

SOFTWARE REQUIREMENT SPECIFICATION FOR ONLINE COURSE SYSTEM

Name	Maheetha S
Roll Number	7376221CS213
Seat Number	60
Project ID	20
Project Title	Online Course System
Stack	Python Stack

STACK COMPONENTS

Frontend	<ul style="list-style-type: none">➤ HTML➤ CSS➤ JS
Backend	<ul style="list-style-type: none">➤ Python➤ Django (Python Web)
Database	<ul style="list-style-type: none">➤ PostgreSQL➤ MySQL
API	<ul style="list-style-type: none">➤ OpenAPI➤ SOAP APIs➤ RESTful API

PROBLEM STATEMENT

The task is to develop a responsive and scalable web application that facilitates online learning through browsing, searching, and enrollment in task-based courses. Key features include user authentication for secure access, course creation and management functionalities, user reviews and ratings for course evaluation, output visualization for enhanced learning outcomes, and progress tracking to monitor user advancement. Additionally, the system must support task submission, including video submissions and provide an instructor's chat board

for interactive guidance. The challenge lies in creating a user-friendly platform that accommodates a large user base and diverse course catalog while ensuring seamless performance and scalability.

INTRODUCTION

The project aims to develop a responsive and scalable web application for online learning, enabling users to browse, search and enroll in task-based courses. With a focus on user authentication and secure access, the platform will offer course creation and management features, user reviews and ratings for course evaluation, and robust progress tracking capabilities. The goal is to create a user-friendly platform that accommodates a diverse course catalog while ensuring seamless performance and scalability.

PROJECT SCOPE

The project scope encompasses the design and development of a feature-rich online course system, including frontend and backend components. Key functionalities include user authentication, course creation and management, user reviews and ratings, output visualization, progress tracking, task submission with video uploads and instructor chat board. The system will prioritize responsiveness, usability, security, and scalability to meet the needs of a large user base.

PROJECT OVERVIEW

The Online Course System offers users access to a wide range of courses spanning 2D art, 3D modeling, Unity development, graphic design, animation, etc. By incorporating structured video content, instructor interaction, task-based learning and progress tracking, the platform aims to facilitate effective skill development. Additionally, user ratings and leaderboards foster a sense of community and motivation while data persistence ensures seamless user interaction.

PROJECT FLOW

User Registration and Authentication:

- Users register for an account or log in to access the platform securely.
- Authentication mechanisms ensure data security and privacy.

Homepage Navigation:

- Users navigate through the homepage using side panels for easy access to sections like Home, Courses, Achievements, Startup, and Projects.
- Floating images enhance visual appeal and engagement.

Course Selection and Enrollment:

- Users browse and enroll in courses categorized into 2D Art, 3D Models, Unity Development, Graphic Design, Animation, etc.
- Each course provides structured video content, instructor availability, and a chat board for interaction.

Learning and Progress Tracking:

- Users access course content and watch videos with a video player that prevents skipping/dragging.
- Progress tracking updates as users watch videos, enabling the next button only after completing the video.

Admin Actions:

- Admins exclusively upload videos for courses to maintain content integrity and quality.
- Admins ensure consistency and quality control across the platform.

Task Submission and Approval:

- After video completion, users submit tasks like 3D modeling and output video creation.
- Instructors verify and approve tasks, enabling the completed button and disabling submission edits.

User-Instructor Interaction:

- Users interact with instructors via chat boards to clarify doubts and seek guidance.
- Instructors provide support and feedback to enhance the learning experience.

Course and Instructor Ratings:

- Users rate courses and instructors upon completion, influencing course popularity and instructor reputation.
- Ratings provide feedback and motivation for continuous improvement.

