SOEN342: Software Requirements and Specifications
section I

Phase III

Group A

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Instructor: Prof. Joumana Dargham
Project Coordinator: Ahmed Rebei

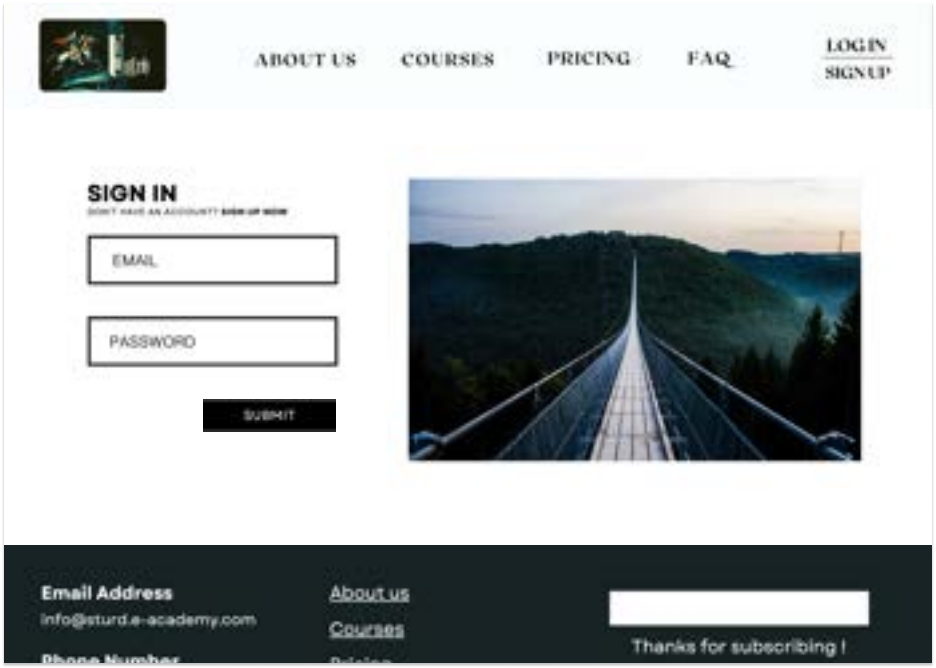
GINA CODY School of Engineering and Computer Science
Department of Computer Science and Software Engineering

