

A PROJECT REPORT

On

TechTube - “An E-learning website”

Submitted by

Roumodip Das (10800220004)

Abhishek Choudhary (10800220030)

Sneha Sarkar (10800220057)

Kunal Kesh (10800220025)

Under the Guidance of

Mr. Biplab Kumar Mondal

Asst. Professor

Asansol Engineering College



INFORMATION TECHNOLOGY

Asansol Engineering College

Asansol

Affiliated to

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY

06/24



ASANSOL ENGINEERING COLLEGE

Kanyapur, Vivekananda Sarani, Asansol, Paschim Bardhaman, West Bengal - 713305
Phone: 225-3057, 225-2108 Telefax: (0341) 225-6334
E-mail: principal.aecwb@gmail.com Website: www.aecwb.edu.in

CERTIFICATE

Certified that this project report on TechTube - “An E-learning website” is the bonafide work of “**Roumodip Das(10800220004),Abhishek Choudhary (10800220030),Sneha Sarkar (10800220057),Kunal Kesh (10800220025)**” who carried out the project work under my supervision.

Mr. Biplab Kumar Mondal

Asst. Professor
Asansol Engineering College

Dr. Anup Kumar Mukhopadhyay

Asst. Professor (HOD)
Information Technology

Asansol Engineering College

INFORMATION TECHNOLOGY

Asansol Engineering College

Asansol

ACKNOWLEDGEMENT

It is our great privilege to express my profound and sincere gratitude to our Project Supervisor Mr. Biplab Kumar Mondal, Asst. Professor, Asansol Engineering College for providing me with very cooperative and precious guidance at every stage of the present project work being carried out under his supervision. His valuable advice and instructions in carrying out the present study have been a very rewarding and pleasurable experience that has greatly benefitted us throughout our work.

We would also like to pay our heartiest thanks and gratitude to Dr. Anup Kumar Mukhopadhyay, HoD, and all the faculty members of the Information Technology, Asansol Engineering College for various suggestions being provided in attaining success in our work.

We would like to express our earnest thanks to our colleagues along with all technical staff of the Information Technology, Asansol Engineering College for their valuable assistance being provided during our project work.

Finally, we would like to express our deep sense of gratitude to our parents for their constant motivation and support throughout our work.

.....
Roumodip Das

.....
Abhishek Choudhary

.....
Sneha Sarkar

.....
Kunal Kesh

Date: <20/06/2024>

Place: Asansol

4th Year

Information Technology

CONTENT

Certificate	ii
Acknowledgement	iii
Content	iv
List of Figures/Table	v
Project Synopsis	vi
1. Abstract.....	vi
2. Introduction	vii
3. Project Details	viii – xix
3.1. Methodology (Data Flow Diagram)	
3.2. Implementation Details	
3.2.1. Hardware Requirements	
3.2.2. Software Requirements	
3.3. Languages Used	
3.4. User Interface	
4. Conclusion	xx
5. Future Scope	xxi
6. Reference	xxii

LIST OF FIGURES

Figure 1	DFD Of the project Level 0	viii
Figure 2	DFD Of the project Level 1	ix
Figure 3	DFD Of the project Level 2	ix
Figure 4	Pie Chart on Languages used	x
Figure 5	Home Page	xi
Figure 6	About Page	xv
Figure 7	Courses Page	xvi
Figure 8	Playlist/Watch video page	xvii
Figure 9	Teacher Page	xviii
Figure 10	Contact Page	xix
Figure 11	Dark Mode Student Portal	xix
Figure 12	Admin Page (Login / Register)	xx
Figure 13	Dashboard	xxi
Figure 14	Playlist Page	xxii
Figure 15	Content Page	xxiv
Figure 16	View Comments Page	xxvi
Figure 17	Search Courses	xxvi
Figure 18	Dark Mode Admin Portal	xxvii
Figure 19	Responsiveness Student Portal (mobile view)	xxviii
Figure 20	Responsiveness Student Portal (Tab view)	xxviii
Figure 21	Responsiveness Admin Portal (mobile view)	xxix
Figure 22	Responsiveness Admin Portal (tab view)	xxix

PROJECT SYNOPSIS

ABSTRACT

In the fast-paced digital landscape, the demand for flexible and accessible education is more significant than ever. "TechTube" emerges as a dynamic e-learning platform designed to transform the traditional learning experience. This project addresses the evolving educational needs of the modern learner by providing a comprehensive and interactive online environment.

TechTube is a user-centric e-learning website that offers a diverse range of courses, spanning from technology and programming to business and creativity. The platform is equipped with cutting-edge features, including high-quality video lectures, user friendly environment and user can utilize the content in offline mode.

INTRODUCTION

This report illuminates the myriad advantages that this innovative learning platform brings to the forefront. From flexible accessibility and personalized learning paths to interactive content and global connectivity, explore how TechTube redefines the landscape of education for the better. This report embarks on an exploration of the manifold advantages inherent in this cutting-edge platform. One of the standout features of TechTube is its commitment to flexibility. Learners can access a wealth of educational content at their convenience, breaking free from traditional constraints of time and location. This flexibility not only accommodates diverse schedules but also fosters a learner-centric environment. Interactivity becomes a cornerstone of education with TechTube. Dynamic multimedia content, and collaborative tools such as students can ask doubts directly creates an immersive learning environment. This not only keeps learners actively engaged but also promotes a deeper understanding of the subject matter through hands-on experiences. Breaking down geographical barriers, the platform connects learners and educators from around the world, fostering a rich exchange of ideas and perspectives. This interconnectedness broadens the educational experience, offering a global perspective on various subjects. As we navigate through the depths of this report, we will uncover how TechTube's forward-thinking design and features contribute to an enriched and effective e-learning journey.

A Glimpse into TechTube:

- **Home Page:** Explore curated content, featured courses tailored to your interests.
- **About Page:** Discover the ethos and mission driving TechTube's commitment to reshaping online education.
- **Register/Login/Logout:** Seamlessly start your learning journey, ensuring your experience is secure and personalized.
- **View Profile:** Monitor your progress, achievements, and personalized settings effortlessly.
- **Update Profile:** Tailor your TechTube experience to reflect your unique learning preferences.
- **Course Page:** Immerse yourself in a diverse range of courses designed to empower and inspire learners.
- **Teacher Page:** Connect with experienced educators shaping the TechTube learning landscape.
- **Contact Us Page:** Access a direct line of communication for queries, support, and feedback

METHODOLOGY

Techtube's e-learning workflow begins with user registration and profile setup, followed by course selection. Users access structured learning modules with diverse content, including videos and interactive elements. Progress is tracked, and assessments provide feedback. User support ensures a smooth learning experience, creating a comprehensive and effective e-learning journey.

Techtube's e-learning platform likely follows a structured methodology to deliver content effectively. It typically involves:

Needs Analysis: Identifying the target audience and their learning needs.

Content Creation: Developing high-quality educational content, which may include video lectures.

Platform Design: Creating an intuitive and user-friendly interface for easy navigation and engagement.

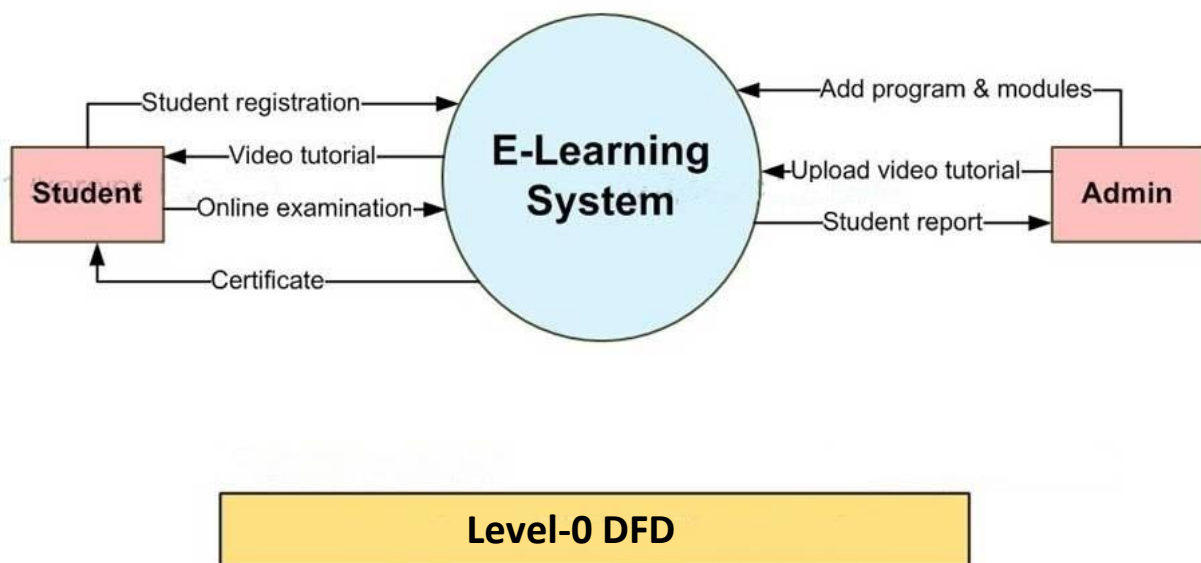
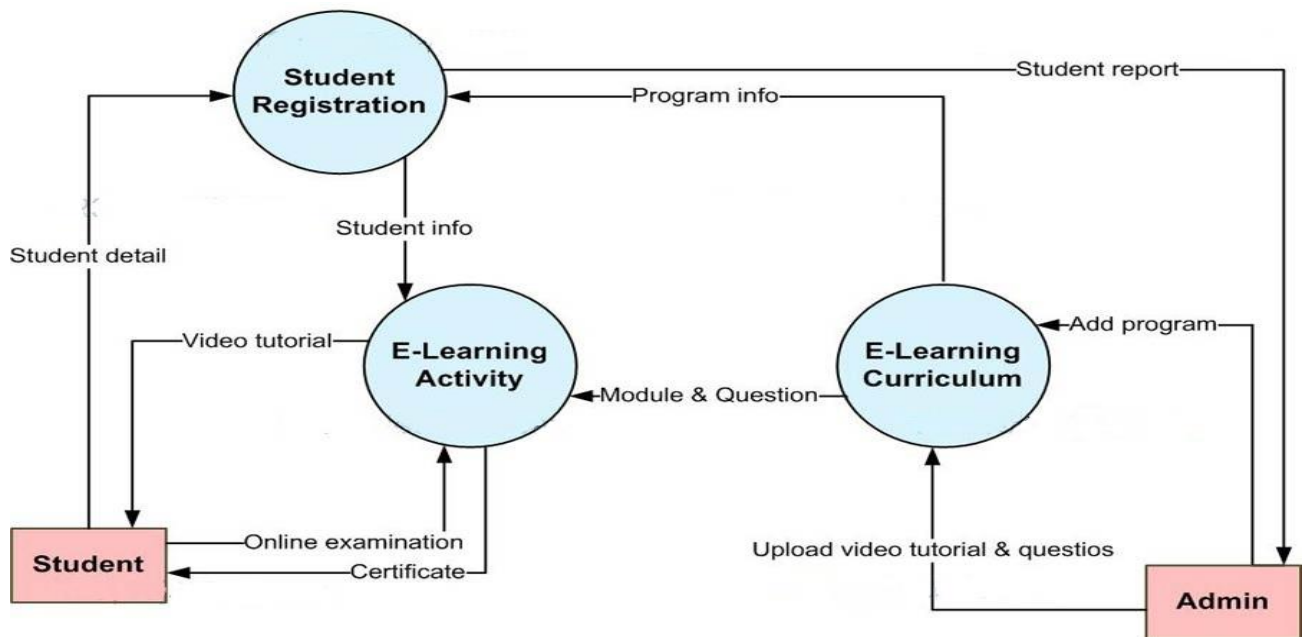


