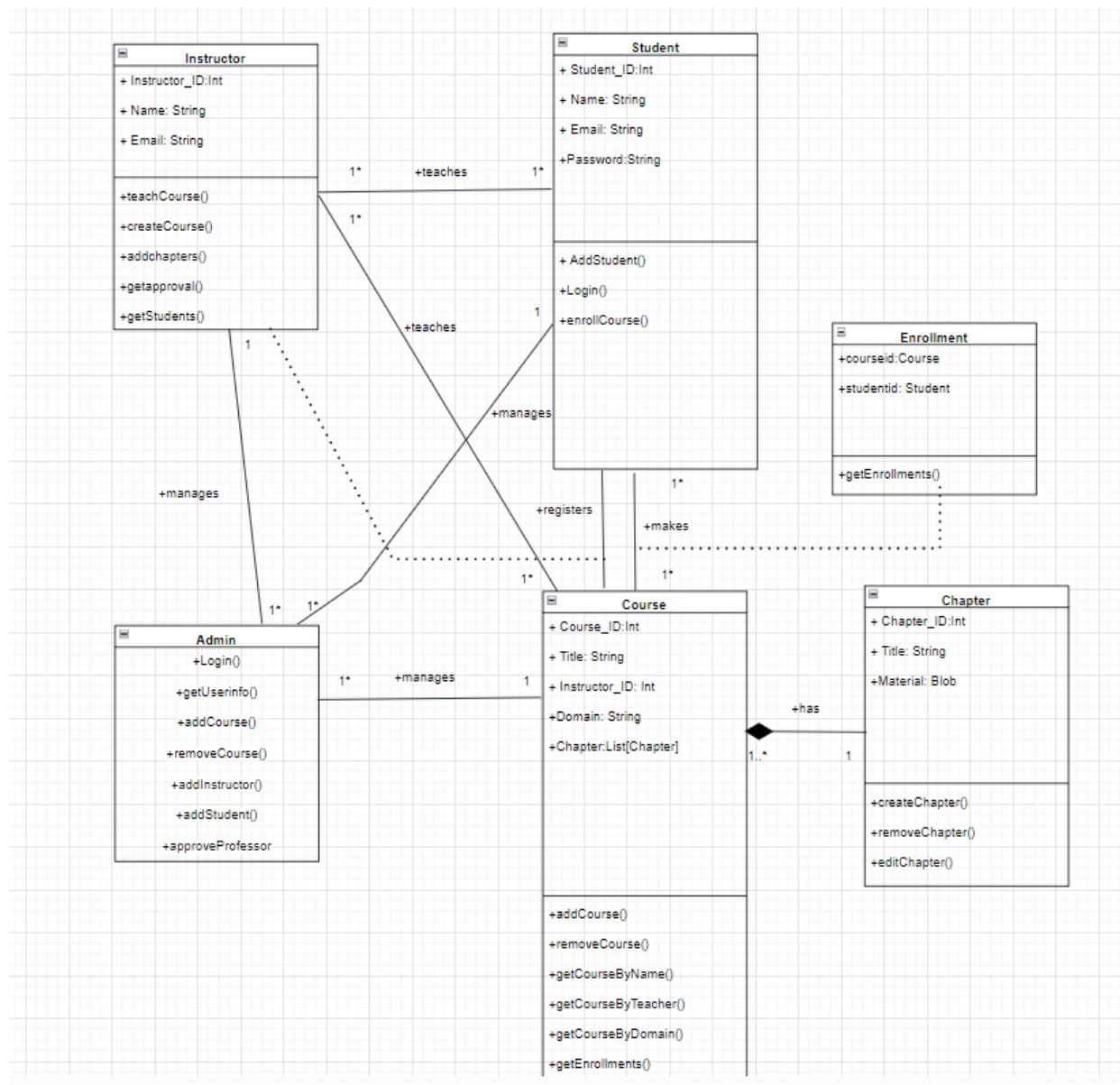|	
Sanjita Chandan	PES1UG20CS380
Shaarvari Kiran	PES1UG20CS389
Shyam Krishna K	PES1UG20CS422
Siddharth M	PES1UG20CS425