Fall 2022

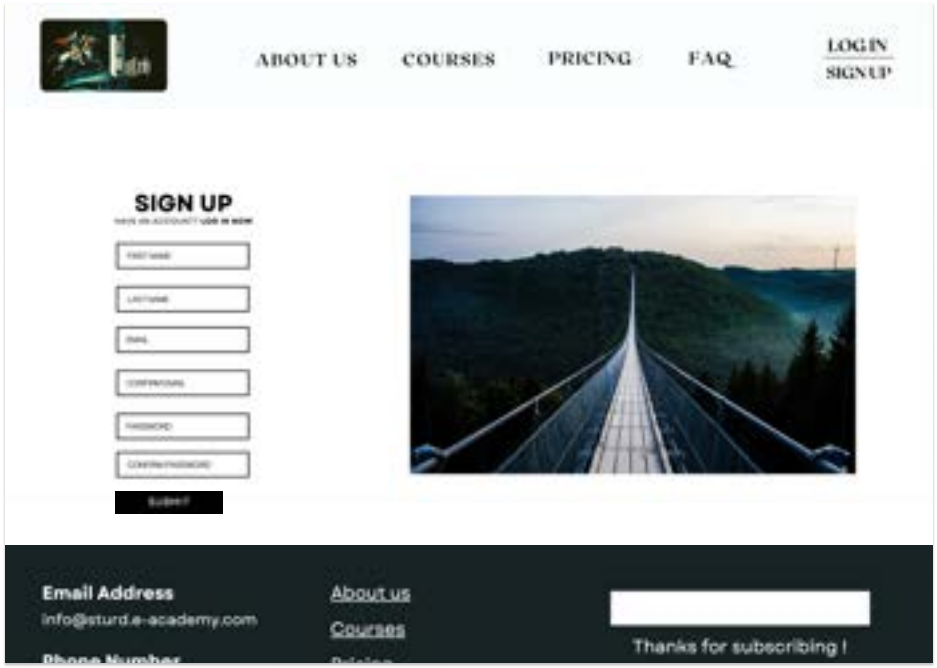
1 Snapshots of Our GUI

Prototype: STURD E-ACADEMY

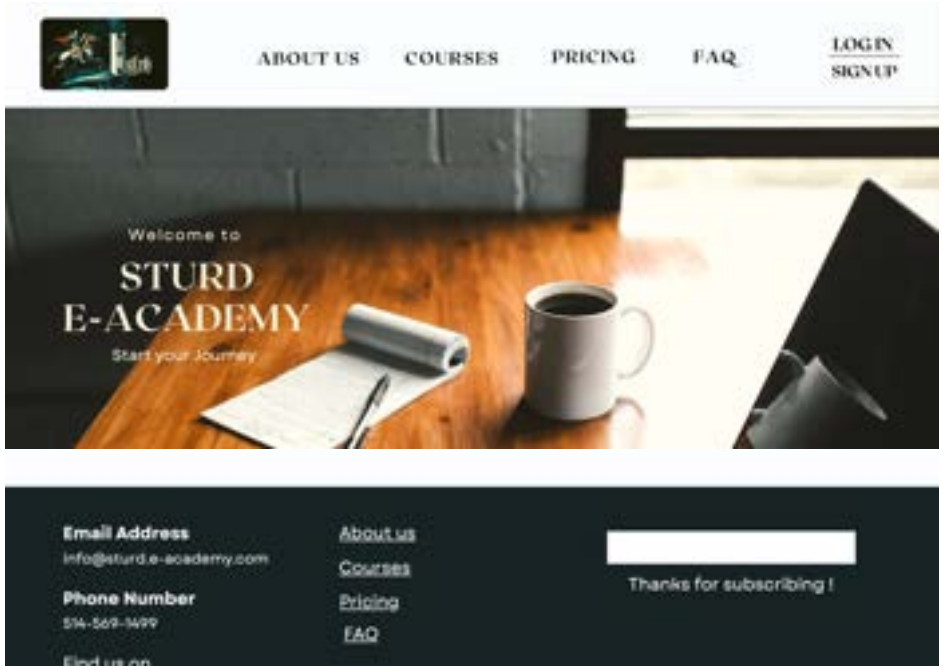
Log In



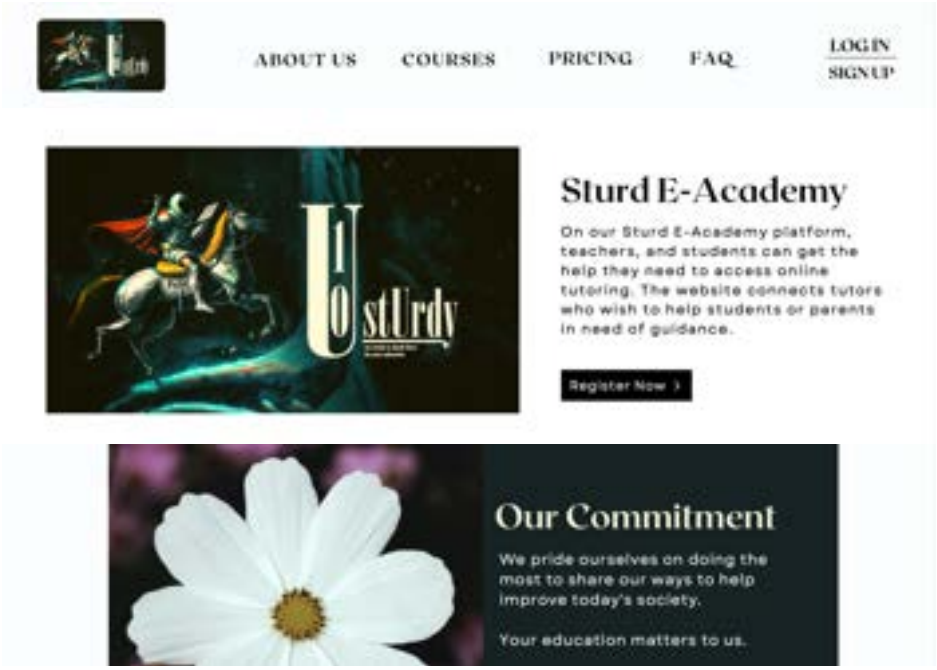
Sign Up



Home Page



About Us



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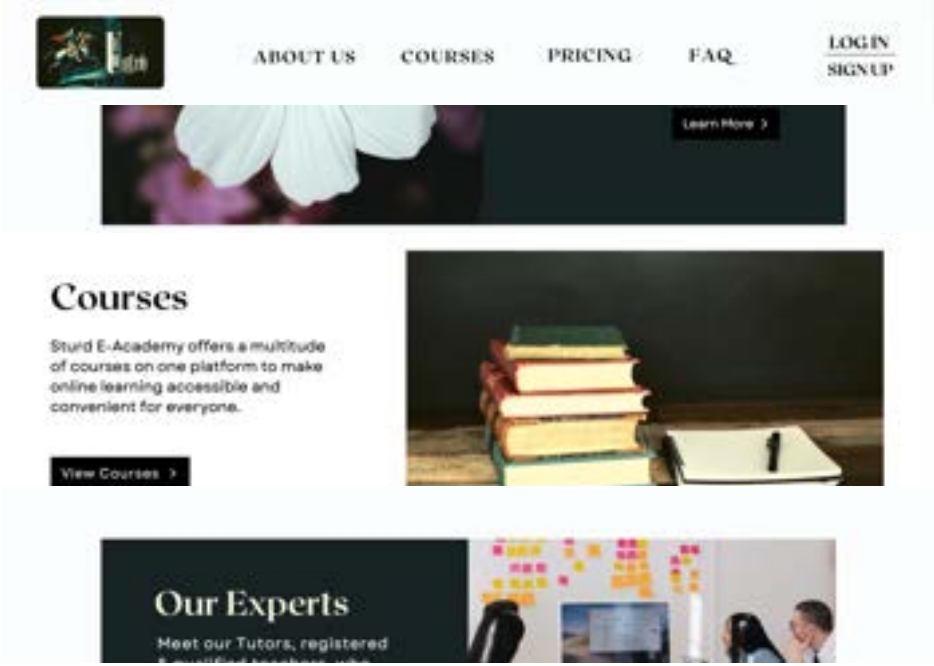
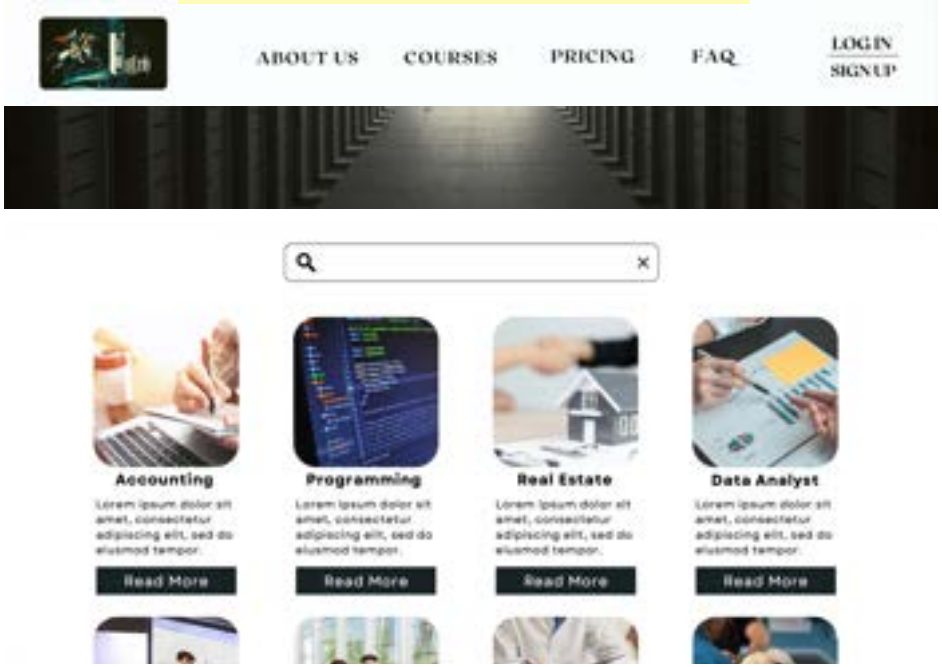


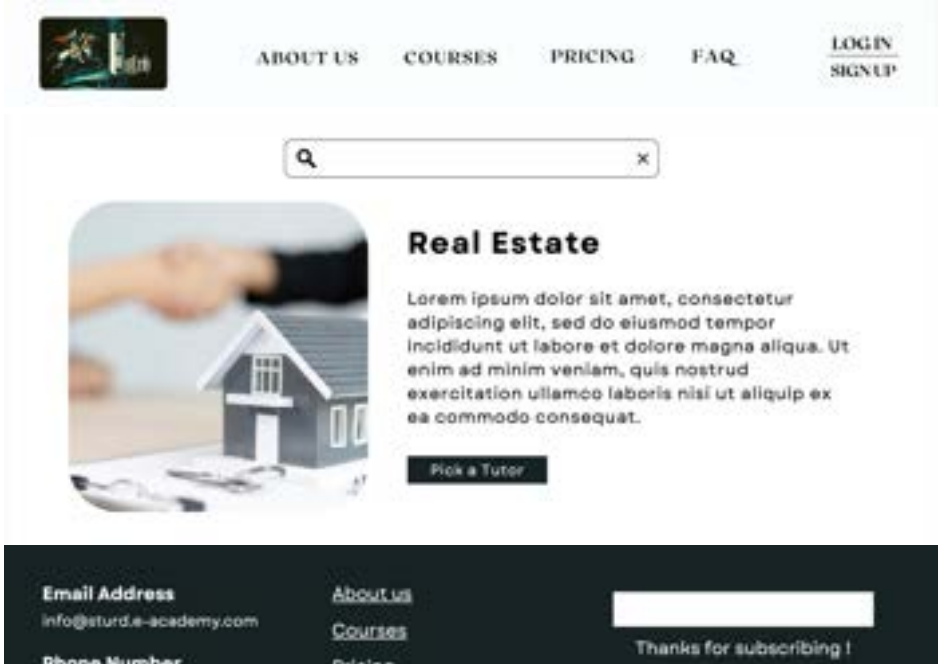
Courses

Courses

Feature #1: Learning experience is customizable. User is able to choose from a variety of offered courses

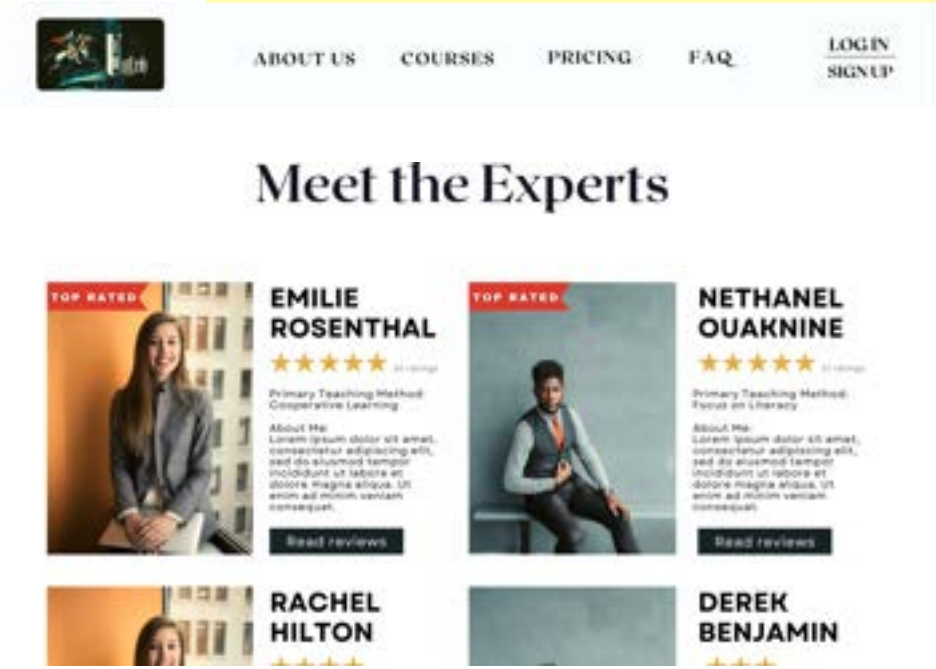


Course Details



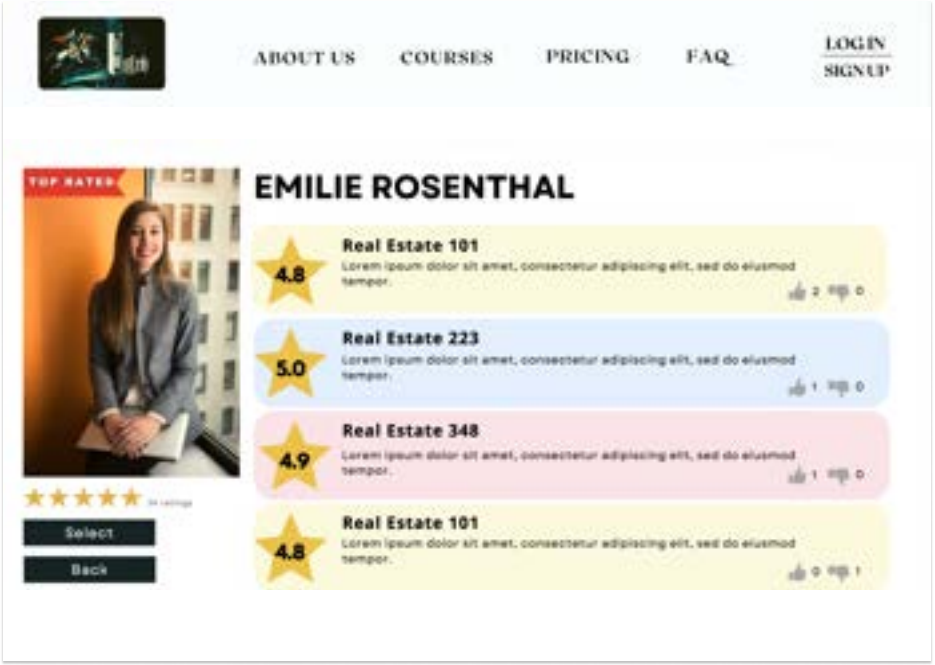
Pick a Tutor

Feature #1: User can pick a tutor based on tutor's "Primary Teaching Method" and "About Me" description. Ratings and reviews are visible.