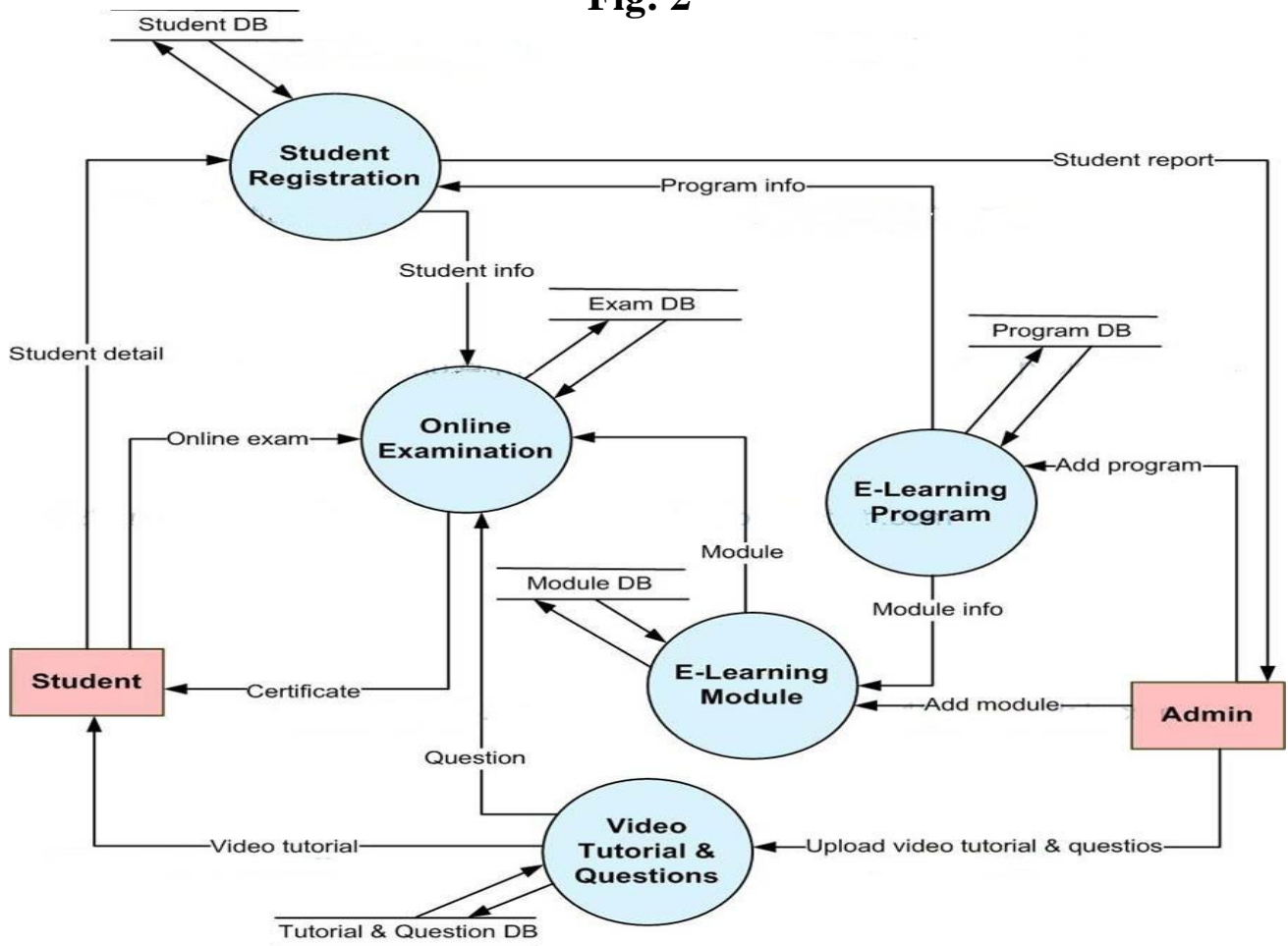
Fig: 1

-



Level-1 DFD

Fig: 2



Level-2 DFD

Fig: 3

IMPLEMENTATION DETAILS

Hardware Requirements:

1. 4GB DDR4 RAM
2. 1TB Hard Drive
3. 8th Gen Intel Core i3-8145U 2.10GHz Processor

Software Requirements:

Windows	10
Frontend-Languages	HTML5, CSS3 and JS
Backend-Languages	PHP 8.2
Database	MySQL
Server	XAMPP Server 8.2
IDLE	Visual Studio Code 9.8.1
Browser	Google Chrome

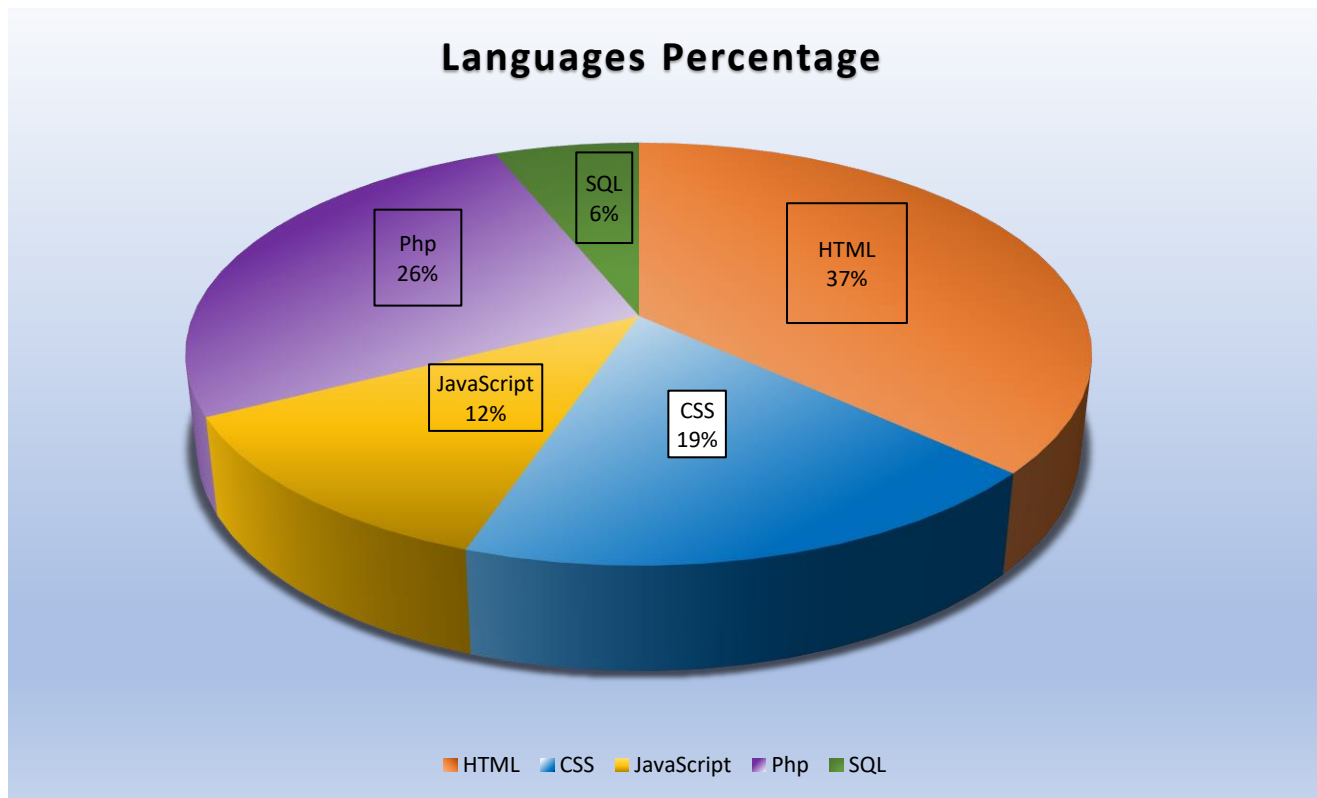
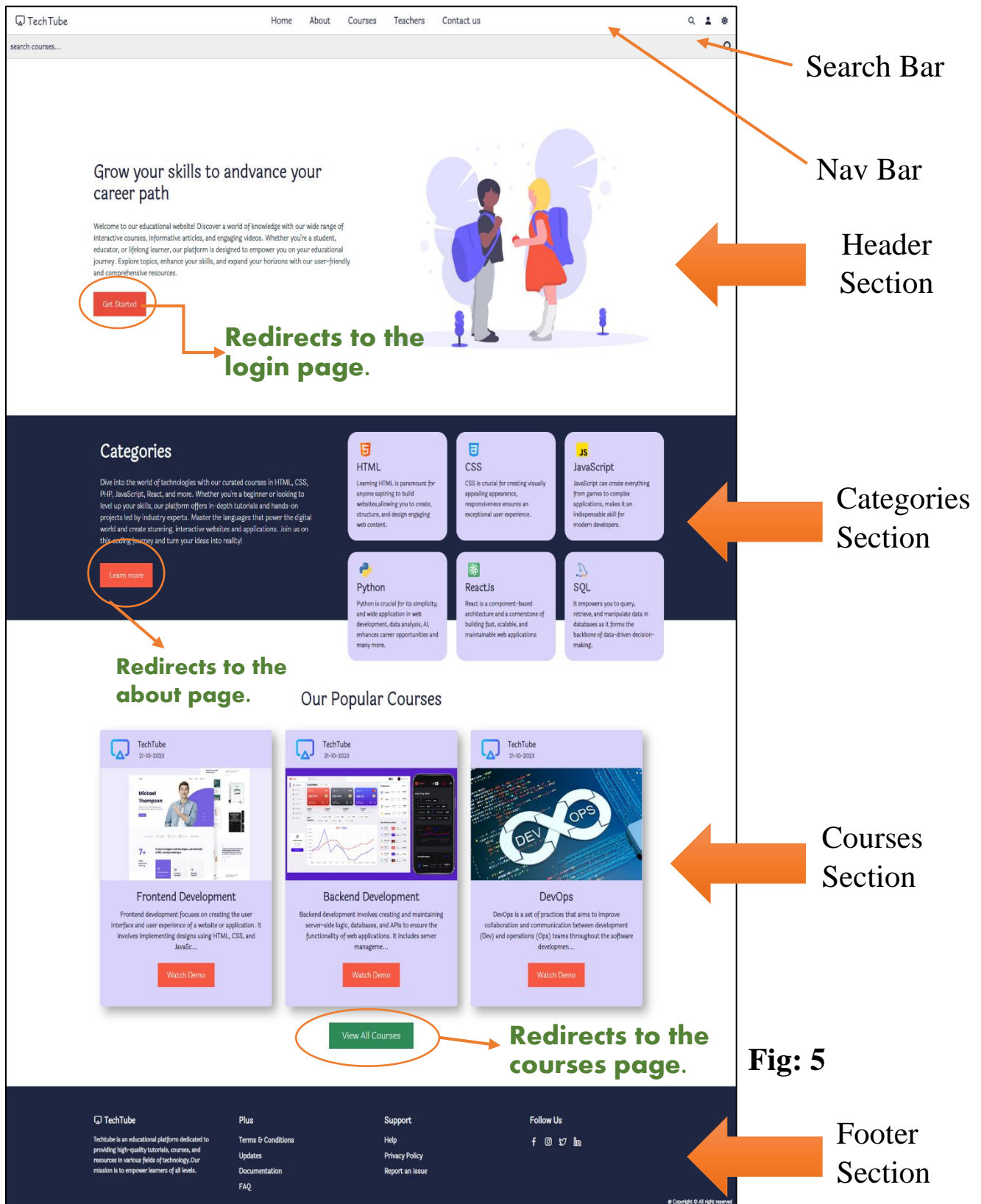


Fig: 4

USER INTERFACE

Students Portal: Home Page



Login/Register

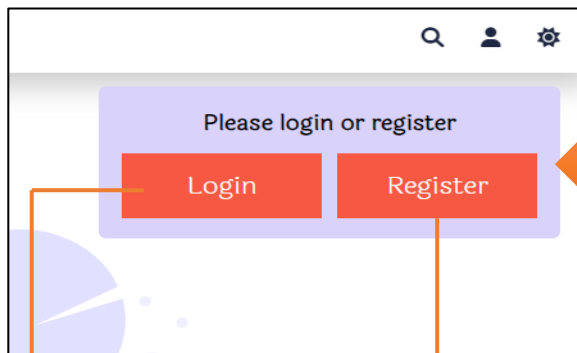


Fig: 5.1

Redirects to login or register page accordingly.