PROBLEM STATEMENT:

Create an e-learning platform using Java that includes a MVC framework along with Frontend.
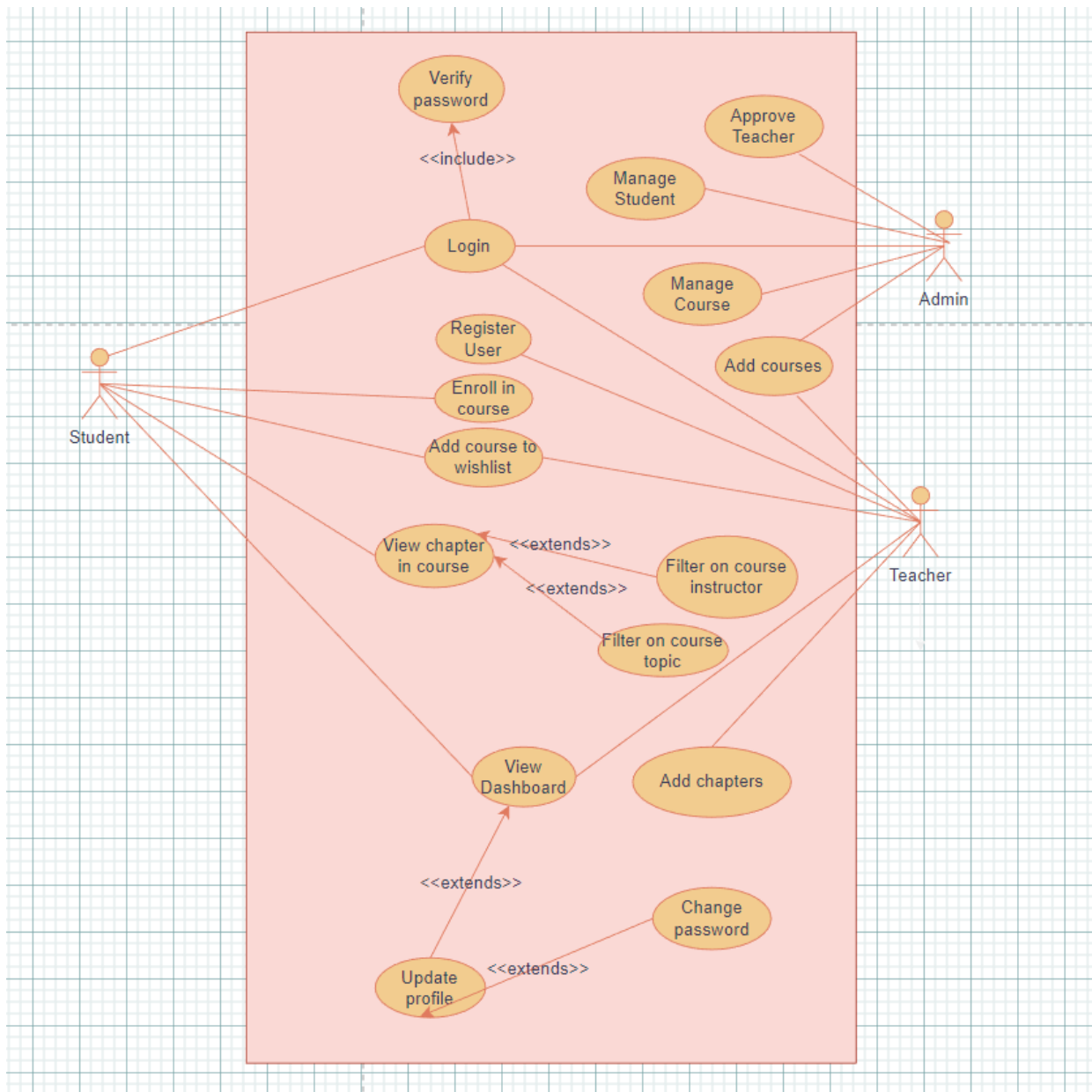
- There should be video-based courses which can be hosted by multiple teachers. The courses should be chapter wise and study materials based on the topic should be provided.

- A filter feature must be implemented where students can view courses offered by their preferred professors and also view all the courses available under a domain.