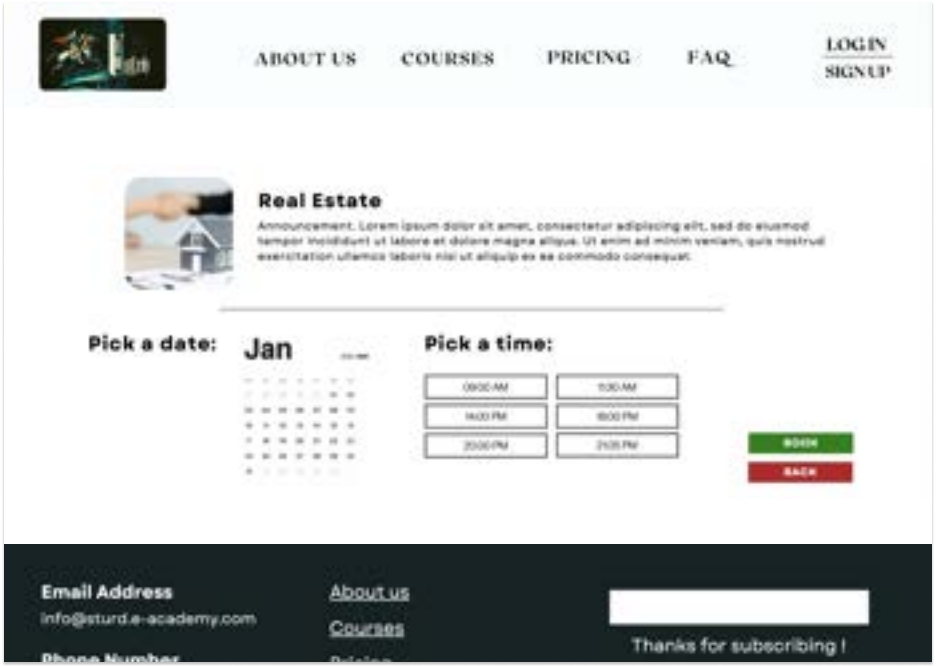


Read Reviews

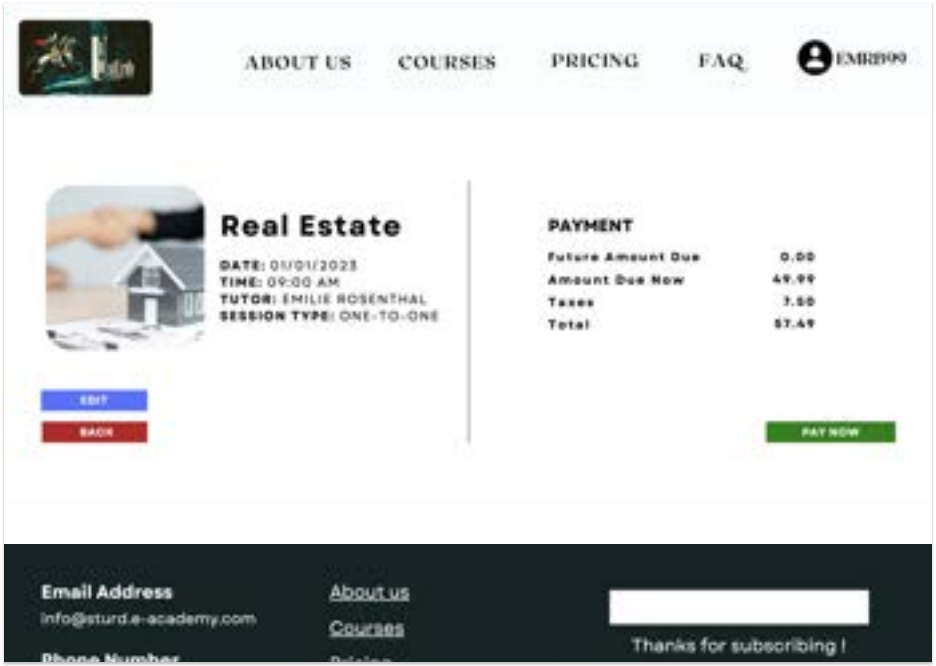
Feature #1: User can read reviews and see like-dislike ratio.