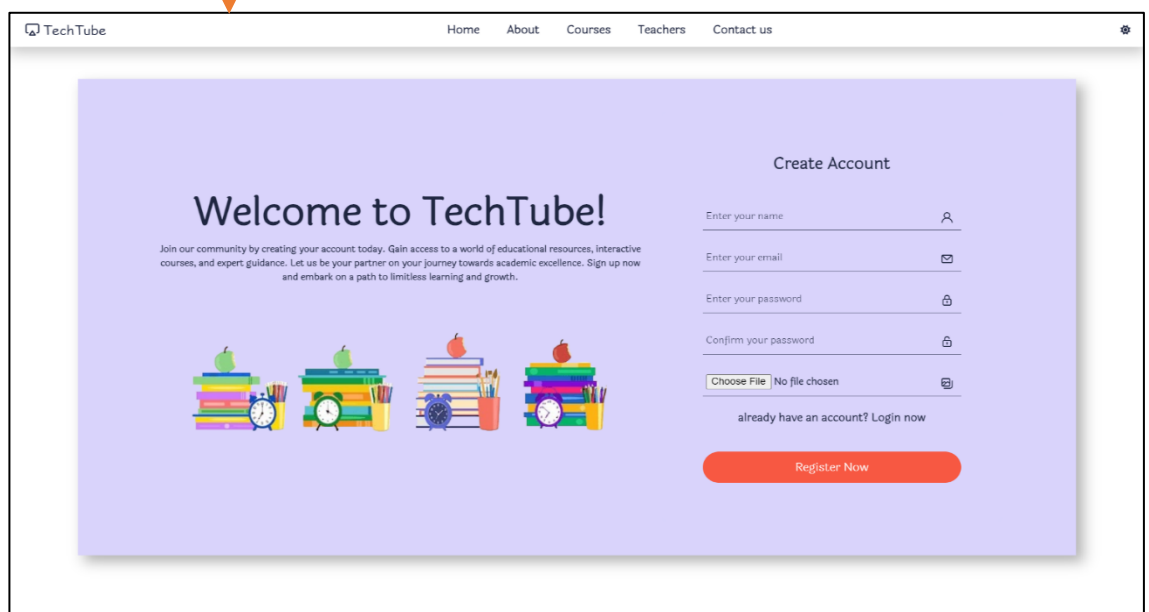


Fig: 5.2

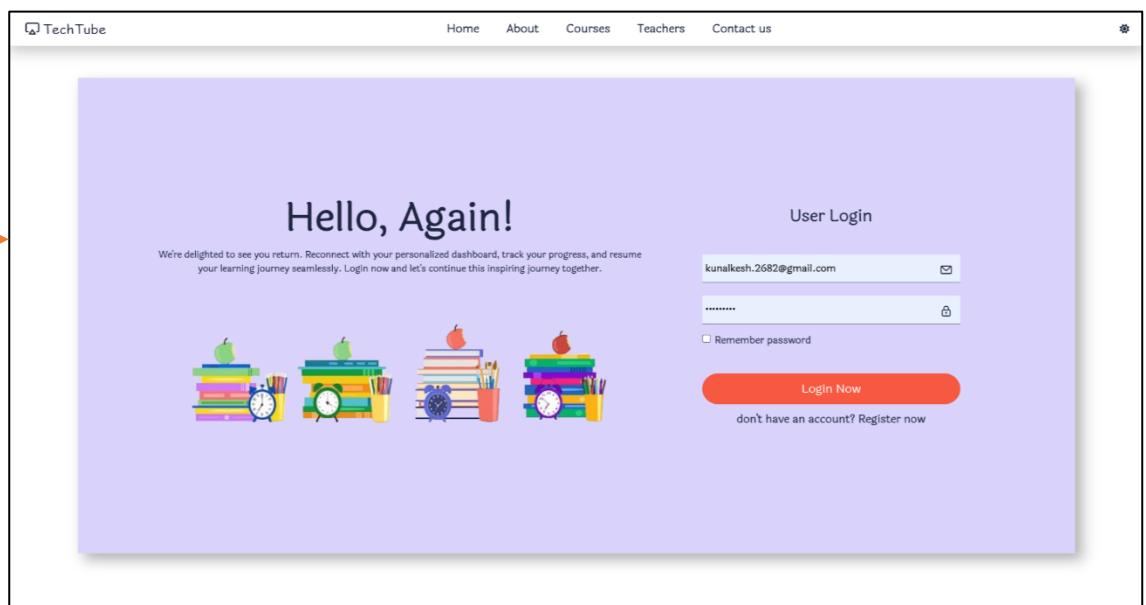


Fig: 5.3

Profile page

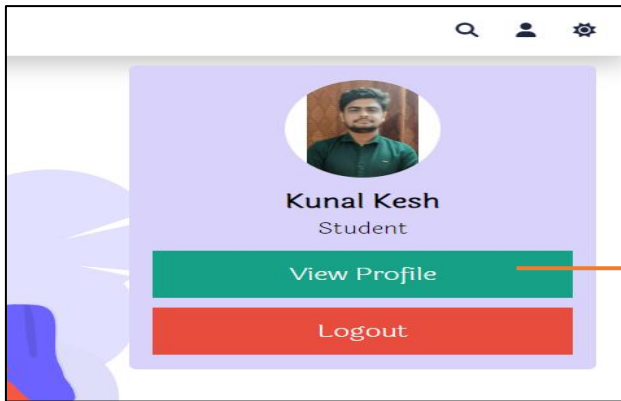


Fig: 5.4

Redirects to the Profile Page, to view profile picture liked, commented & saved tutorials.

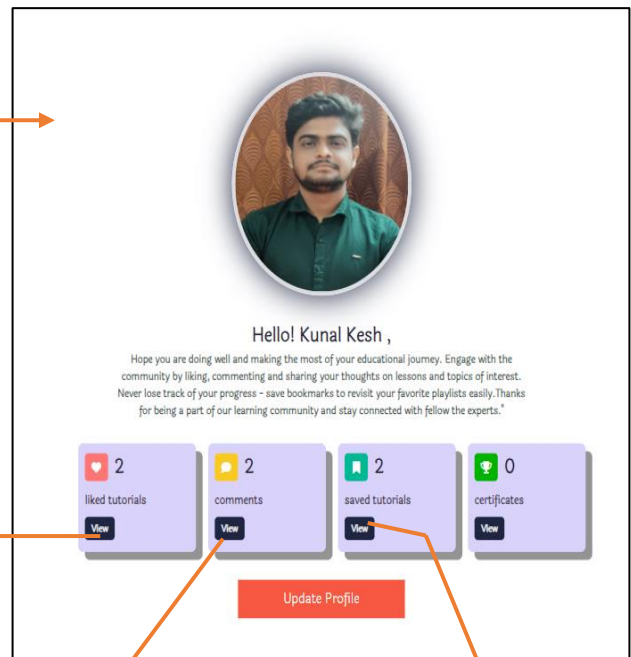


Fig: 5.5

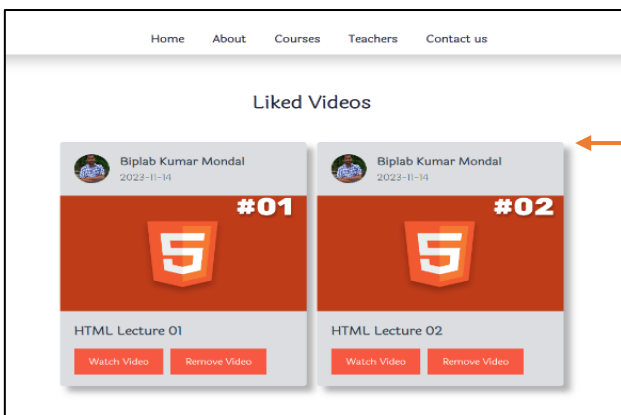


Fig: 5.6

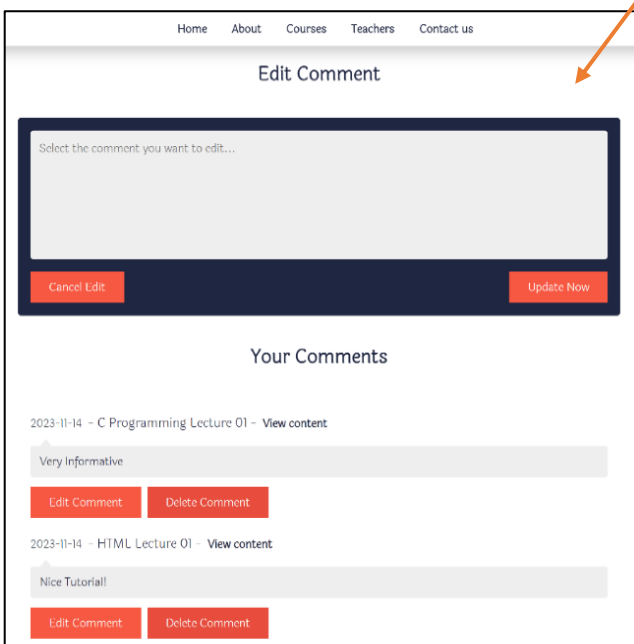


Fig: 5.7

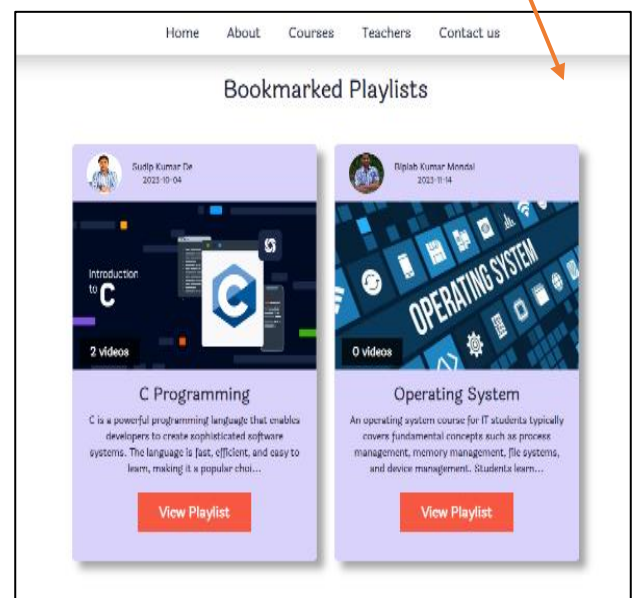
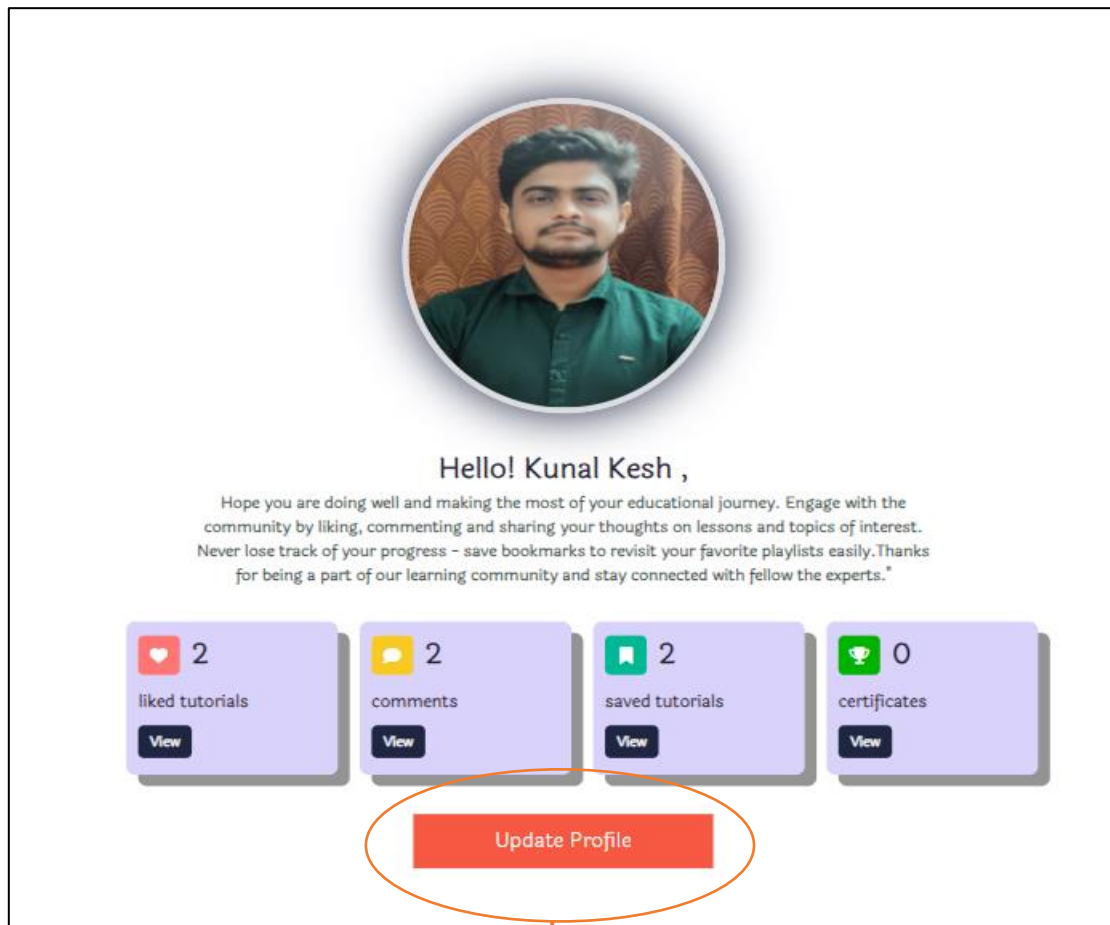


Fig: 5.8

Update Profile



The image shows a web browser window with the "TechTube" logo and navigation links: Home, About, Courses, Teachers, Contact us. The main content area has a light purple background and is titled "Update Profile".

On the left, there is a section titled "Let's stay Updated!" with the subtitle "Keep your information current and relevant. Customize your profile to reflect your unique identity." Below this are four icons representing stacks of books with an apple and a clock.

On the right, the "Update Profile" form is displayed. It includes the following fields:

- Name: Kunal Kesh (with a user icon)
- Email: kunalkesh.2682@gmail.com (with an email icon)
- Profile Picture: Choose File | No file chosen (with a camera icon)
- Password: A field with asterisks (with a lock icon)
- New Password: enter your new password (with a lock icon)
- Confirm Password: confirm your new password (with a lock icon)

At the bottom of the form is a red button labeled "Update Profile".