Leaderboard and Data Persistence:

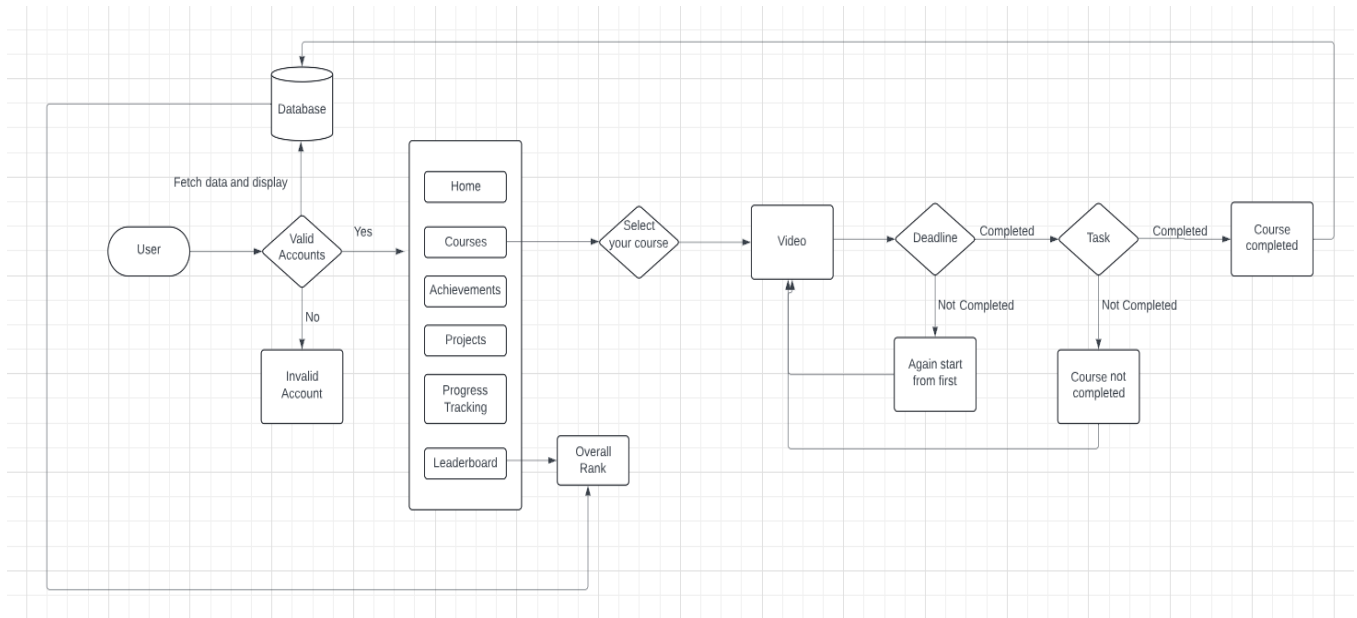
- Student leaderboards track performance for ongoing motivation.
- Chat board data persists to maintain conversation history.

Non-Functional Requirements:

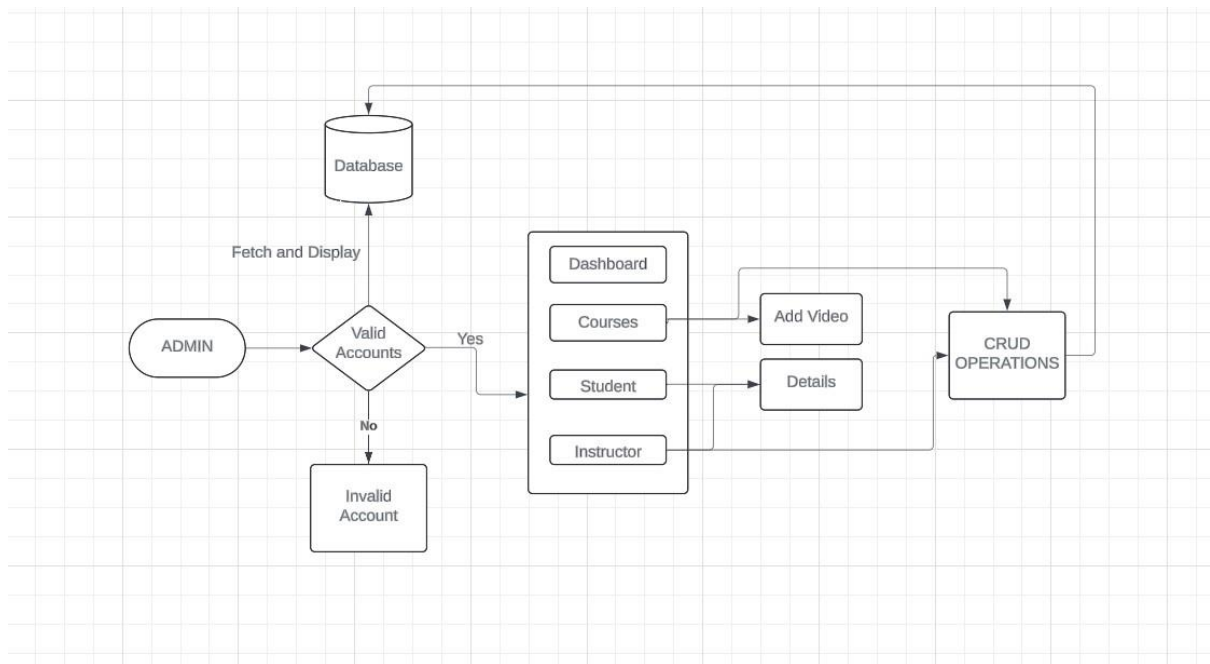
The system ensures a neat and intuitive interface, consistent design elements, mobile responsiveness, smooth video playback, quick loading times, user authentication, encryption of sensitive data, scalability, reliability, and regular backups for data integrity.