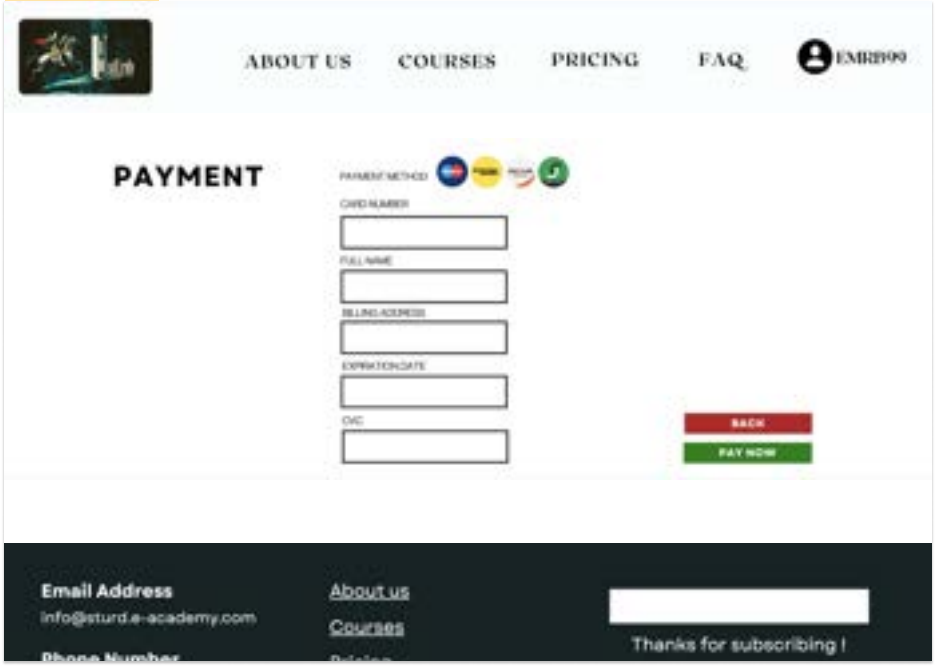
Book a Session



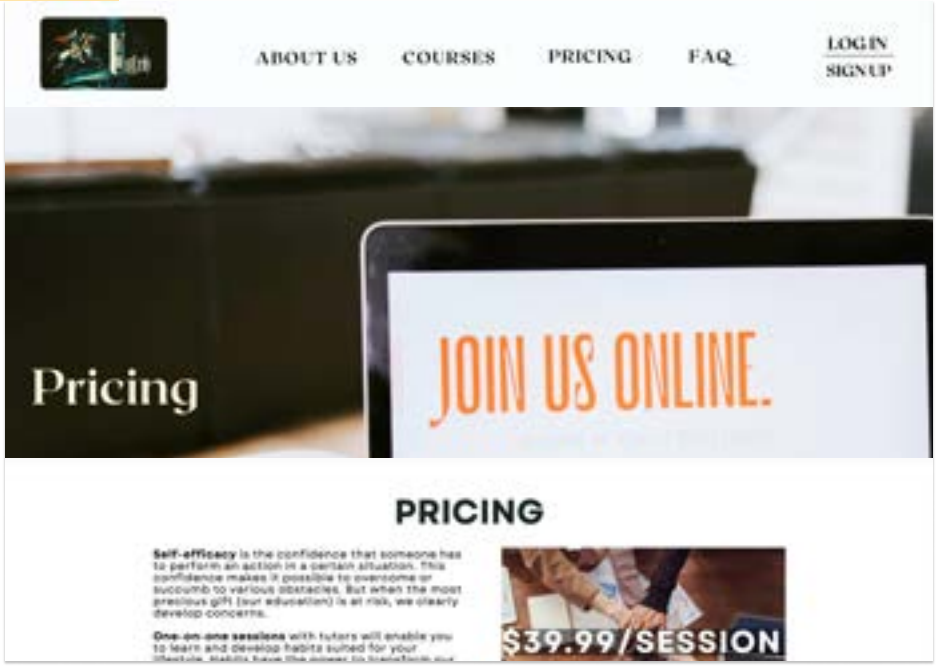
Price Summary



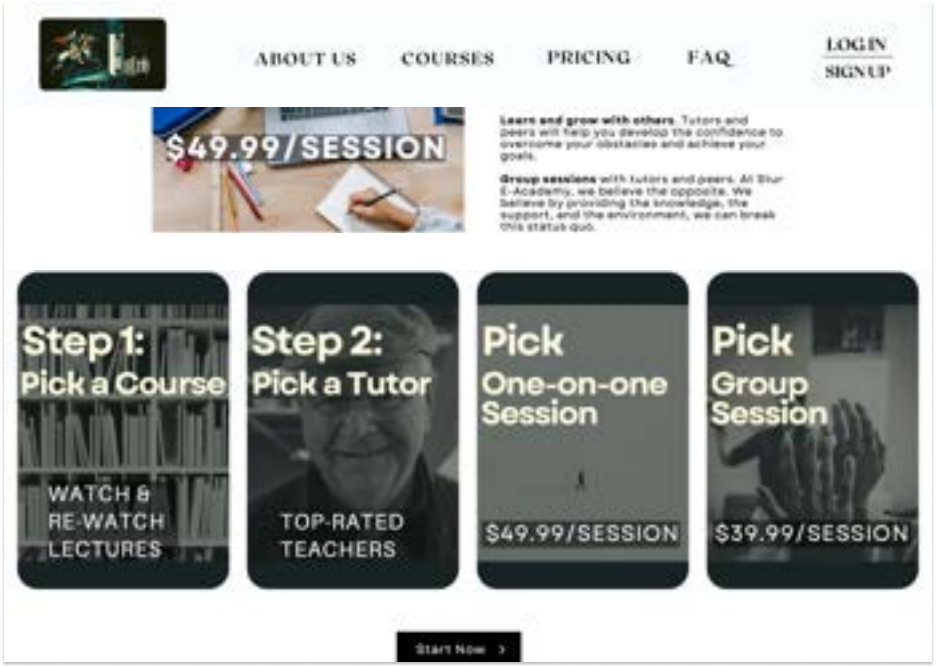
Payment



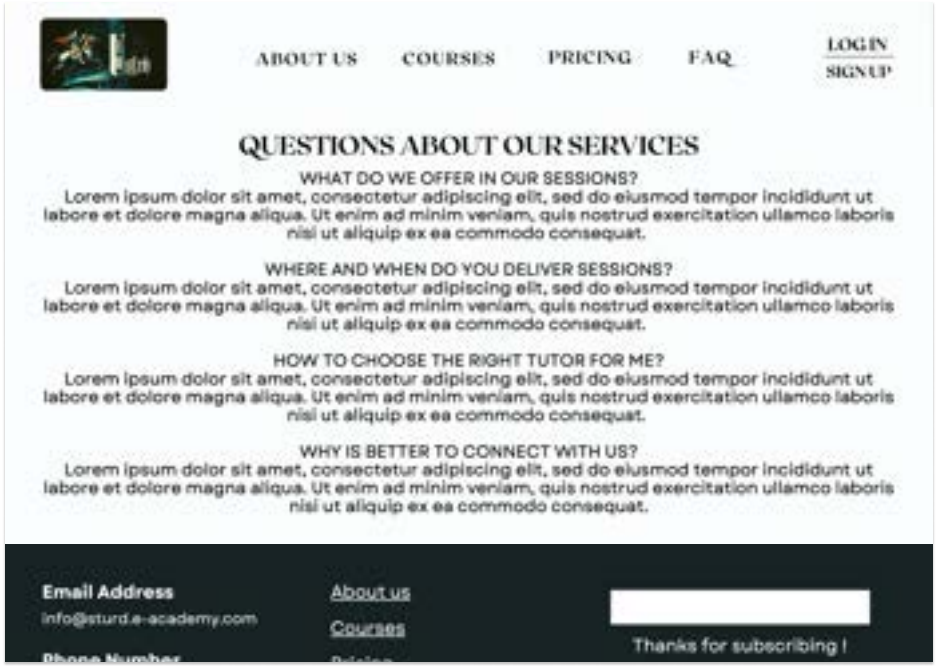
Pricing



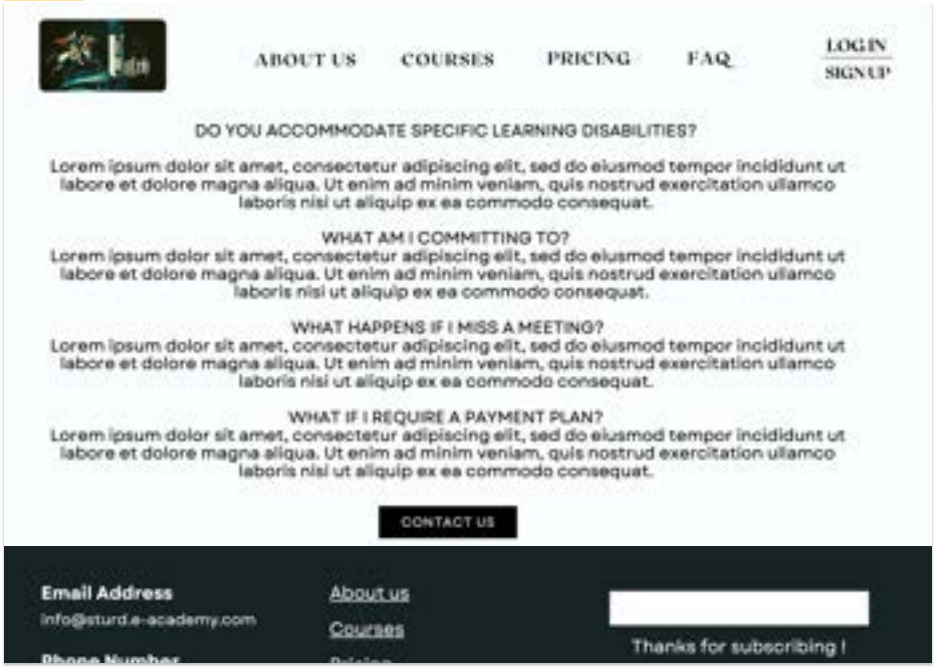
Pricing



FAQ



FAQ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WHAT HAPPENS IF I MISS A MEETING?
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WHAT IF I REQUIRE A PAYMENT PLAN?
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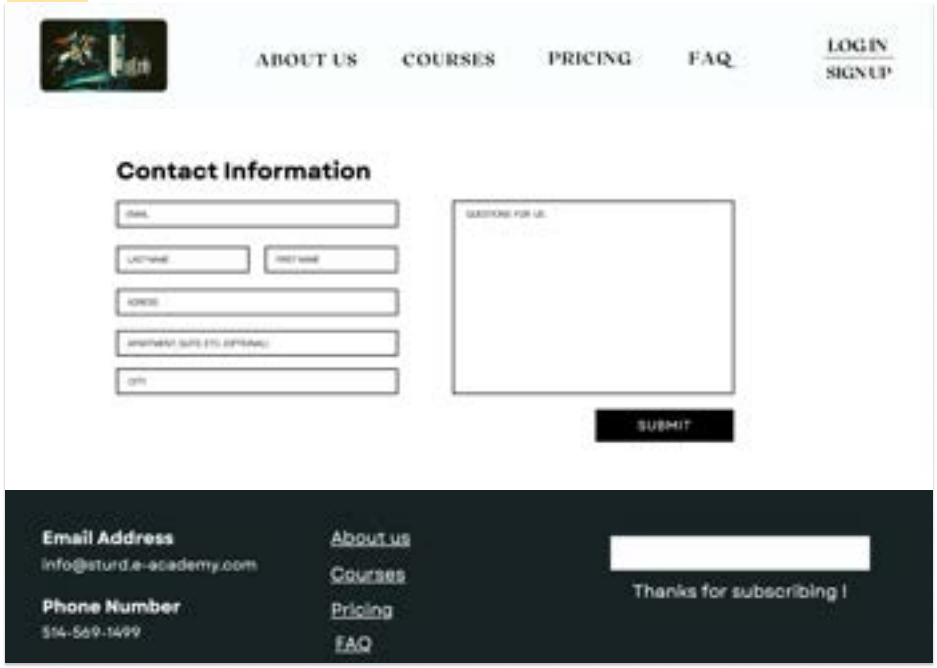
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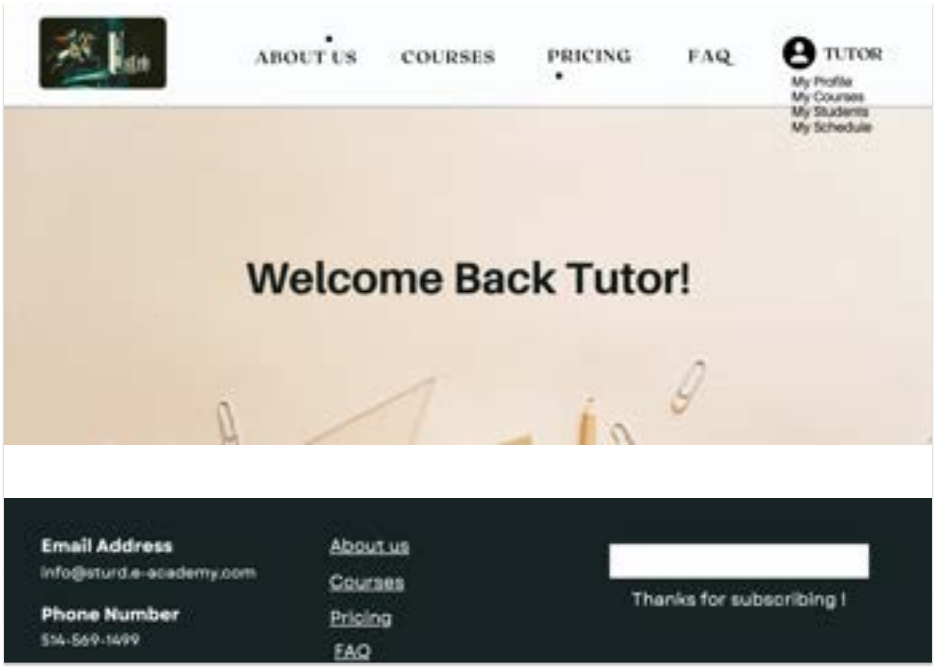
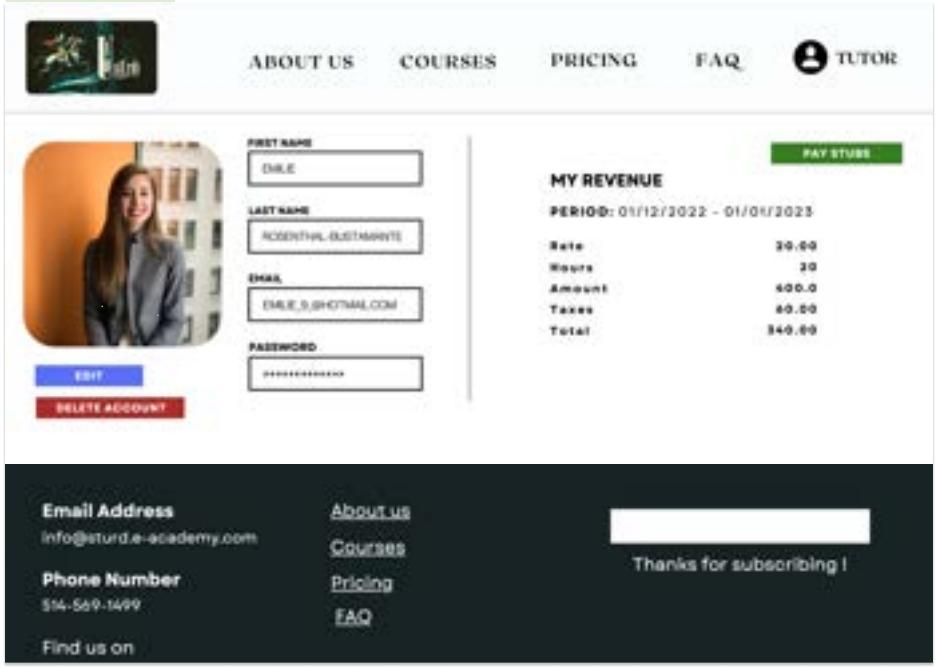
Tutor's View