Fig: 5.9

About Page



Achievement
Section

FAQs
Section

Testimonial
Section

Fig: 6

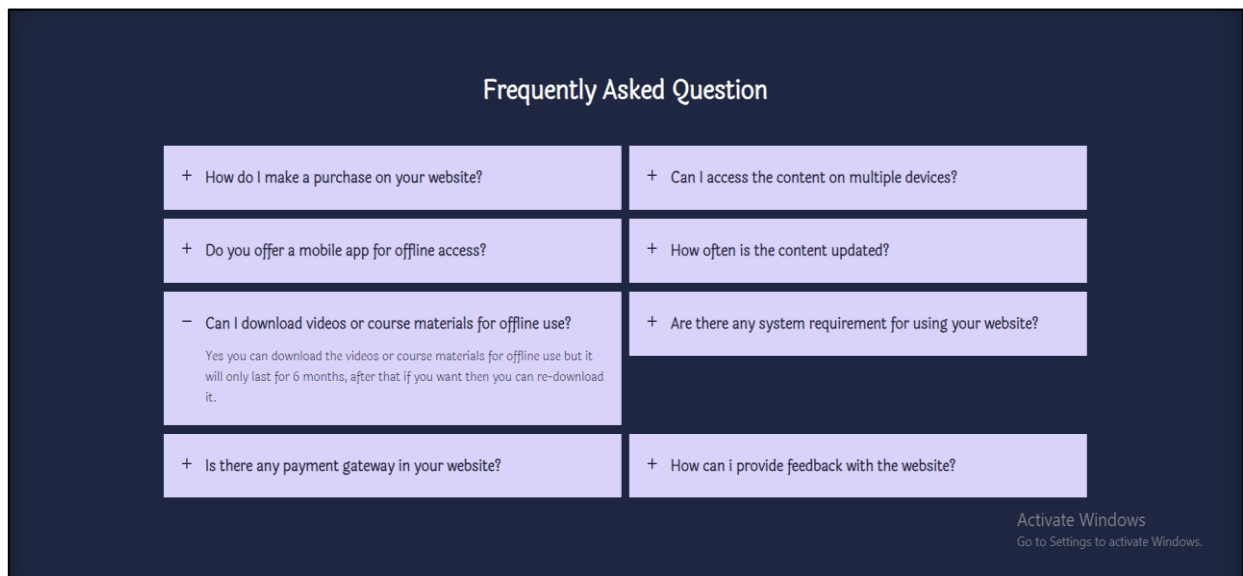
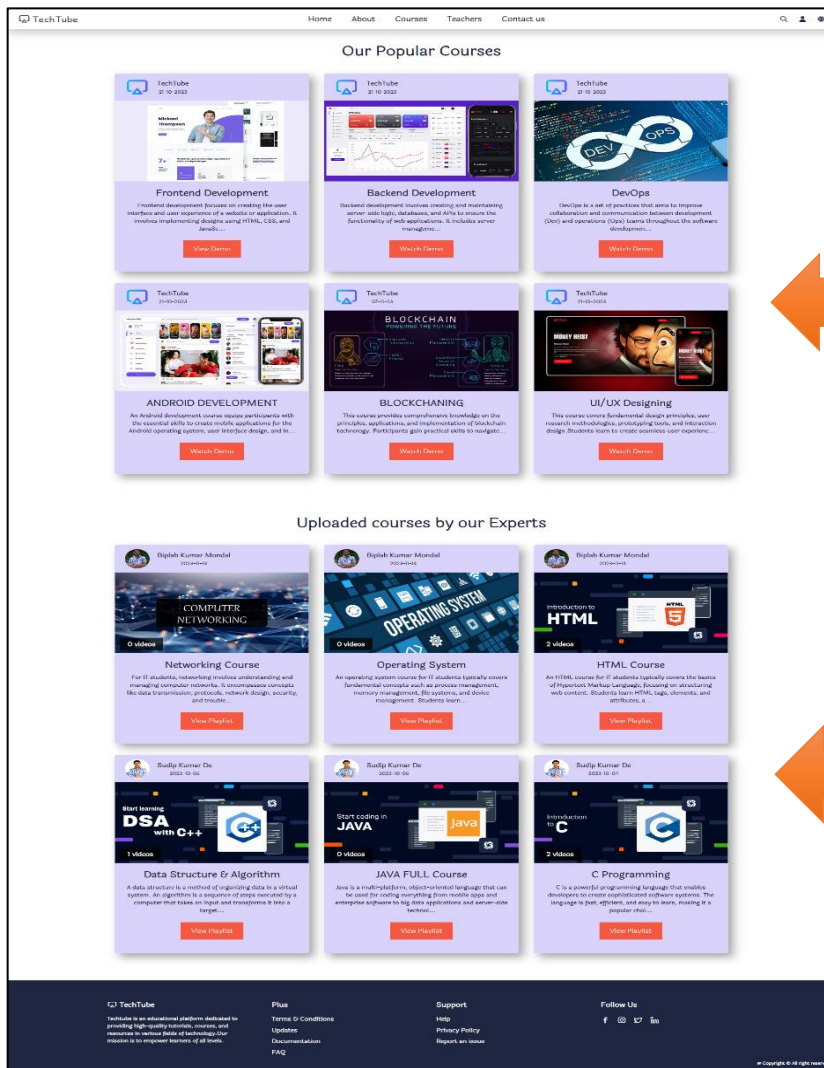


Fig: 6.1

Courses Page



Demo video
Section

Uploaded
Course
Section

Fig: 7

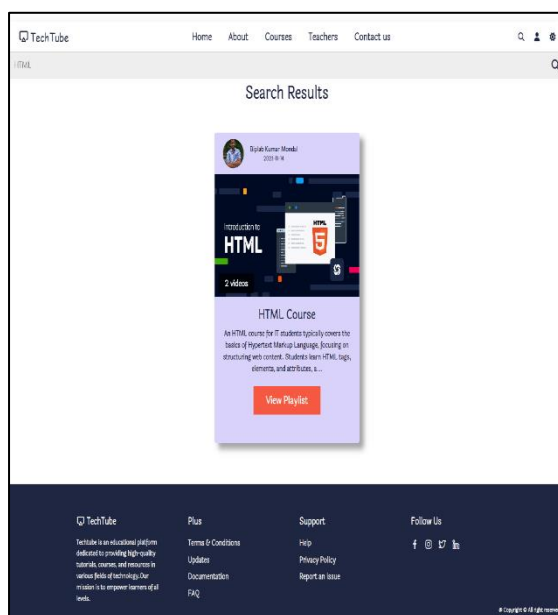


Fig: 7.1

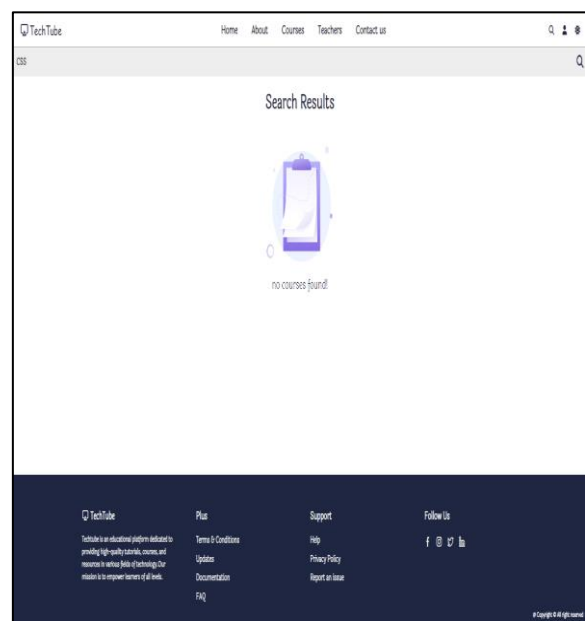


Fig: 7.2

Playlist/Watch Video page

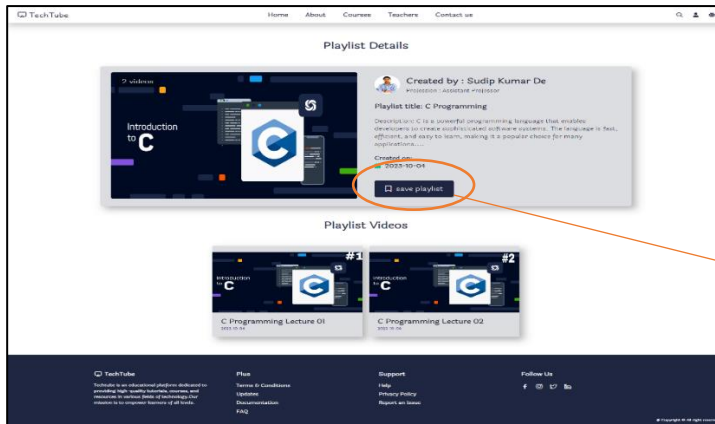


Fig: 8

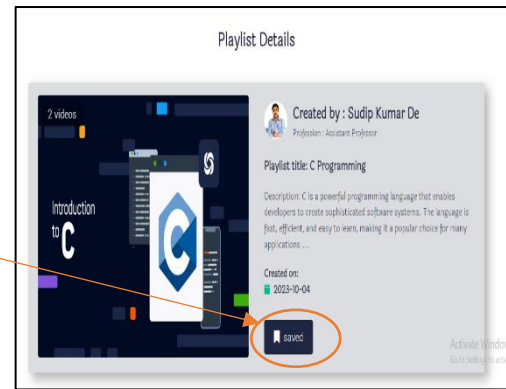


Fig: 8.1

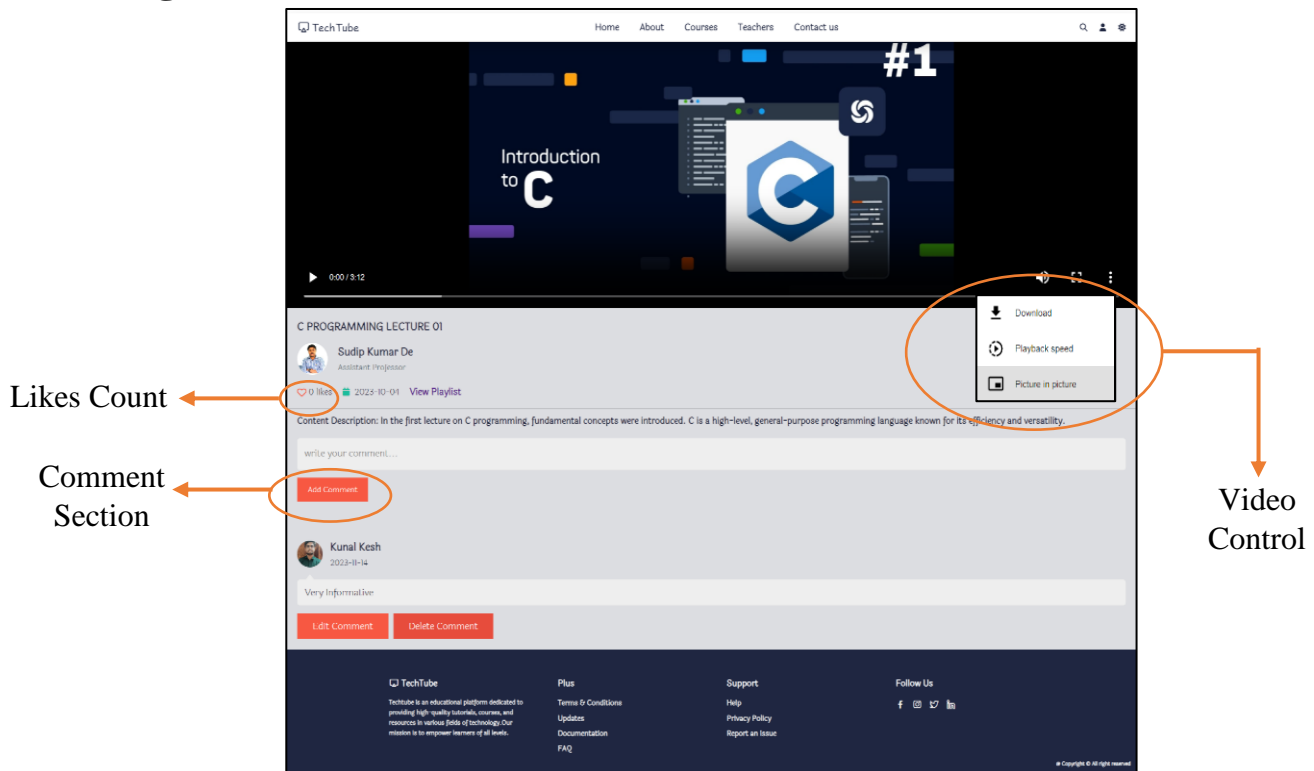
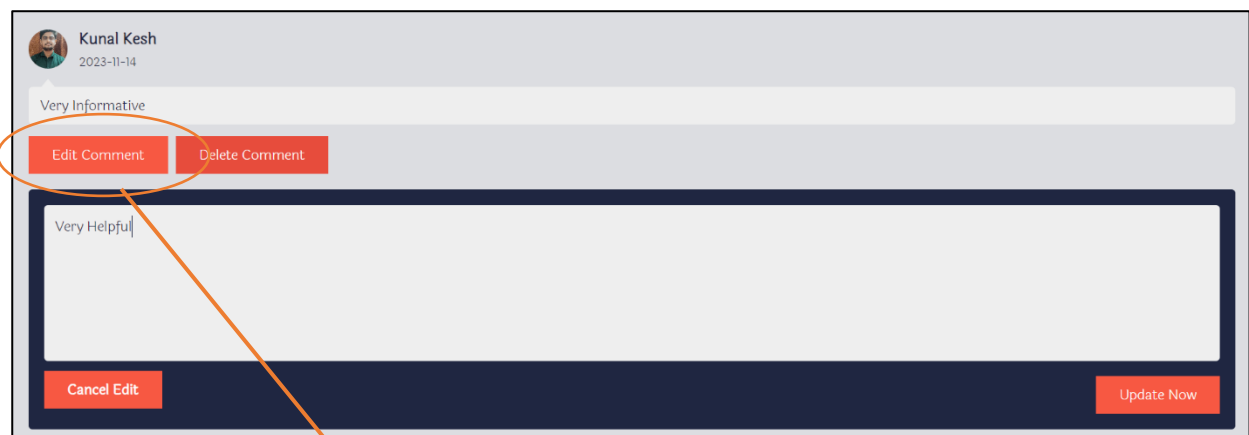