FLOWCHART

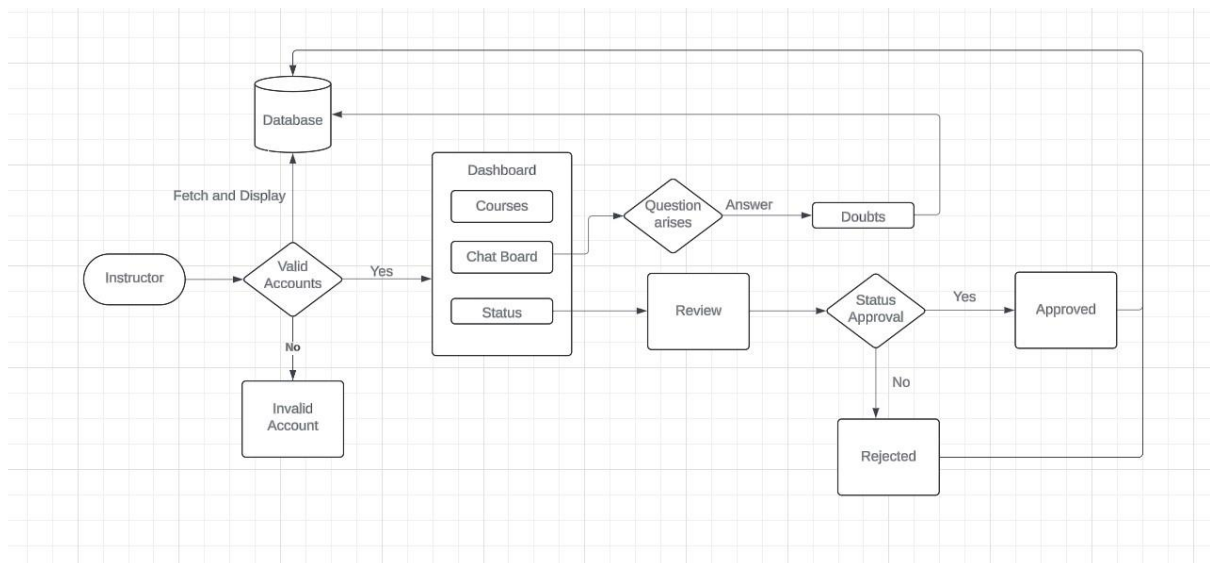
USER



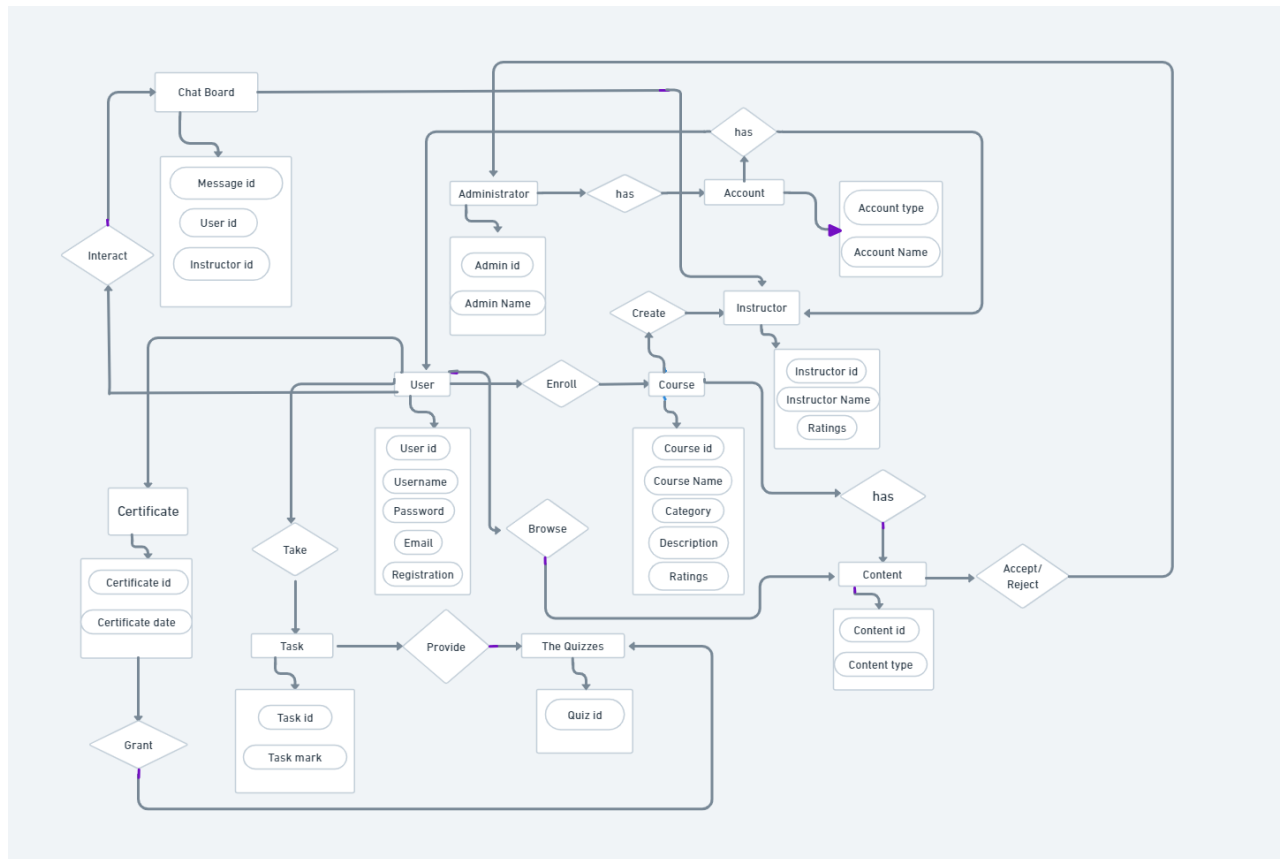
ADMIN



INSTRUCTOR



ER DIAGRAM



PROTOTYPE

LOG IN

ONLINE COURSE SYSTEM

Sign In

USERNAME

Enter username


PASSWORD

Enter password

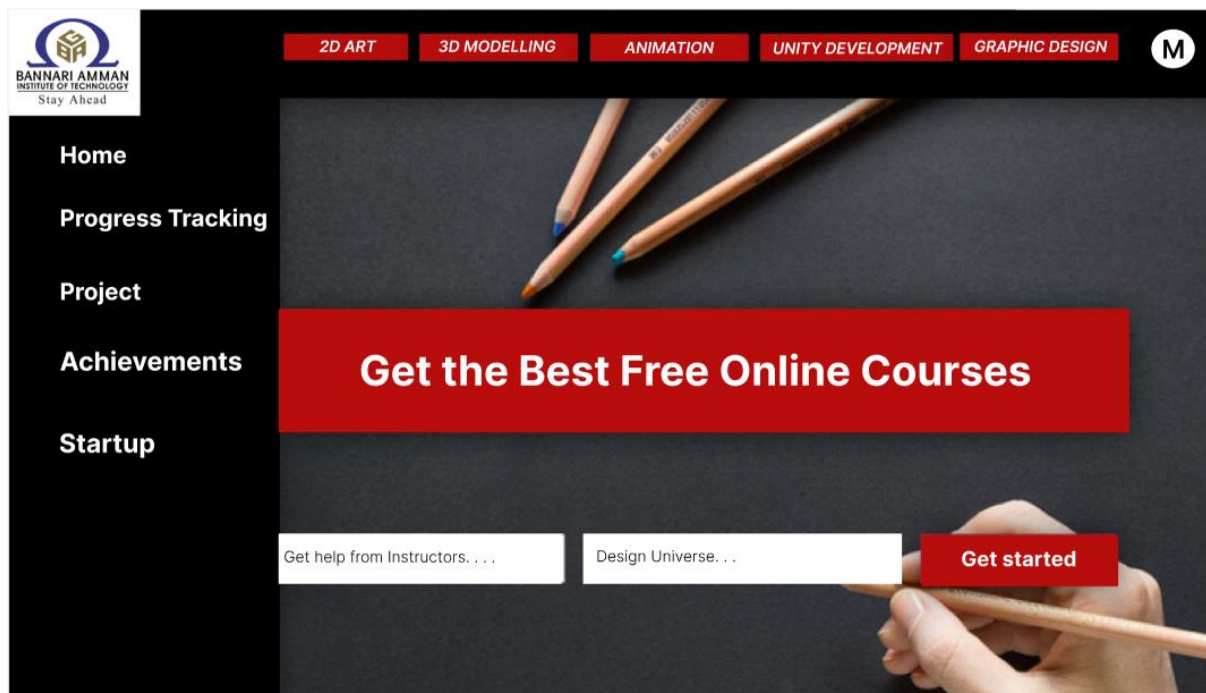
☐ Forget password

Sign In

OR

 Sign in with google

USER



Home

Progress Tracking

Project

Achievements

Startup