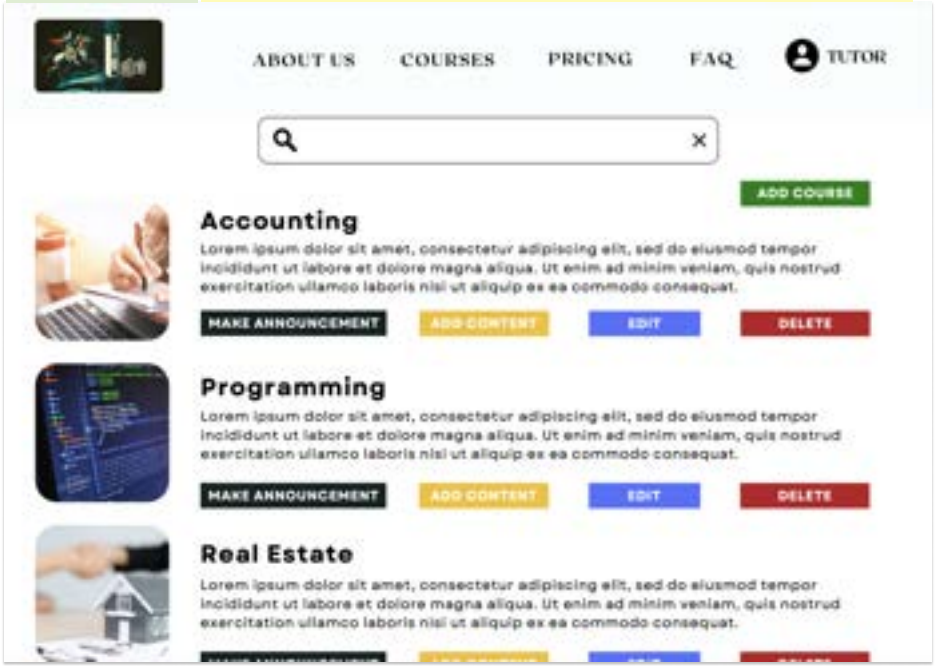


My Profile



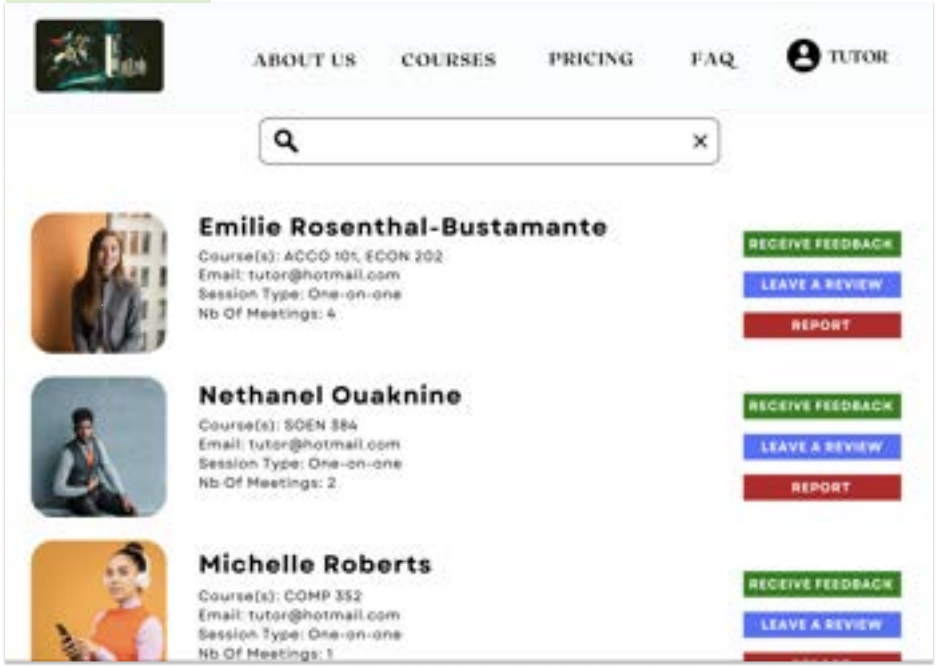
My Courses

Feature #5: Tutors can easily manage course content and make announcements

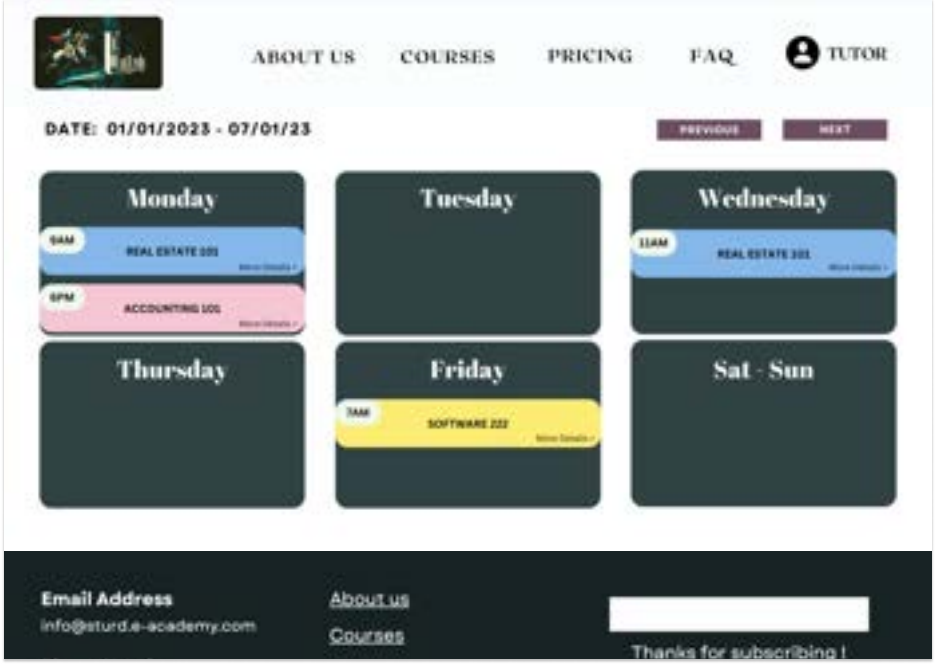


My Students

Feature #4: Tutors can leave feedback + points of improvement for students/parents