Fig: 8.3



**Edit
Comments**

Fig: 8.4

Teachers Page

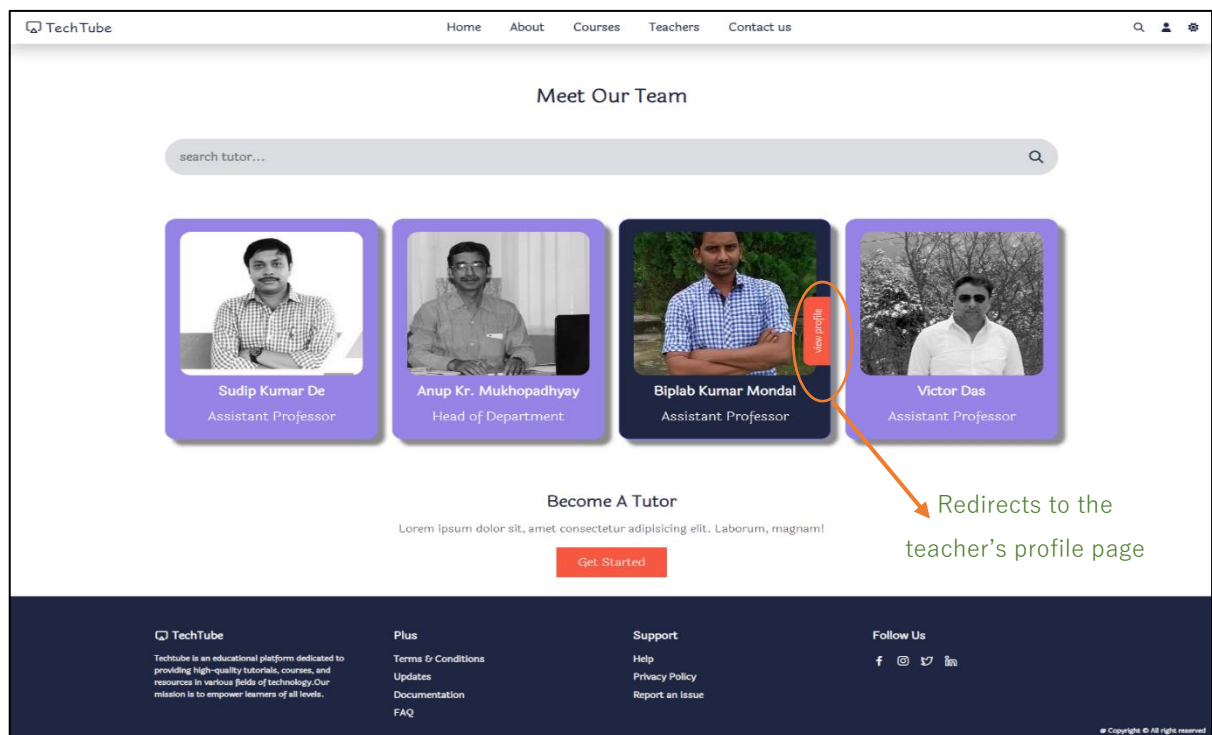


Fig: 9

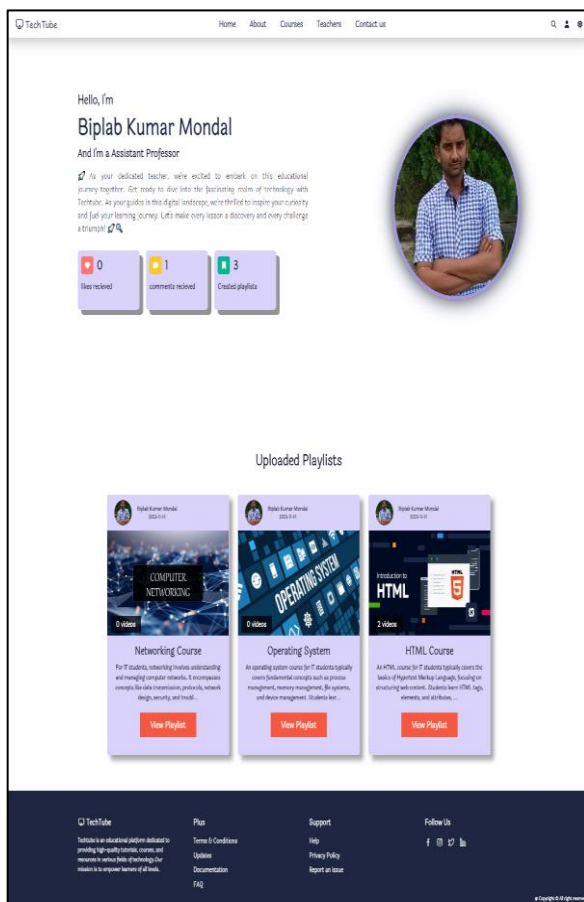


Fig: 9.1

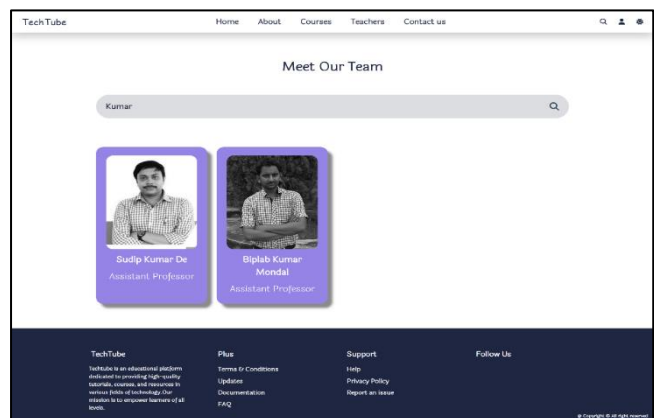


Fig: 9.2

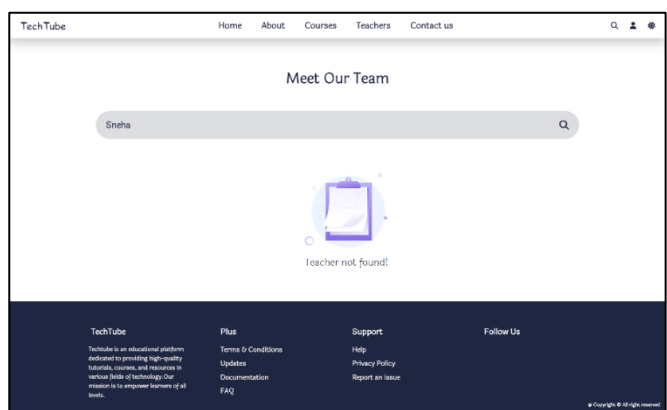


Fig: 9.3

Contact Page

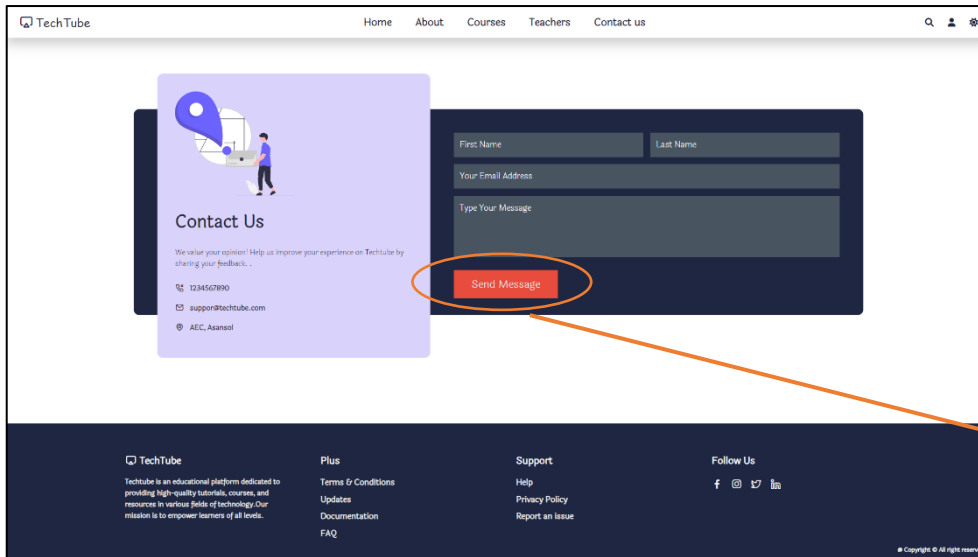


Fig: 10

Dark Mode

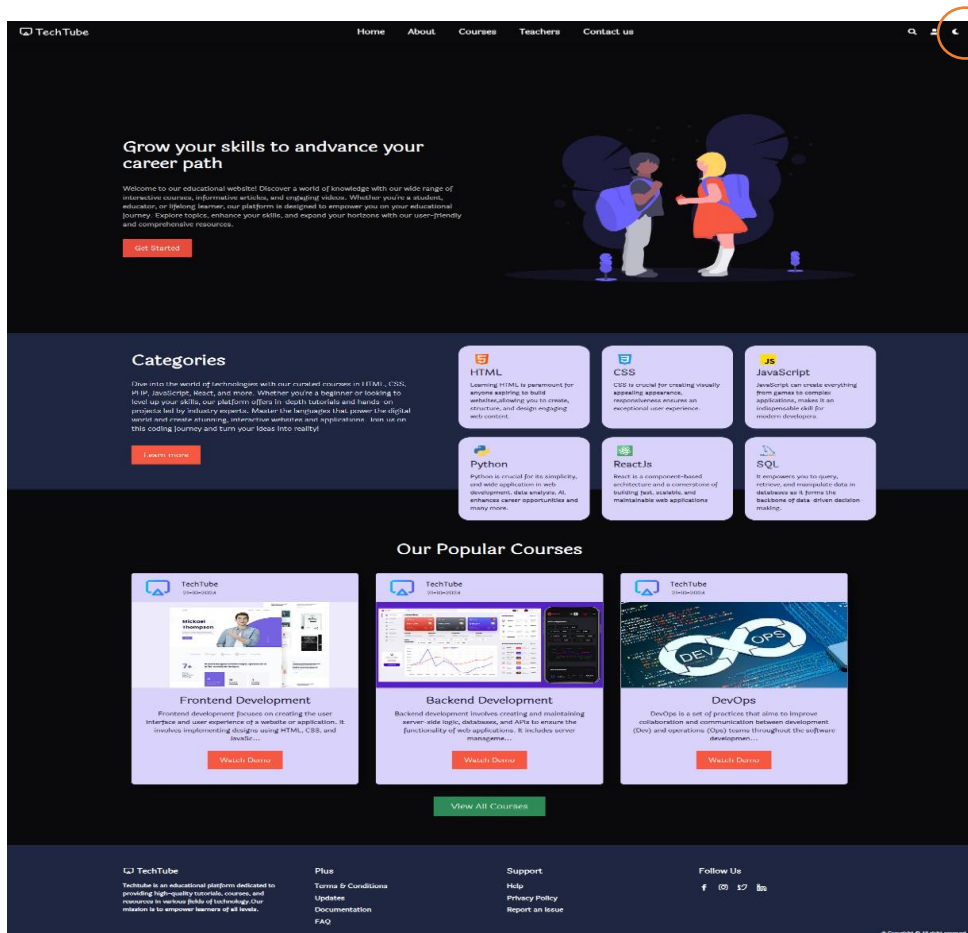


Fig: 11

Admin Portal:

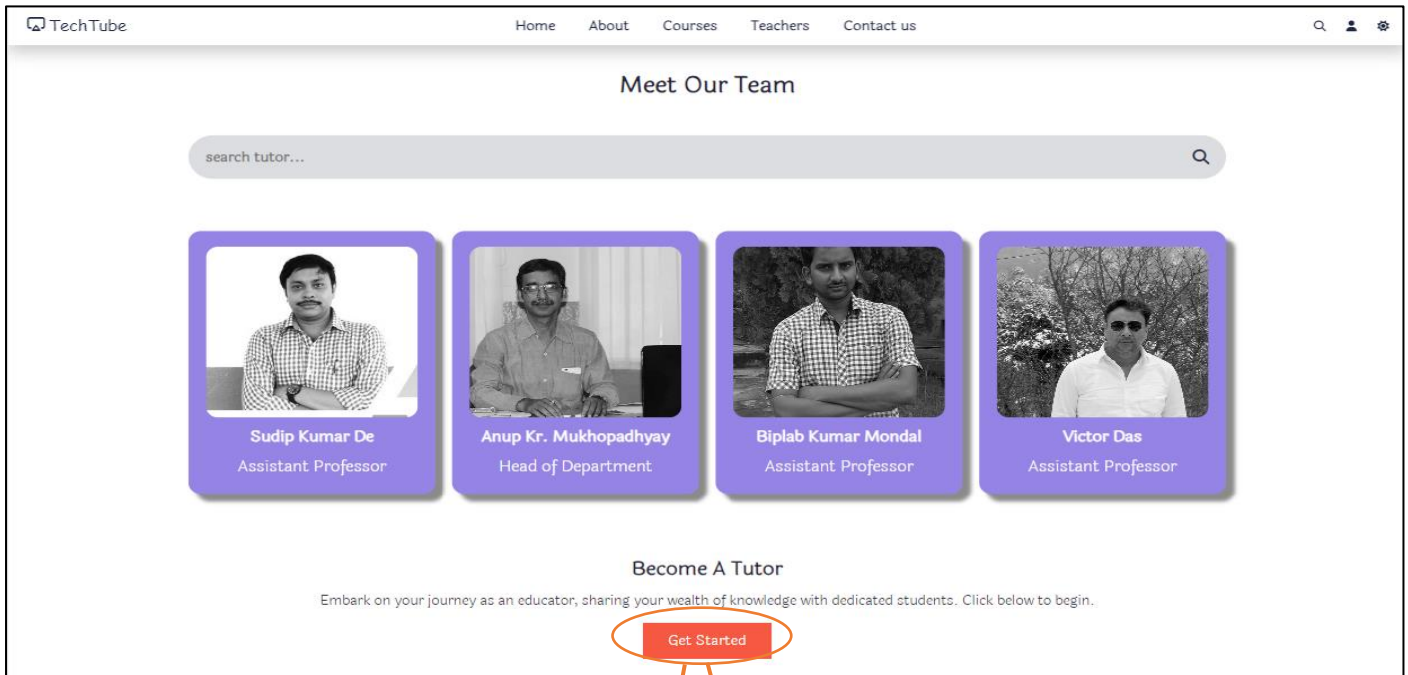


Fig: 12

Redirects to Login / Register Page

Login/Register

The screenshot shows a 'Register' form with a light purple background. The form has the following fields and elements: 'Your Name *' with a text input field containing 'Enter Your Name'; 'Your Password *' with a password input field containing four dots; 'Your Profession *' with a dropdown menu showing '-- Select Your Profession'; 'Confirm Password *' with a text input field containing 'Confirm Your Password'; 'Your Email *' with a text input field containing 'bkm@gmail.com'; and 'Select Pic *' with a 'Choose File' button and the text 'No file chosen'. At the bottom of the form, there is a link 'Already Have An Account? Login Now' and a 'Register Now' button.