- The students should be able to enrol for a course and view the material.

- The teacher should be able to create courses, add chapters and view enrolled students.

- The admin must be able to approve teachers, manage students, manage teachers and create courses and chapters.

MODELS:

1. Class Diagram:

Instructor
+ Instructor_ID:Int
+ Name: String
+ Email: String

+teachCourse()
+createCourse()
+addchapters()
+getapproval()
+getStudents()

Student
+ Student_ID:Int
+ Name: String
+ Email: String
+Password:String

+ AddStudent()
+Login()
+enrollCourse()

Enrollment
+courseid:Course
+studentid: Student

+getEnrollments()

Admin
+Login()
+getUserinfo()
+addCourse()
+removeCourse()
+addInstructor()
+addStudent()
+approveProfessor

Course
+ Course_ID:Int
+ Title: String
+ Instructor_ID: Int
+Domain: String
+Chapter:List[Chapter]

+addCourse()
+removeCourse()
+getCourseByName()
+getCourseByTeacher()
+getCourseByDomain()
+getEnrollments()

Chapter
+ Chapter_ID:Int
+ Title: String
+Material: Blob

+createChapter()
+removeChapter()
+editChapter()

Relationships labelled: +teaches, +manages, +registers, +makes, +has

2. Usecase Diagram

DESIGN PATTERNS AND PRINCIPLES

Single Responsibility Principle:

- Controllers only handle the incoming requests and delegate the processing to services.
- Services only contain business logic and delegate data access to repositories.
- Repositories only handle data access to the underlying database.
- Models only

Command Pattern:

This behavioral design pattern allows to encapsulate actions as objects, which can be invoked by different clients. In this pattern, a client sends a request to a receiver object, which in turn delegates the request to a command object to perform the necessary actions. We have used it for the GetMapping and RequestMapping methods.

GITHUB LINK

https://github.com/shyamk10/E-Paathashala

INDIVIDUAL CONTRIBUTIONS

1. Sanjita Chandan Ballapur (PES1UG20CS380)

   - Create course functionality with model, service, repository and controller
   - Frontend implementation for the same

2. Shaarvari Kiran (PES1UG20CS389)

   - Login functionality with authentication using Controller
   - Frontend implementation for the same

3. Shyam Krishna K (PES1UG20CS422)

   - Create chapter for course using model, service, repository and controller
   - Frontend implementation for the same

4. Siddharth M (PES1UG20CS425)

   - Admin approves/rejects professor using service
   - Frontend implementation for the same

SCREENSHOTS

1. Create course

🗋 New Course

Course Name : *
ooadj

Course Start Date : *
08-04-2023

Instructor Name : *
shaar

Skill Level : *
Intermediate

Course Video ID : (only ID) *
elrMbAQSU34

Course Description : *
Introduction to Java course

Course Type : *
Youtube

Course Language : *
English

+ Add Course

Course List

ooadj

937NXutdT6Cy

Instructor: shaar
Learners: 0 enrolled previously
Level: Intermediate
Language: English

Introduction to Java course

More Info

	id	courseid	coursename	coursetype	description	enrolledcount	enrolleddate	instructorinstitution	instructorname	language	skilllevel	websiteurl	youtubeurl
☐ 🖊 Edit 🔧 Copy ⊖ Delete	14	9CVaLtPVtOXQ	dbt	Youtube	Database Technologies	3	2023-04-08		kss	Hindi	Basic		Ekhm-aFgps4
☐ 🖊 Edit 🔧 Copy ⊖ Delete	40	937NXutdT6Cy	ooadj	Youtube	Introduction to Java course	0	2023-04-08		shaar	English	Intermediate		elrMbAQSU34

2. Create chapter

NEW CHAPTERS

Course Name: *

> ooadj

Please choose course name from the drop-down

Chapter-1 Name: *

> Object oriented

Chapter-1 URL: *

> drQK8ciCAjY

Please Provide the Chapter-1 video ID as the URL here...