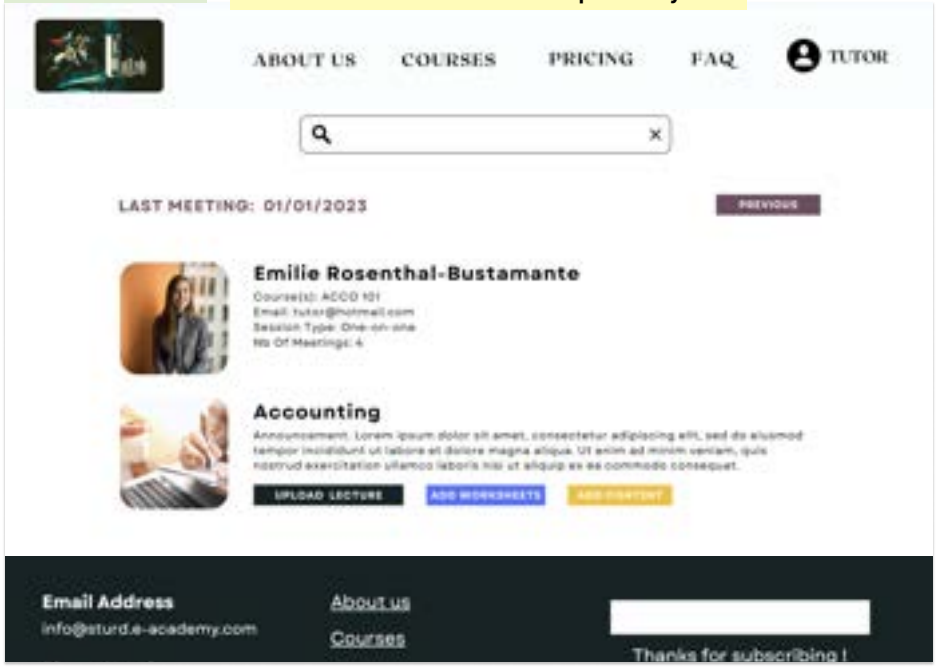
My Schedule



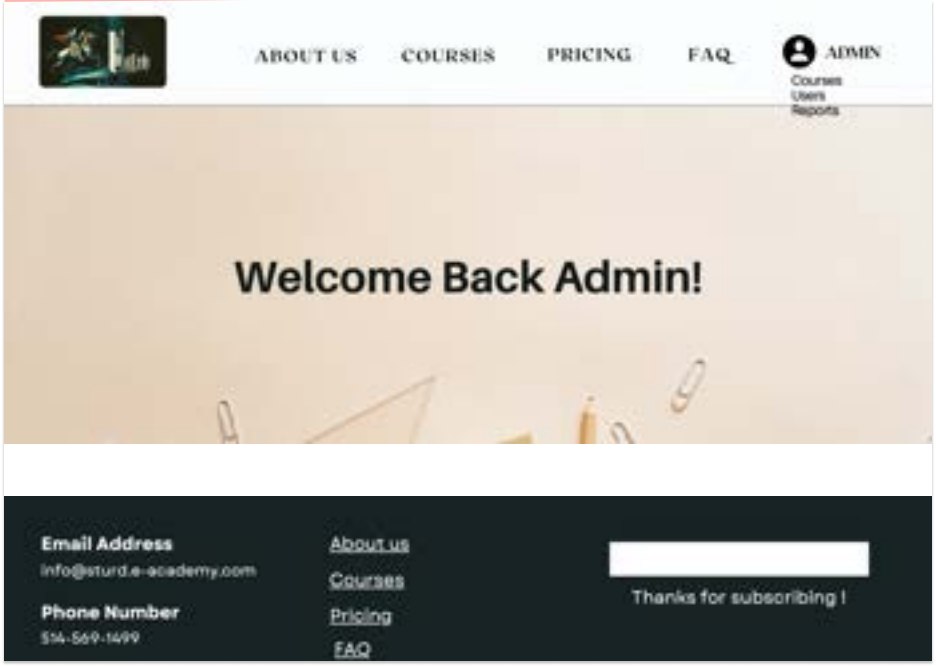
Post Session

Feature #2: Tutors can distribute tailored worksheets that touch on the subject covered during the sessions.

Feature #3: Recorded lectures can be uploaded by tutors.