Fig: 12.1

The screenshot shows a 'Welcome Back!' login form with a light purple background. The form has the following fields and elements: 'Your Email *' with a text input field containing 'bkm@gmail.com'; 'Your Password *' with a password input field containing four dots; a link 'Don't Have An Account? Register Now'; and a 'Login Now' button.

Fig: 12.2

Dashboard

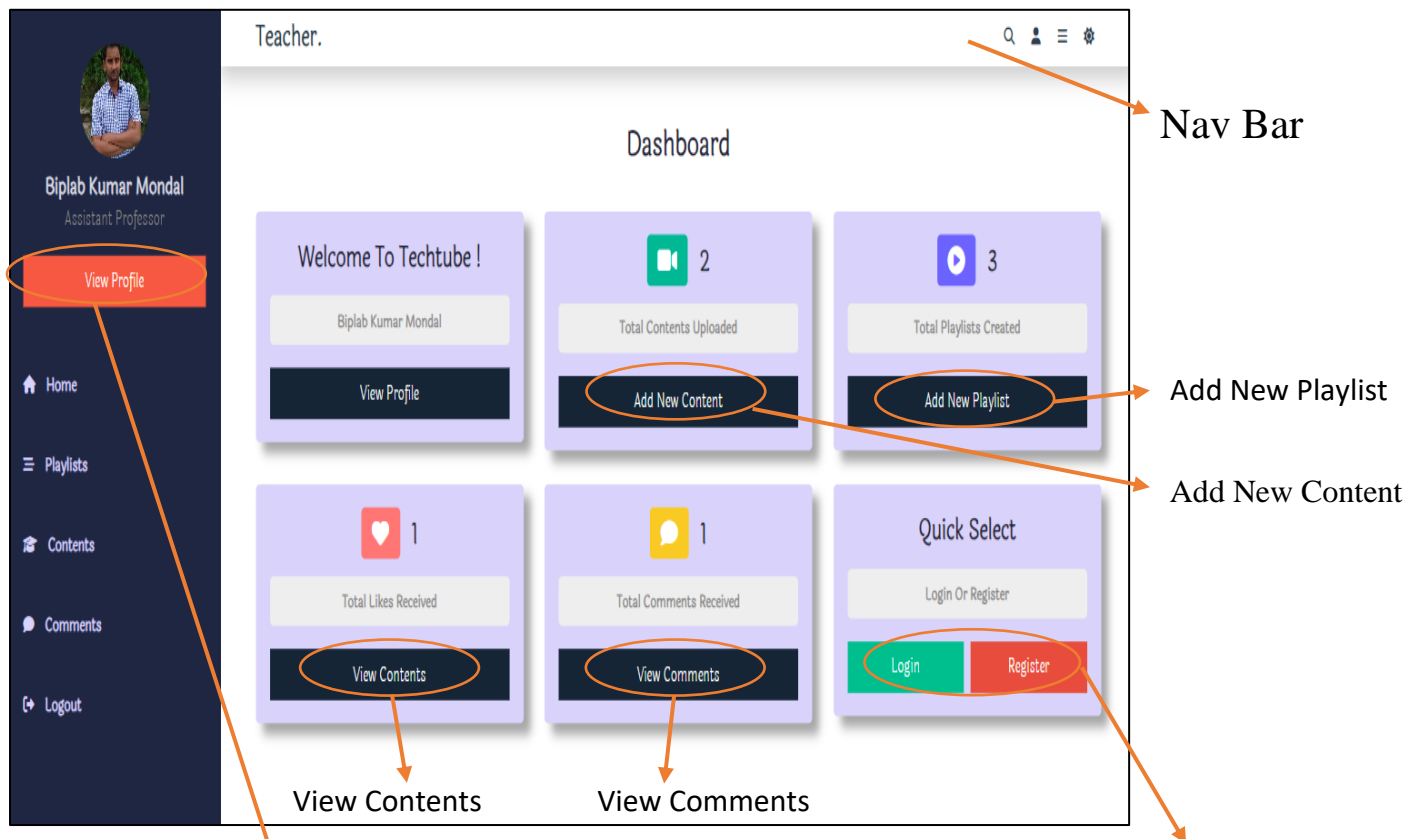


Fig: 13

Redirects to Login / Register

Profile Page

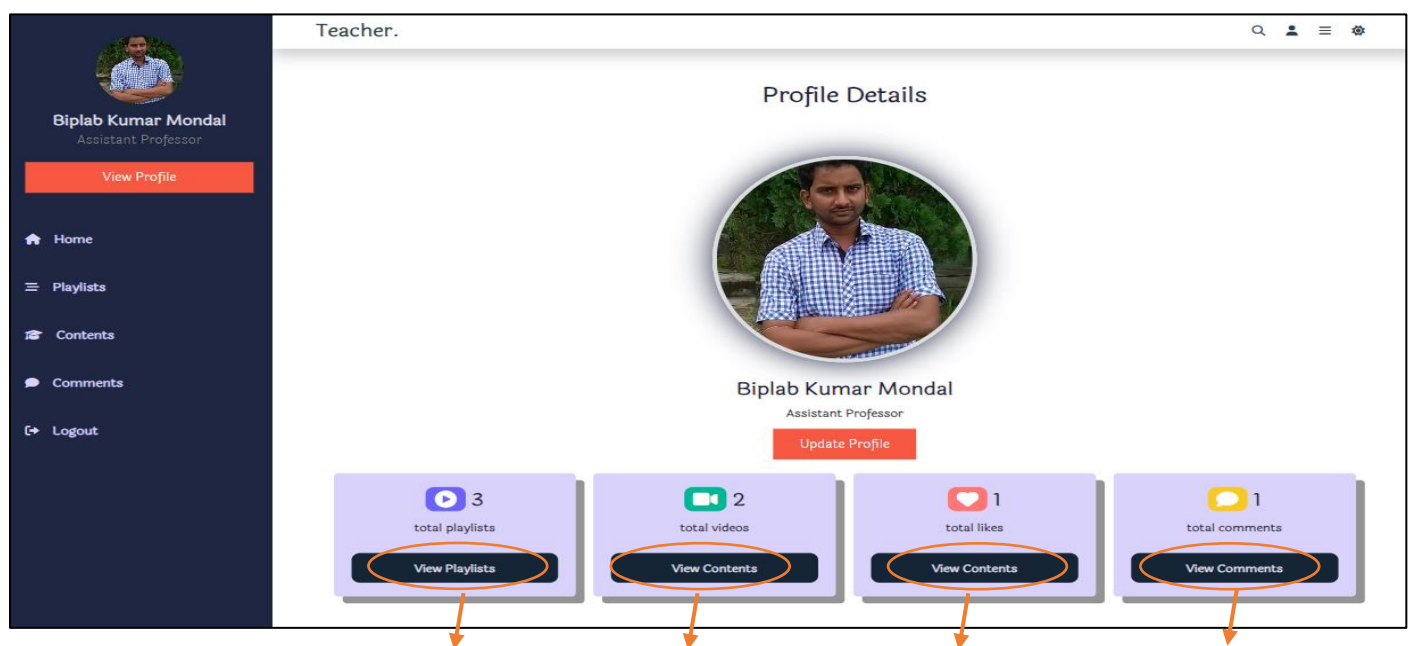


Fig: 13.1

View Playlists

View Contents

View Likes

View Comments

Playlist Page

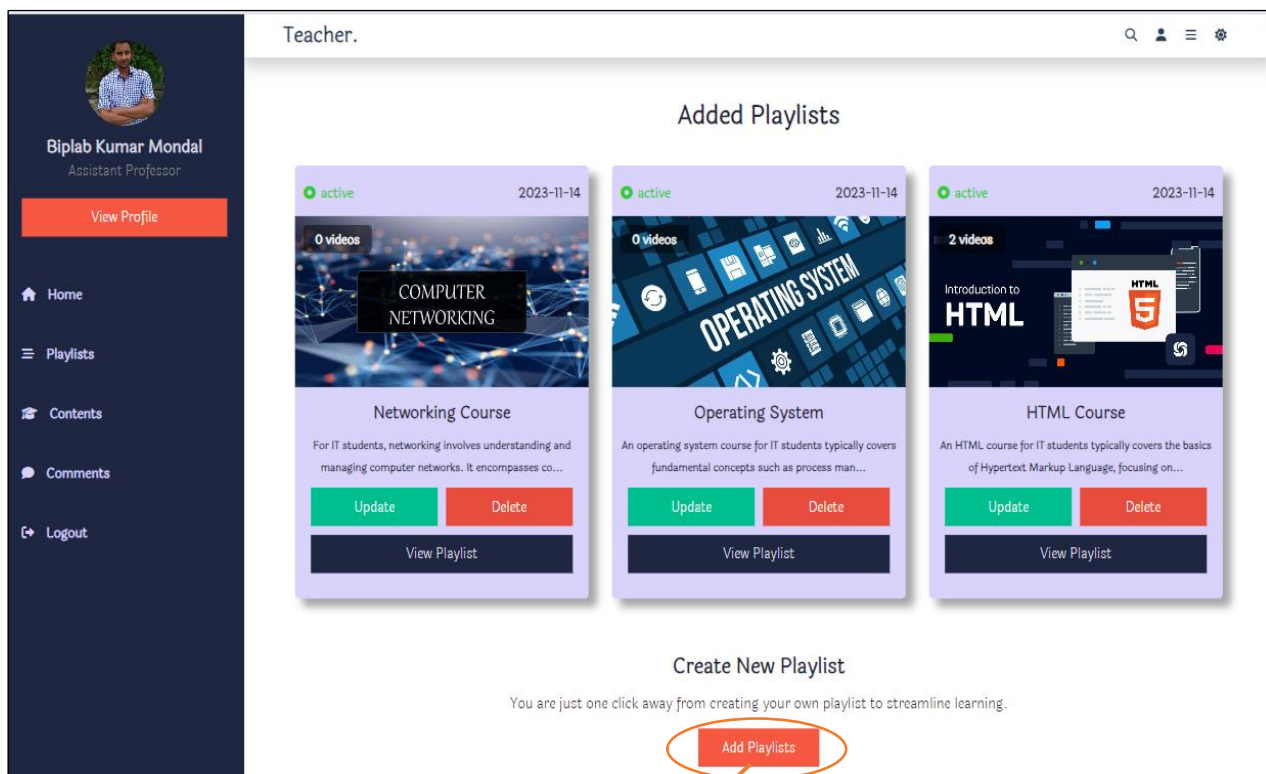


Fig: 14

Redirects to Add Playlist Form

The 'Create Playlist' form contains the following fields and controls:

- Playlist Status ***: A dropdown menu with the placeholder text '-- select status'. An arrow points to this field with the annotation 'Shows Status of the Playlist'.
- Playlist Title ***: A text input field with the placeholder text 'enter playlist title'. An arrow points to this field with the annotation 'Input for Playlist's Title'.
- Playlist Description ***: A large text area with the placeholder text 'write description'. An arrow points to this field with the annotation 'Input for Playlist's Description'.
- Playlist Thumbnail ***: A file upload control with a 'Choose File' button and the text 'No file chosen'. An arrow points to this field with the annotation 'Input for Playlist's Thumbnail'.
- Create Playlist**: A dark blue button at the bottom of the form.

Fig: 14.1

Update Playlist Page

The 'Update Playlist' form is a purple-bordered box containing several input fields and buttons. Annotations with orange arrows point to specific fields:

- Playlist Status ***: A dropdown menu showing 'active'. Annotation: 'Update Status of the Playlist'.
- Playlist Title ***: A text input field containing 'Networking Course'. Annotation: 'Update Playlist's Title'.
- Playlist Description ***: A text area containing a paragraph about networking. Annotation: 'Update Playlist's Description'.
- Playlist Thumbnail ***: A section with a thumbnail image labeled 'COMPUTER NETWORKING' and a 'Choose File' button. Annotation: 'Update Playlist's Thumbnail'.

At the bottom of the form are three buttons: 'Delete' (red), 'View Playlist' (green), and 'Update Playlist' (dark blue).

Fig: 14.2

View Playlist Page

The 'View Playlist' page is a light gray interface. At the top, it says 'Teacher.' and has search, user, and settings icons. The main section is titled 'Playlist Details' and features a card for the 'Networking Course'.