+ Add

+ Add Chapter

Welcome to ooadj course 👋

Course Contents
(click on chapter name to get into the videos)

✅ **1) Object oriented**
subcontents (1/1)

			id	chapter1id	chapter1name	
☐	✏️ Edit	Copy	⊖ Delete	41	drQK8ciCAjY	Object oriented

3. Enroll in course

ooadj

937NXutdT6Cy

Instructor Name : shaar
Instructor Institution :
Enrolled Date : 2023-04-08
Learners : 1 learners enrolled previously
Course Type : Youtube contents
Level : Intermediate
Language : English

Introduction to Java course

Enrolled   **Visit Course**   **Courselist**   ♡ **Like**

🎓 My Learning

ooadj

937NXutdT6Cy

Date: 2023-04-28
Your ID: tPjFQ08MIM5e
Instructor: shaar
Learners: 1 enrolled previously
Type: Youtube
Level: Intermediate
Language: English

Introduction to Java course

id	courseid	coursename	coursetype	description	enrolledcount	enrolleddate	enrolleduserid	enrolledusername	enrolledusertype	instructorinstitution	instructorname	language	skilllevel	websiteurl
🖉 Edit ⧉ Copy ⊖ Delete 42	937NXutdT6Cy	ooadj	Youtube	Introduction to Java course	1	2023-04-28	tPjFQ08MIM5e	sanj	user		shaar	English	Intermediate	

4. Create professor


Professor Dashboard

Professor added to the database:

	email	degreecompleted	department	experience	gender	institutionname	mobile	password	professorid	professorname	status
☐ 🖊 Edit ⊞ Copy ⊖ Delete	sanj@gmail.com	Btech	CSE	3	Female	PES	8618544470	123	eaur3VCLeHzb	Sanjita	false
☐ 🖊 Edit ⊞ Copy ⊖ Delete	shy@gmail.com	Btech	CSE	2	Female		9902016468	123	heU2WBE5KpGa	shyam	accept

5. Approve professor

Approve Professor Here

IDENTITY	NAME	EMAIL	DEGREE	EXPERIENCE	DEPARTMENT	MOBILE	STATUS
	Sanjita	sanj@gmail.com	Btech	3 years	CSE	8618544470	Accept / Reject
	shyam	shy@gmail.com	Btech	2 years	CSE	9902016468	Accepted

			email	degreecompleted	department	experience	gender	institutionname	mobile	password	professorid	professorname	status
☐	Edit Copy Delete		sanj@gmail.com	Btech	CSE	3	Female	PES	8618544470	123	eaur3VCLeHzb	Sanjita	accept
☐	Edit Copy Delete		shy@gmail.com	Btech	CSE	2	Female		9902016468	123	heU2WBE5KpGa	shyam	accept

6. Add wishlist

ooadj

937NXutdT6Cy

Instructor Name : shaar
Instructor Institution :
Enrolled Date : 2023-04-08
Learners : 1 learners enrolled previously
Course Type : Youtube contents
Level : Intermediate
Language : English

Introduction to Java course

Enrolled | Visit Course | Courselist | ♥ Fav

♥ **User WishList**

Course : java	Course : ooadj
Course ID : HTQoBXFnSEVc	Course ID : 937NXutdT6Cy
Instructor : mahitha	Instructor : shaar
Learners : 0 enrolled already	Learners : 1 enrolled already
Type : Youtube Tutorials	Type : Youtube Tutorials
Level : Basic	Level : Intermediate
Language : English	Language : English
Visit Course	Visit Course

			coursename	courseid	coursetype	description	enrolledcount	instructorinstitution	instructorname	language	likeduser	likedusertype	skilllevel	websiteurl
☐	Edit Copy Delete		java	HTQoBXFnSEVc	Youtube	mbmbm	0		mahitha	English	1@gmail.com	user	Basic	
☐	Edit Copy Delete		ooadj	937NXutdT6Cy	Youtube	Introduction to Java course	1		shaar	English	1@gmail.com	user	Intermediate	

7. View Statistics

Admin Dashboard — Home — Welcome admin@gmail.com — Logout

Add Professor

Add Course

Add Chapters

Approve Professor

Course List

WishList

Users
2 users registered

Professors
2 Professors currently teaching the learners

Courses
2 courses available

Learners
1 enrollments have been made by **1** Learners

Chapters

Favourites