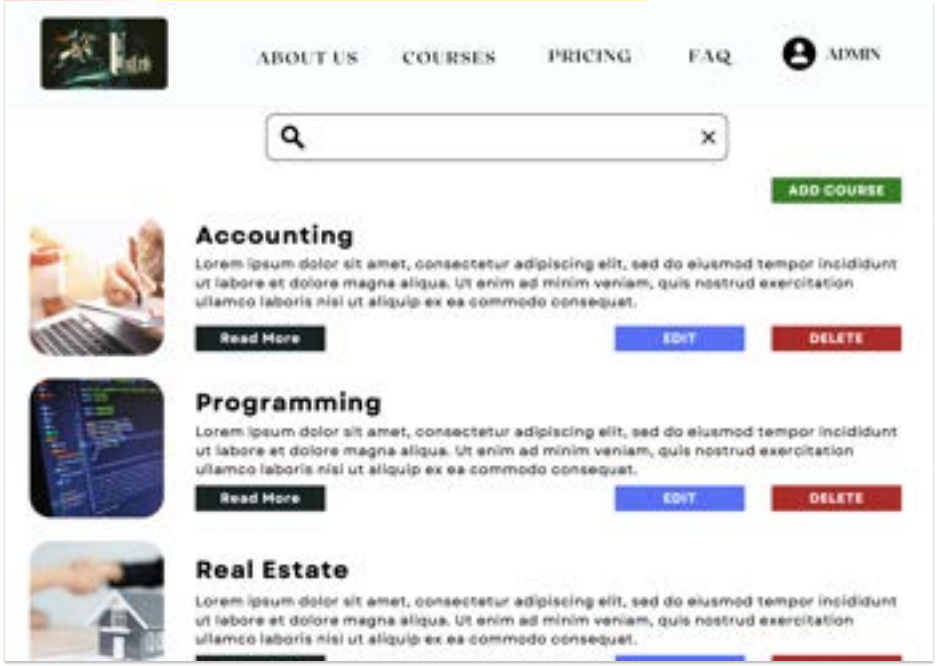


Admin's View



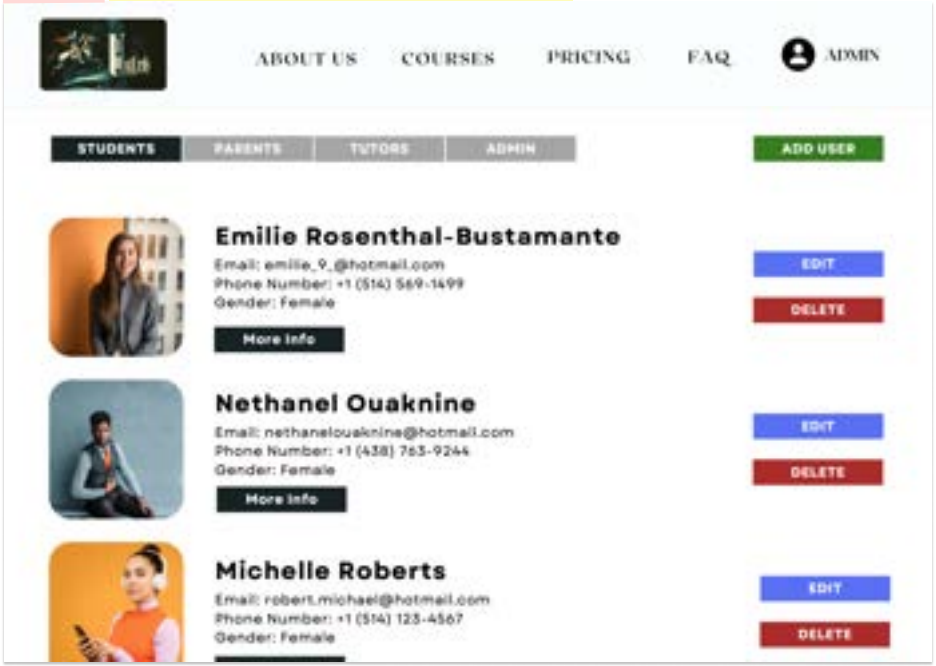
Courses

Feature #6: Administrators can manage courses easily



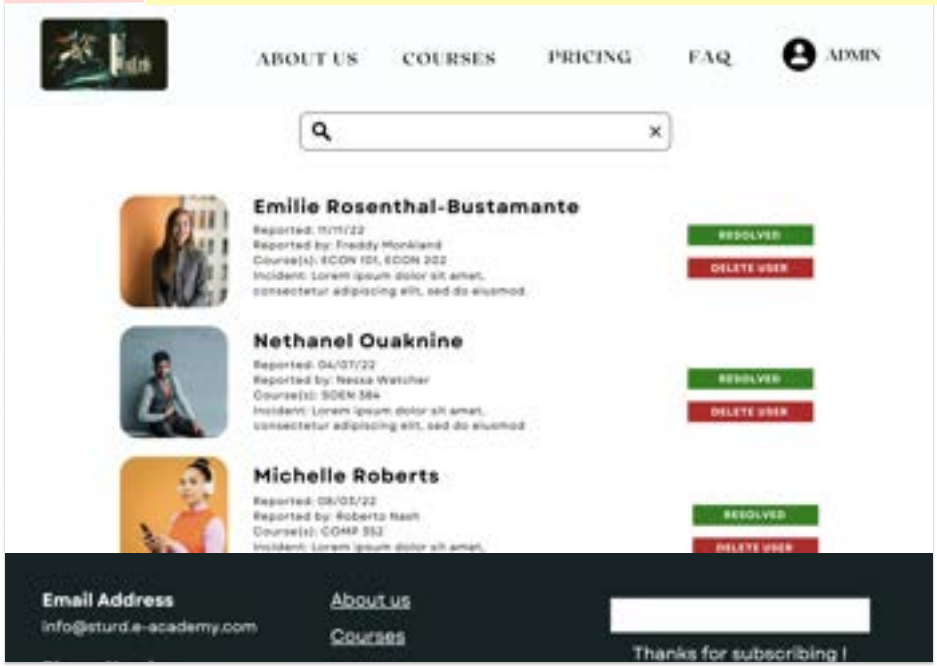
Users

Feature #7: Administrators can manage users easily

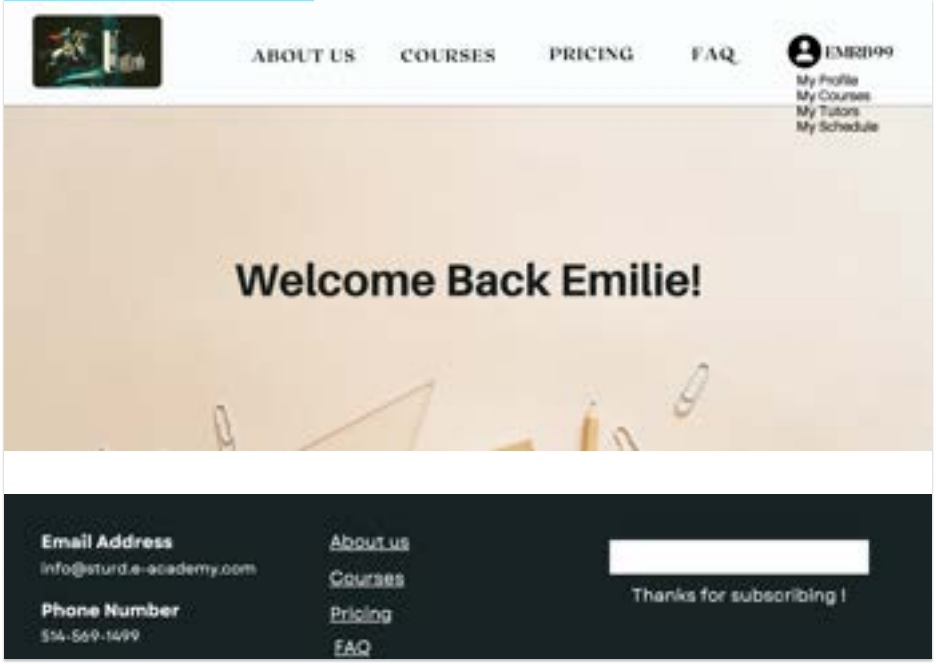


Reports

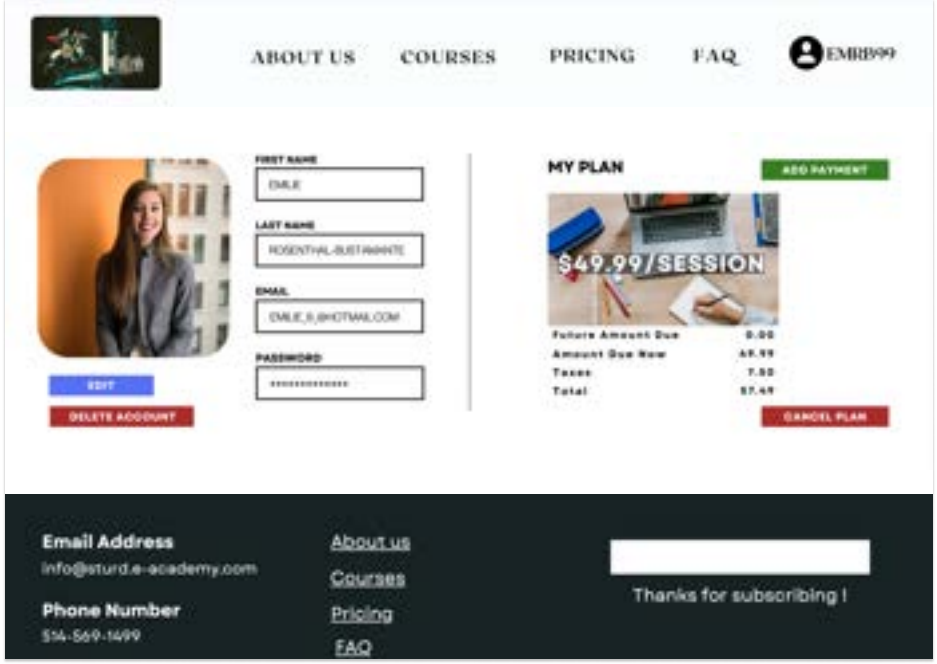
Feature #8: Administrators can ensure a secure and safe environment. After investigation, the admin can either resolve the report or take action and delete the reported user's account.



User's View

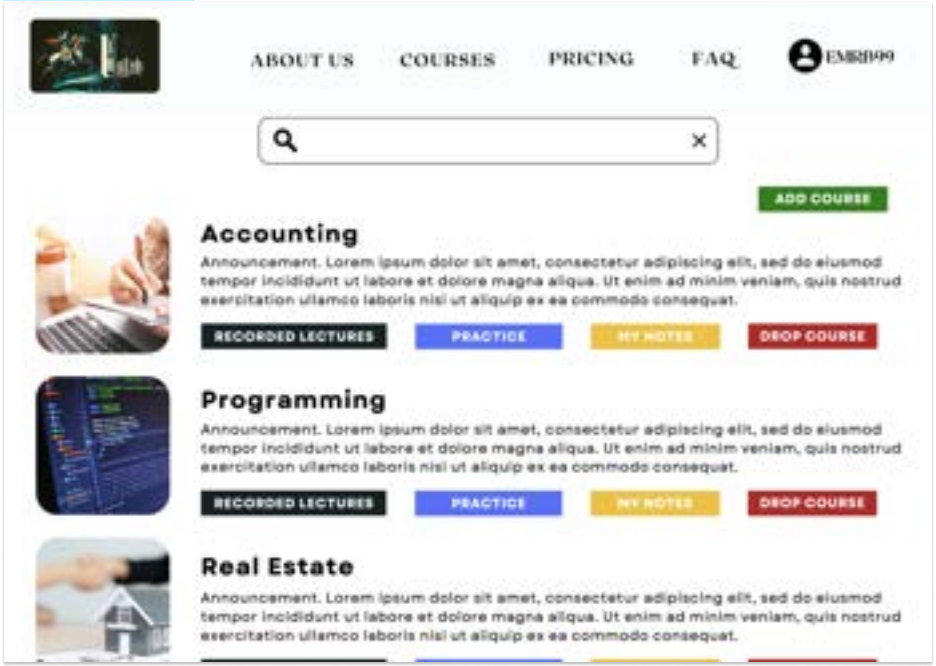


My Profile



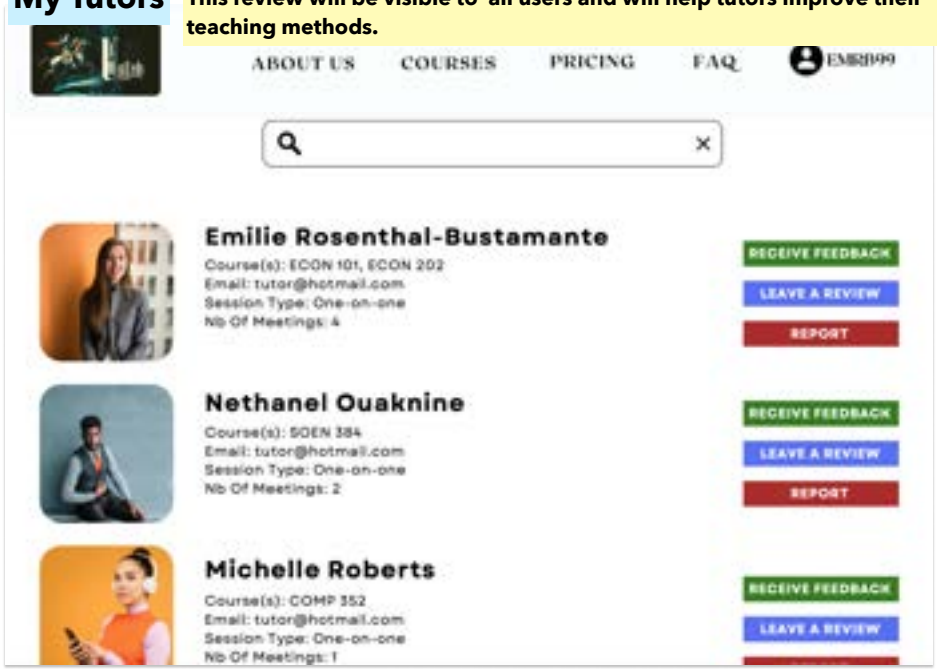
My Courses

Feature #9: Students can review recorded lectures at their own convenience.