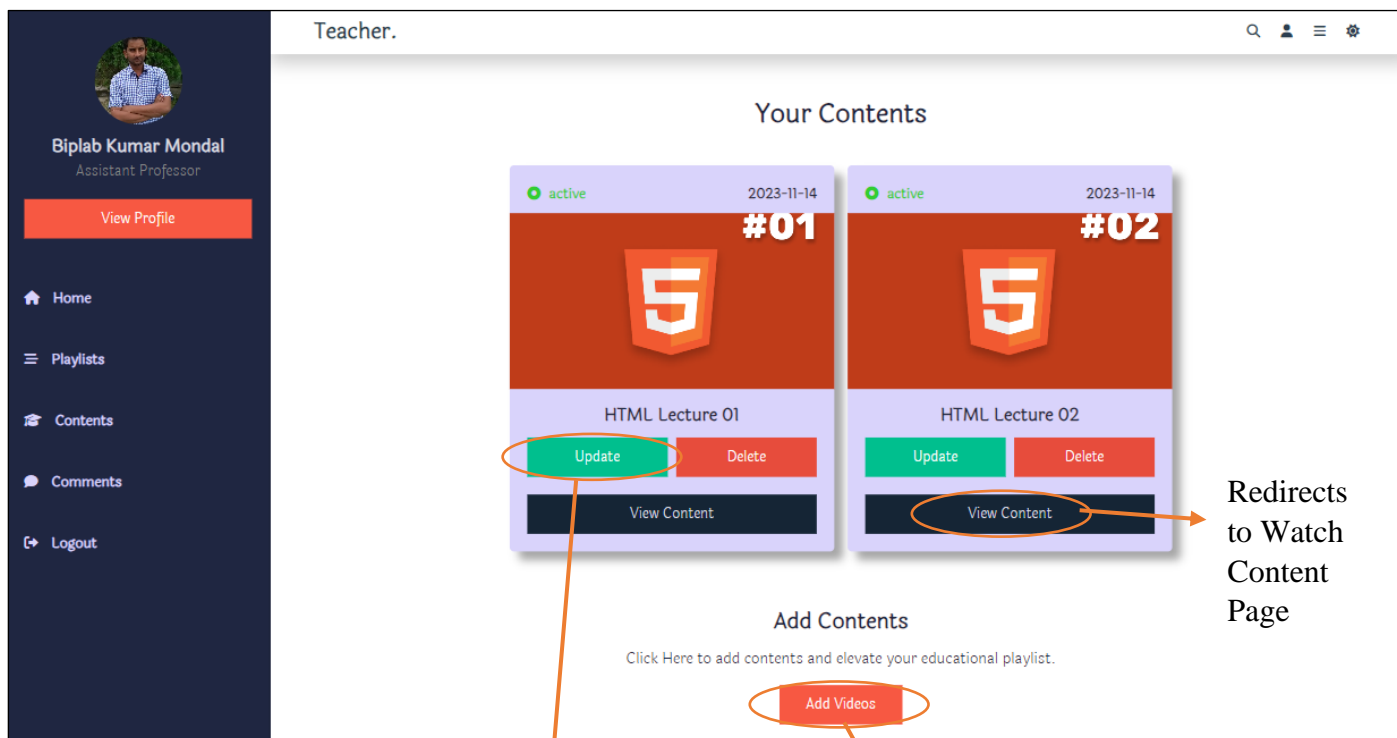
The 'Networking Course' card includes:

- A thumbnail image with the text 'COMPUTER NETWORKING'.
- A date '2023-11-14'.
- A description: 'For IT students, networking involves understanding and managing computer networks. It encompasses concepts like data transmission, protocols, network design, security, and troubleshooting. Key topics include TCP/IP, OSI model, routers, switches, firewalls, and wireless technologies. Practical skills in configuring and maintaining networks are crucial, along with knowledge of emerging technologies like SDN (Software-Defined Networking) and cloud networking. Continuous learning is essential in this dynamic field to keep up with advancements and security challenges.'
- Two buttons: 'Update Playlist' (green) and 'Delete Playlist' (red).

Below the card is a section titled 'Playlist Videos' with the text 'no videos added yet!' and an 'Add Videos' button.

Fig: 14.3

Content Page



Redirects to Update Content form

Fig: 15

Redirects to Upload Content form

The 'Update Content' form contains the following fields: 'Update Status' (dropdown menu set to 'active'), 'Update Title' (text input with 'HTML Lecture 01'), 'Update Description' (text area with a sample HTML description), 'Update Playlist' (dropdown menu set to 'select playlist'), 'Update Thumbnail' (file upload section with a 'Choose File' button and a video player showing a thumbnail), and 'Update Video' (file upload section with a 'Choose File' button). At the bottom are 'View Content' and 'Delete Content' buttons, and an 'Update Content' button.

Fig: 15.1

The 'Upload Content' form contains the following fields: 'Video Status' (dropdown menu set to '-- select status'), 'Video Title' (text input with 'enter video title'), 'Video Description' (text area with 'write description'), 'Video Playlist' (dropdown menu set to '--select playlist'), 'Select Thumbnail' (file upload section with a 'Choose File' button), and 'Select Video' (file upload section with a 'Choose File' button'). At the bottom is an 'Upload Video' button.

Fig: 15.2

Watch Content Page

The screenshot shows a video player with a black background. The video content is a white rectangular area with the text "Learn HTML with TechTube" in a red, cursive font. Below the video player, there is a date "2023-11-14" and the title "HTML Lecture 01". Below the title, there are icons for "1 Likes" and "1 Comments". A paragraph of text describes the lecture content. Below the text, there are two buttons: a green "Update" button and a red "Delete" button. Below these buttons, there is a section for "User Comments" showing a comment by "Kunal Kesh" dated "2023-11-14" with the text "Nice Tutorial!". Below the comment, there is a red "Delete Comment" button.

Watch Video

2023-11-14

HTML Lecture 01

1 Likes 1 Comments

HTML Lecture 01 introduces students to the fundamental concepts of Hypertext Markup Language (HTML), the backbone of web development. The lecture covers the basics of HTML syntax, structure, and essential tags. Students learn how to create a basic HTML document, understand the document structure with headings, paragraphs, and lists, and incorporate hyperlinks. Emphasis is placed on hands-on practice to ensure students gain practical skills in coding and creating simple web pages. The goal is to provide a solid foundation for further exploration of web development technologies.

Update Delete

Deletes the Content

Redirects to Update Content form

User Comments

Shows User Comments

Kunal Kesh
2023-11-14

Nice Tutorial!