2D ART

3D MODELLING

ANIMATION

UNITY DEVELOPMENT

GRAPHIC DESIGN

M

Sketch Mastery

Illustration Techniques

Artistic Expressions

Make a 2D Flappy Bird Game

Ultimate 2D Shader Graph

Cartoon Game Logo Art

Q. Browse more...

Get the Best Free Online Courses

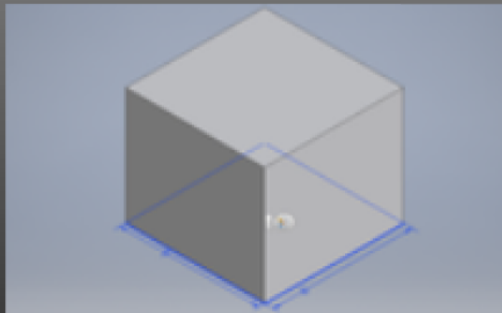
Get help from Instructors. . . .

Design Universe. . . .

Get started

INTRODUCTION TO 3D MODELLING

M



Instructor: Olivia

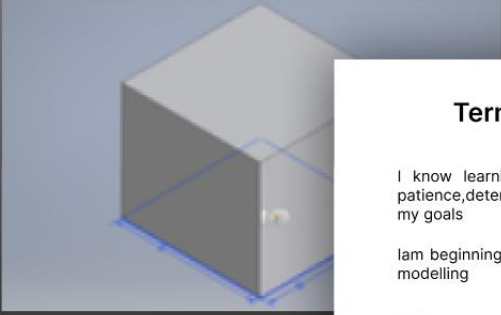
Skills you will gain: 3D Modelling

⌚ Duration: 5 hours

What you'll learn

- Basic Concepts and Tools
- Polygon Modelling Techniques
- Introduction to Sculpting
- Navigating the 3D Workspace
- Texturing and Materials
- Basic Animation Principles
- Creating Basic Shapes
- Lighting and Rendering
- Exporting and Sharing Models