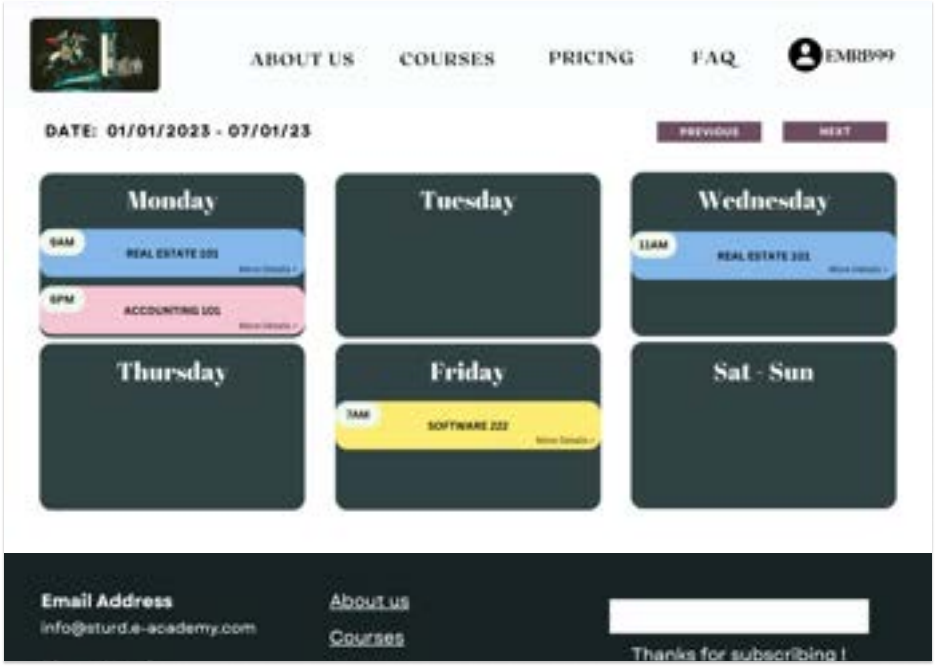


My Tutors

Feature #10: Students can leave their tutor a review about their experience. This review will be visible to all users and will help tutors improve their teaching methods.



My Schedule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2 Quality Assurance

To ensure that our product is of high quality, Requirements were analysed carefully, Meetings were done to solve conflicts and revise all the requirements including all functional and non functional requirements.

Use case diagrams have been generated for each functional requirement also they got evaluated and tested mulitple times after implementation using our GUI mentioned above.
We made sure that our software follows high quality software standards by developing a software quality assurance plan.

The main concerns were to properly manage a plan of quality assurance which made it easier to ensure that the funtional requirements are cohesive, unambiguous, and independant etc.
After passing through the SQAP step by step for each functional requirement; unit-tests and test cases had been done.

3 Change Management

3.1 Purpose of The Change Management Plan

The Change Management Plan documents and tacks the necessary information required to effectively manage project change from project inception to delivery.

The Change Management Plan is created during the Analysis Phase of the project. Its intended audience is the project manager, project team, project sponsor and any senior leaders whose support is needed to carry out the plan.

The project's analysis phase is when the change management plan is developed. The project manager, project team, project sponsor, and any senior executives whose backing is required to carry out the plan are the intended audiences. In this section, we will discuss the change management of the Sturd E-Academy platform. This section will look at Sturd E-Academy for change requests and adaptability. The Sturd E-Academy platform modification request examples we'll show you next.

3.2 Change Request sample

CR #1: The Responsiveness of the platform

Element	Description
CR#	[CR001]
Title	The Responsiveness of the platform
Description	when viewing video lectures and navigating the main website hub, the website's responsiveness across devices is critical. The improved responsiveness of the website will lead to an increase in user base (reaching more users via different mobile devices) and customer satisfaction.
Type of CR	Enhancement

Artifacts impacted	Quality
Importance of the CR	High

CR #2: The Responsiveness of the platform

Element	Description
CR#	[CR002]
Title	Support for additional file formats for content and homework submission.
Description	Students could only submit PDF and TXT files, while teachers could only submit ppt, pdf, txt and mp4 videos. This change will allow both parties to submit file formats such as PY, Java, HTML, all MS. Office extensions, mov, jpg, and pngs. This improvement is intended to make it easier for all users to upload or download files.
Type of CR	Enhancement
Artifacts impacted	Quality and Scope
Importance of the CR	High

CR #3: increase file size limit

Element	Description
CR#	[CR003]
Title	increase file size limit
Description	Students could only submit PDF and TXT files up to 2MB in size, while teachers could only submit ppt, pdf, txt files up to 10MB in size, and mp4 videos up to 100MB in size. This change will raise the upload limit for both parties to 25 MB for photos, pdfs, and text files, and 250 MB for video files. This enhancement aims to make it easier for all users to upload and download large files with high quality and low compression.
Type of CR	Enhancement
Artifacts impacted	Quality
Importance of the CR	low

CR #4: changing the provider of the video player.

Element	Description
CR#	[CR004]
Title	changing the provider of the video player.

Description	A third-party service that hosted the video player had problems with frame drops and poor video quality. This modification will switch that third party to a more dependable provider (and enhance the website's integration with it.
Type of CR	Pug fix (Defect)
Artifacts impacted	Quality
Importance of the CR	high

CR #5: Allowing for third-Party Verification system

Element	**Description**
CR#	[CR005]
Title	Allowing for third-Party Verification system
Description	allowing users to register for an account on the site using their Facebook, Google, or other social media login. requiring the user to manage and remember fewer login passwords. It is also no longer necessary for the platform to manage secure credential recovery procedures or store login credentials.
Type of CR	New Feature

Artifacts impacted	Scope
Importance of the CR	Medium

CR #6: Enabling customization of the tutor page

Element	Description
CR#	[CR006]
Title	enabling customization of the tutor.
Description	Students and parents will now be able to visit tutors' fully configurable homepages. Tutors will be able to edit their page interface components, add images, videos, and interactive components. This modification is intended to increase tutor commercial viability and allow them to have the creative freedom over the materials presentation.
Type of CR	New Feature
Artifacts impacted	Quality and User interface and design.
Importance of the CR	Low

CR #7: Student leader board

Element	Description
CR#	[CR007]
Title	Student leader board
Description	Students will have access to a new Progress page for each class that shows statistics on total involvement, performance, advances, and other broad statistics like active daily study hours, etc , as well as their overall level compared to other students . Parents and children will be able to readily view educational progression and track their success over time on this page.
Type of CR	New Feature
Artifacts impacted	User experience, User interface and design.
Importance of the CR	Low

CR #8: messenger chat system

Element	Description
CR#	[CR008]
Title	messenger chat system

Description	integrating a messenger chat system that will improve communication between users and tutors on the platform. The present module supports email forms for communication. The purpose of this feature is to improve that by integrating it completely into the platform.
Type of CR	Enhancement / New Feature
Artifacts impacted	User experience, Scope.
Importance of the CR	High

CR #9: Improve monitoring to Tutors Rating System

Element	**Description**
CR#	[CR009]
Title	Improve monitoring to Tutors Rating System
Description	Users can submit reviews of the tutors and give stars to the instructors using our current ranking system, which takes numerous factors into account. However, there is a chance of spam ratings and the use of offensive and derogatory words. For this reason, we'll be putting in place a screening mechanism that catches suspicious behaviour and blocks derogatory language. The objectives of this action are to increase openness and raise instructor quality generally.
Type of CR	Enhancement

Artifacts impacted	Quality, User experience, Scope.
Importance of the CR	medium

CR #10: Authentication Enhancement

Element	Description
CR#	[CR010]
Title	Authentication Enhancement
Description	Because the present authentication is insecure, users could get around it by using disposable or temporary email accounts and phone numbers. The change will make it difficult to use fake credentials, thereby enhancing security and lowering the number of fictitious users.
Type of CR	Enhancement
Artifacts impacted	Security.
Importance of the CR	High

3.3 Change readiness of your work

We employed several requirement evaluations tools to assess the changes.

To prevent jargon conflicts and further conflicts in the system, we used inconsistency management to find conflicts between objects both before and after a modification was performed. Additionally, we evaluated and identified risks associated to processes and products using risk analysis. By using temporary emails and credentials, for instance, we discovered the risk of the current authentication process and its lack of security. we assessed the countermeasures to improve security and decrease the number of fake users, that may sabotage other systems like the rating system and the review system, etc.

We also used traceability management approaches to determine the effects of the suggested modifications and to implement them by upholding consistency between the items in a requirements document. Making a traceability graph makes it simpler to determine the things impacted by a change request so that the impacts and viability may be assessed. For instance, we confirmed that the modification we did changing the provider of the video player would not affect the availability of old videos used on the old platform. Moreover, to evaluate improvements, feature diagrams allowed for the graphical display of similarities and differences within the system family.

We used requirements evaluation to rapidly and efficiently identify issues and hunt for solutions, which was essential in implementing new system improvements.