Delete Comment

Deletes User Comment

Fig: 15.3

Comment Page

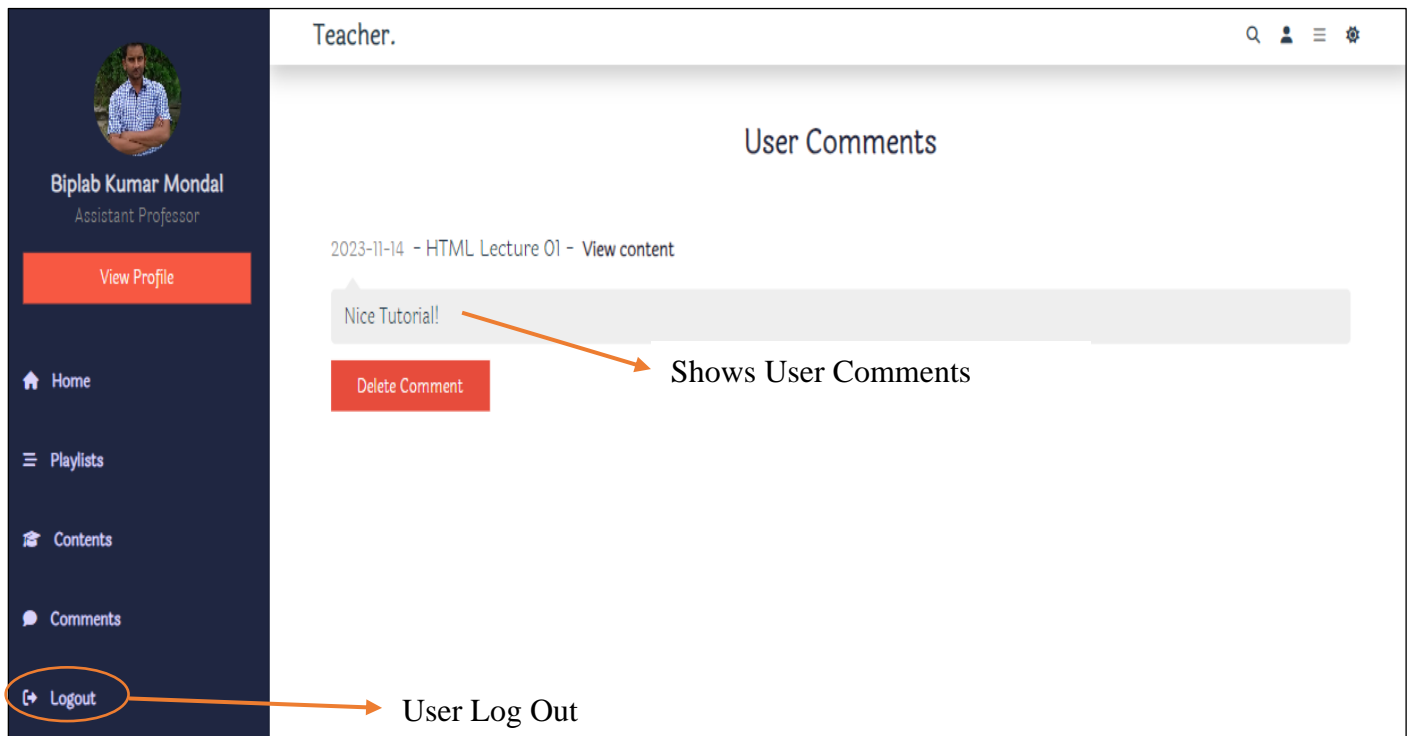


Fig: 16

Search Bar

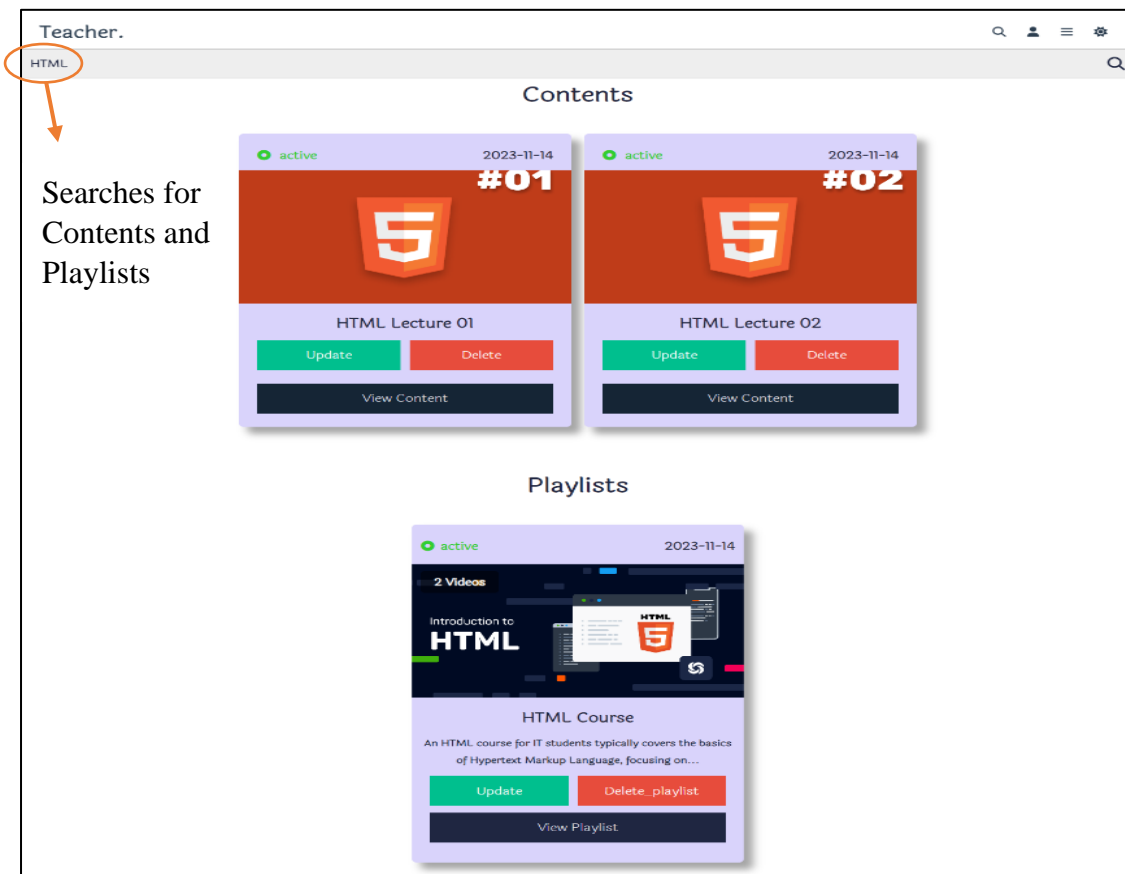


Fig: 17

Dark Mode

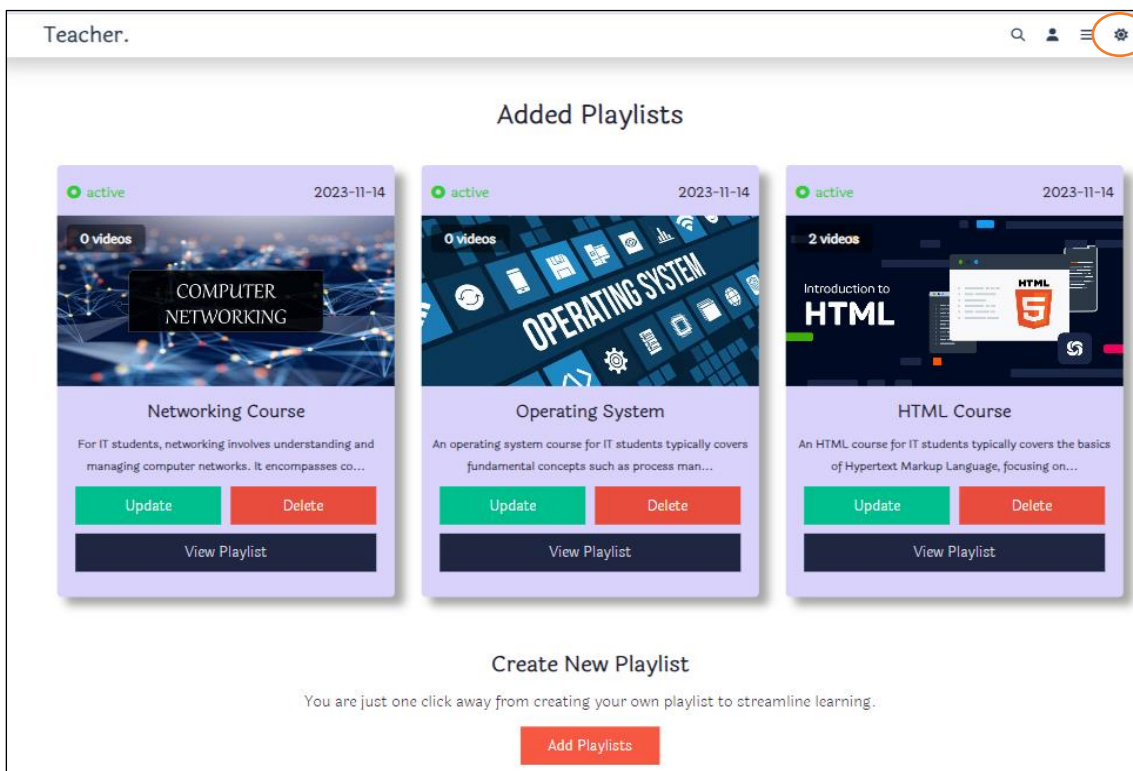
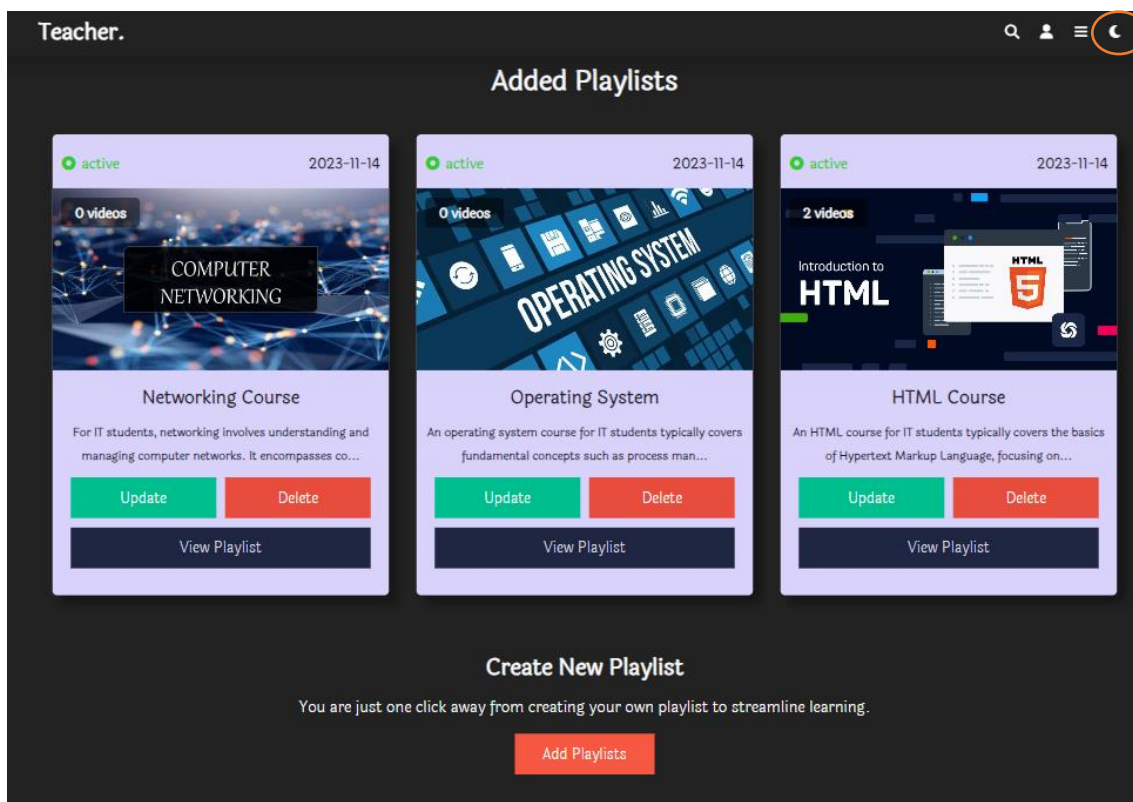


Fig: 18

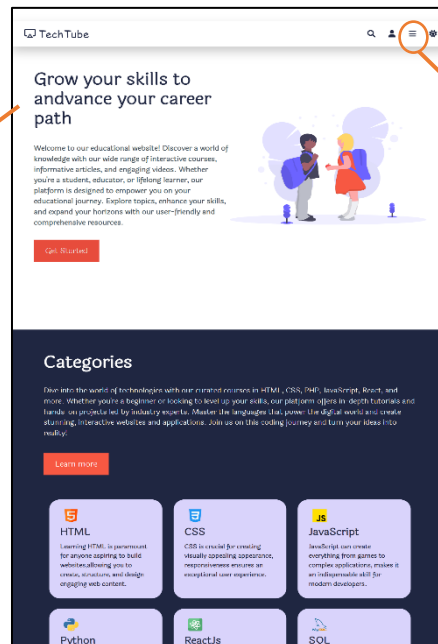
Dark Mode
Applied



Responsiveness Student Portal (Tab & Mobile View)

Mobile View

iPhone SE
(375 x 667)

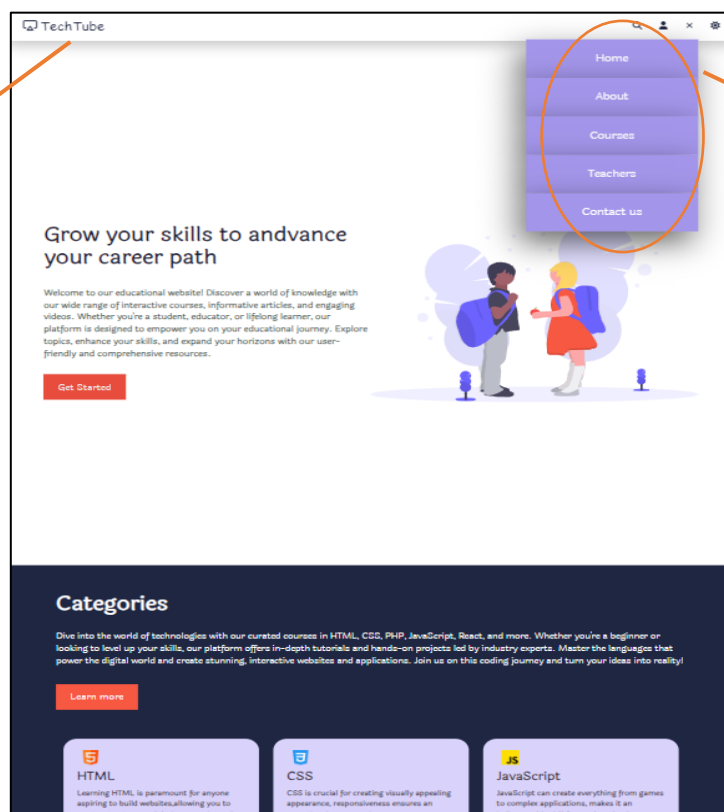


Hamburger
Menu

Fig: 19

Tablet View

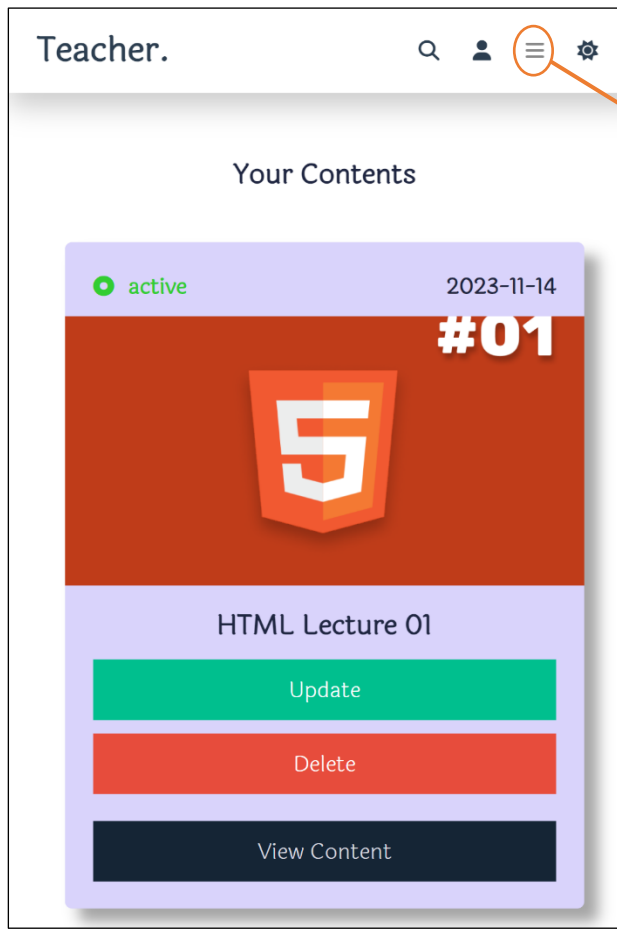
iPad Pro
(1024 x 1366)



Nav Menu
in Tablet
View

Fig: 20

Responsiveness Admin Portal (Tab & Mobile View)



Hamburger Menu

Mobile View

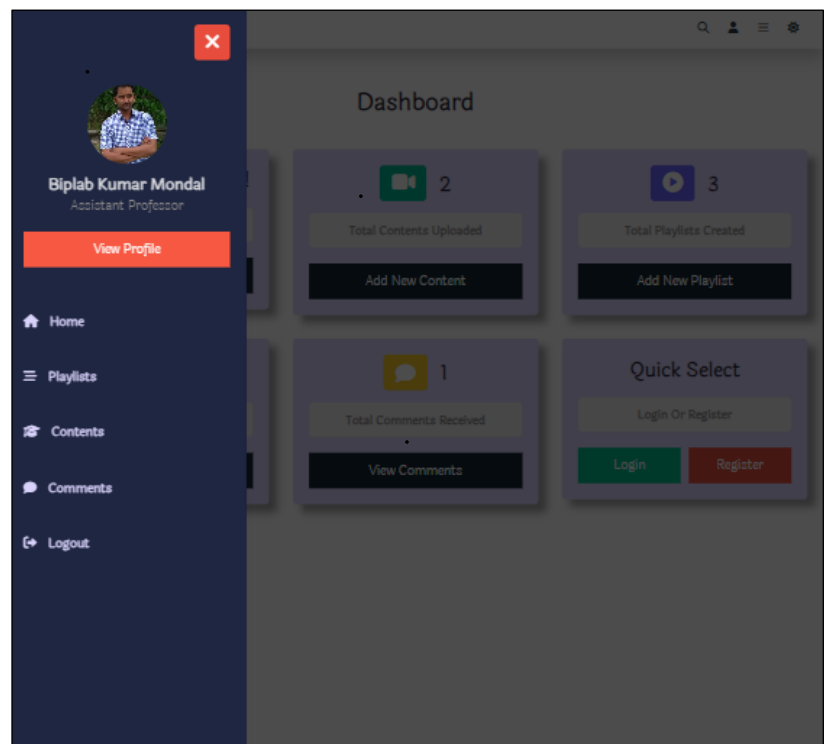
iPhone SE (375
x 667)

Fig: 21

Tablet View

iPad Pro (1024 x
1366)

Fig: 22



CONCLUSION

In conclusion, Techtube serves as a commendable educational website, providing a wealth of learning opportunities for users. Through its diverse array of content, ranging from tutorials and lectures to practical demonstrations, Techtube caters to a broad audience with varied learning preferences. The platform's user-friendly interface enhances the overall learning experience, allowing for seamless navigation and accessibility.

Moreover, Techtube's commitment to quality education is evident in the meticulous curation of its content, ensuring relevance and accuracy. The inclusion of interactive features and community engagement further fosters a dynamic learning environment, encouraging collaboration and knowledge-sharing among users. As a valuable resource, Techtube not only imparts knowledge but also inspires a spirit of curiosity and continuous learning. Whether one is a novice or an expert in a particular field, Techtube stands as a reliable companion on the journey of educational exploration, making it a noteworthy platform in the realm of online education.

FUTURE SCOPE

The future scope of TechTube, with its innovative certificate system, is expansive and promising. By integrating automatic certificate generation contingent on successful course completion, we are poised to revolutionize online learning. This feature not only incentivizes students to genuinely engage with the course material but also ensures the credibility and value of the certification.

One key future development is the enhancement of our pop-up question mechanism. By refining the timing and difficulty of the pop-up questions, we can ensure that each student remains actively engaged and appropriately challenged. This will enhance the overall learning experience by preventing passive consumption of the content and promoting active participation.

Moreover, the integration of advanced analytics will allow instructors to gain deeper insights into student performance and engagement patterns. This can inform continuous improvement of course content and instructional strategies, leading to more effective learning outcomes.

REFERENCE

- <https://flatuicolors.com/palette/defo>
- <https://www.flaticon.com/>
- <https://www.youtube.com>
- <https://www.pngegg.com/>
- <https://fonts.google.com/>
- <https://storyset.com/>
- <https://cdnjs.com/libraries/font-awesome>
- <https://swiperjs.com/>
- <https://unicons.iconscout.com/release/v2.1.6/css/unicons.css>
- <https://formsfree.io/>