INTRODUCTION TO 3D MODELLING



Instructor: Olivia

will gain: 3D Modelling

on: 5 hours

Terms and Conditions

I know learning can be hard, but I have the patience, determination and discipline to reach my goals

I am beginning my learning in introduction to 3D modelling

☒ I commit to completing this course

[Start the course](#)

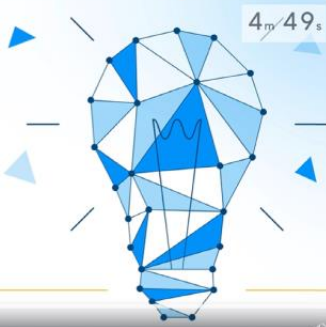
What you'll learn

- Basic Concepts and Tools
- Navigating the 3D Workspace
- Creating Basic Shapes

- Polygon
- Texturing and Materials
- Lighting and Rendering

- Basic Animation Principles
- Exporting and Sharing Models

Introduction to 3D Modelling




4m 49s

Let's Get Excited!

0:11 / 4:45

1x


Drop your doubts here 

Type here.....

[Next](#)

Introduction to 3D Modelling


1



Introduction to 3D Modelling

Bit


2



User Interface Overview

Bit


3



Toolbar Introduction

Bit

4



Properties Panel

Bit

Task Submission

1. Output Screenshot

Add file

2. Source File

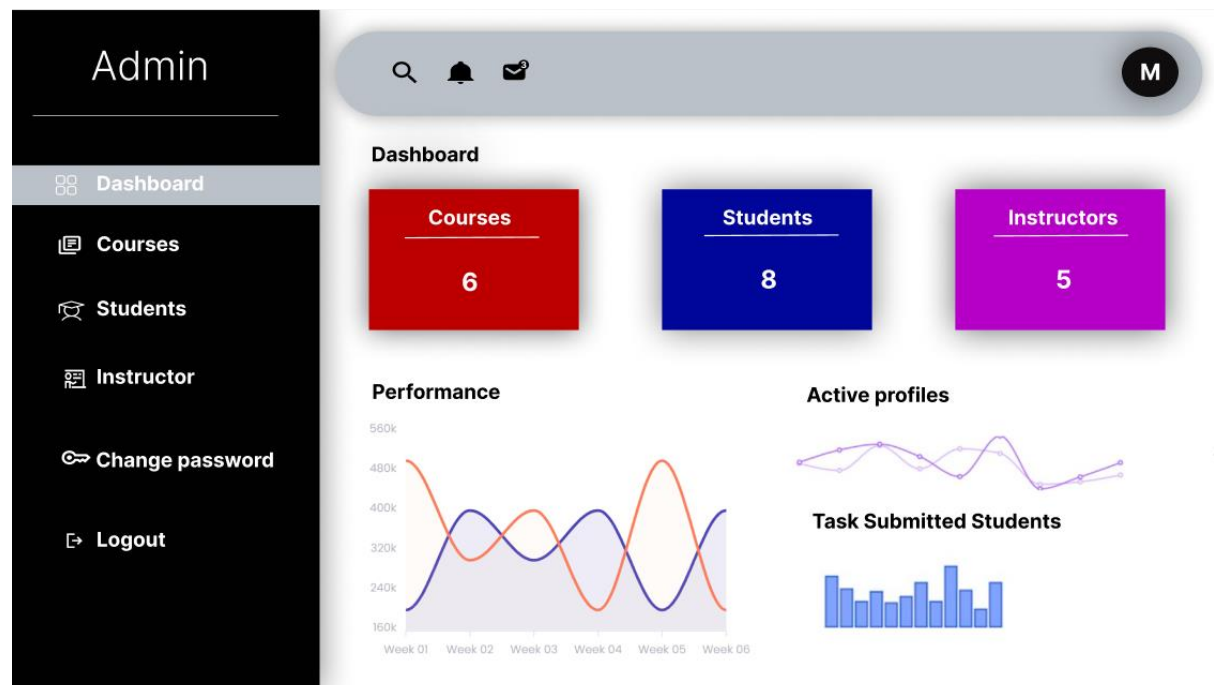
Add file

3. Ratings

Your answer

Submit

ADMIN



Admin

Dashboard

Courses

Students

Instructor

Change password

Logout

List of courses

M

Course ID	Name	Author	Action
10	2D Art	Asha	<div><div></div><div></div></div>
11	3D Modelling	Vikos	<div><div></div><div></div></div>
12	Unity Development	John	<div><div></div><div></div></div>
13	Animation	Kim	<div><div></div><div></div></div>
14	Graphic Design	Manish	<div><div></div><div></div></div>

Admin

Dashboard

Courses

Add video

Students

Instructor

Change password

Logout

Add Video

M

Course ID	Name	Author	Video
10	2D Art	Asha	<div><div></div>Add video</div>
11	3D Modelling	Vikos	<div><div></div>Add video</div>
12	Unity Development	John	<div><div></div>Add video</div>
13	Animation	Kim	<div><div></div>Add video</div>
14	Graphic Design	Manish	<div><div></div>Add video</div>

Admin

Dashboard

Courses

Students





















Instructor

Change password

Logout

List of students

M

Student ID	Name	Email	Contact	Action
101	Kavya	kavya.cs22@bitsathy.ac.in	 	 
102	Ram	ram.ad22@bitsathy.ac.in	 	 
103	Priya	priya.it22@bitsathy.ac.in	 	 
104	Sam	sam.cs22@bitsathy.ac.in	 	 
105	Dhiya	dhiya.cs22@bitsathy.ac.in	 	 

Admin

Dashboard

Courses

Students

Instructor


Change password

Logout

Instructors

M

Search




Pooja

2D Art

Profile

Chat




Dharani

3D Modelling

Profile

Chat




Riyona

UI/Ux

Profile

Chat




Jeevi

Animation

Profile

Chat




Varun

Graphic Design

Profile

Chat



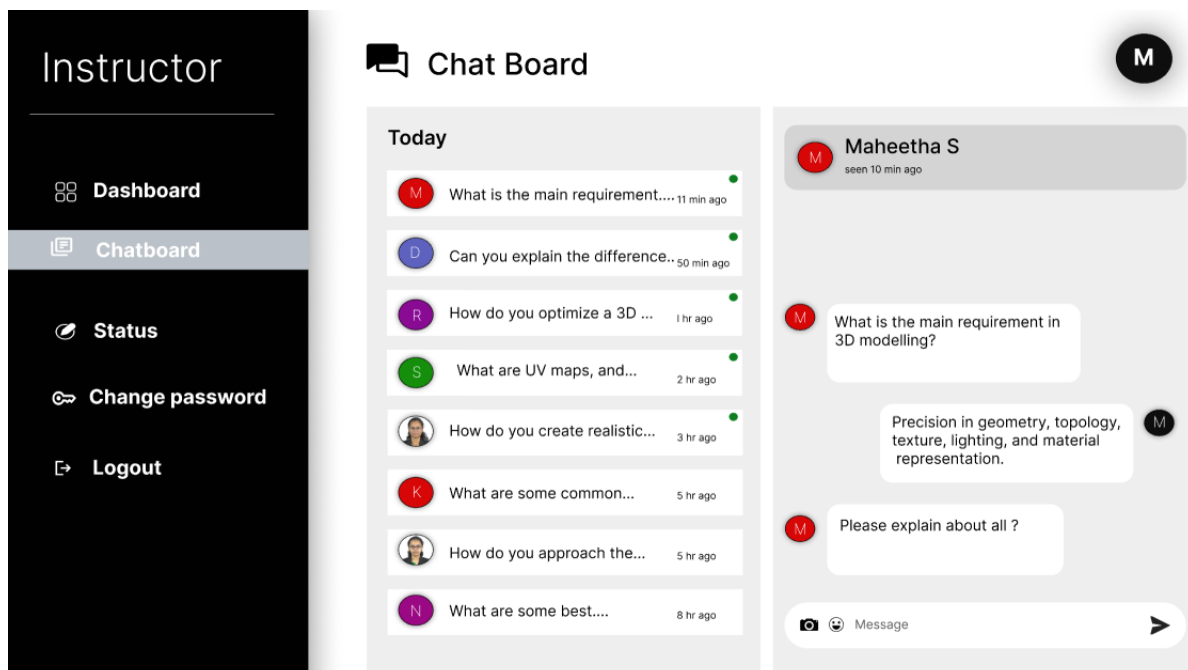
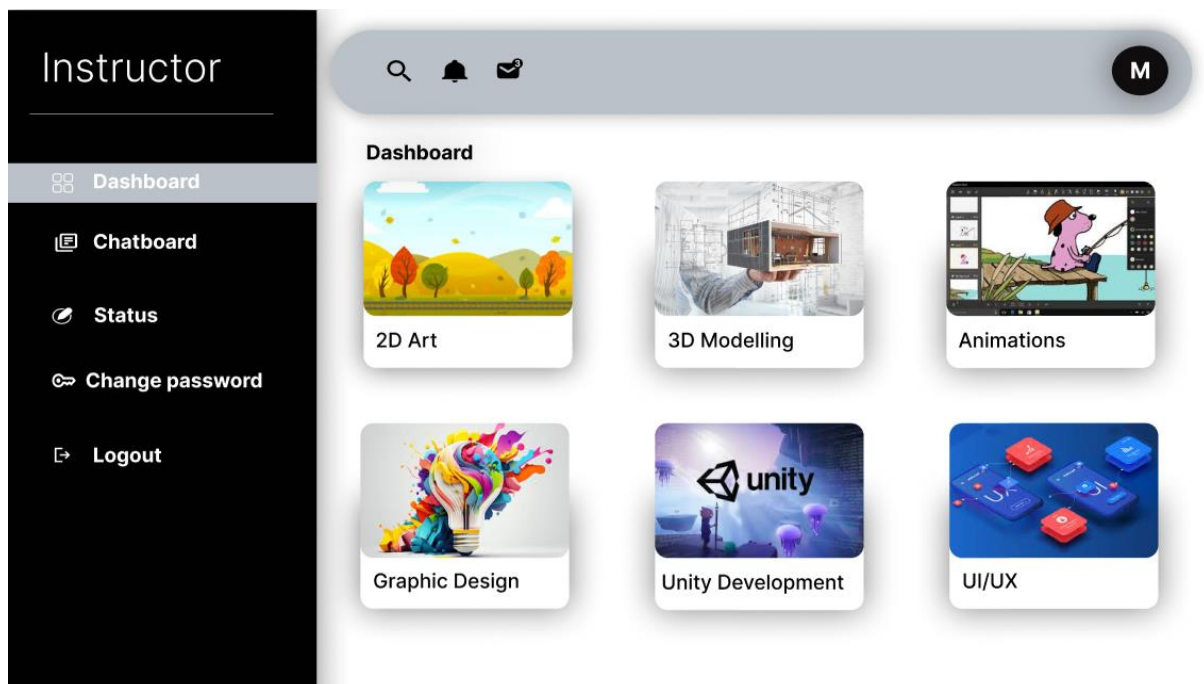
Amit

Django

Profile

Chat

INSTRUCTOR



Instructor

Dashboard

Chatboard

Status

Change password

Logout

Task Review and Approval Status

M

Student ID	Name	Email		Status
101	Kavya	kavya.cs22@bitsathy.ac.in	Review	<div>Approve</div> / <div>Reject</div>
102	Ram	ram.ad22@bitsathy.ac.in	Review	<div>Approve</div> / <div>Reject</div>
103	Priya	priya.it22@bitsathy.ac.in	Review	<div>Approve</div> / <div>Reject</div>
104	Sam	sam.cs22@bitsathy.ac.in	Review	<div>Approve</div> / <div>Reject</div>
105	Dhiya	dhiya.cs22@bitsathy.ac.in	Review	<div>Approve</div> / <div>Reject</div>