A Field Project Report on

# ONLINE EDUCATIONAL PLATFORM

**Submitted**

*In partial fulfillment of the requirements for the award of the degree*

**BACHELOR OF TECHNOLOGY**

**In**

**COMPUTER SCIENCE and ENGINEERING**

By


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# CERTIFICATE

This is to certify that the field project entitled *"**ONLINE EDUCATIONAL PLATFORM**"* is being submitted by VARDHAN (231FA04618), LIKHITHA (231FA04665), SUBANI SHAIK (231FA04692) and SANDHYA (231FA04G20) in partial fulfilment of the requirements for the degree of **Bachelor of Technology (B.Tech.) in Computer Science and Engineering** at the Department of Computer Science and Engineering, Vignan's Foundation for Science, Technology and Research (Deemed to be University), Vadlamudi, Guntur District, Andhra Pradesh, India.

This is a bonafide work carried out by the aforementioned students under my guidance and supervision.

**Guide**

**Project Review Committee** **HoD, CSE**

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## DECLARATION

**Date:15-04-2025**

We hereby declare that the work presented in the field project titled "***ONLINE EDUCATIONAL PLATFORM***" is the result of our own efforts and investigations.

This project is being submitted under the supervision of **Mr. Sk. Sikindar, Asst. Professor, Department of CSE** in partial fulfillment of the requirements for the Bachelor of Technology (B.Tech.) degree in Computer Science and Engineering at the Department of Computer Science and Engineering, Vignan's Foundation for Science, Technology and Research (Deemed to be University), Vadlamudi, Guntur, Andhra Pradesh, India.


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## 1. Introduction

In recent years, the integration of technology into education has revolutionized the way knowledge is delivered and consumed. Traditional classroom settings, while still essential, are being enhanced and, in some cases, replaced by digital learning environments. This transformation has been significantly accelerated by global events such as the COVID-19 pandemic, which pushed educators and learners worldwide to adopt online methods of teaching and learning. Amidst this shift, platforms like YouTube have gained immense popularity due to their accessibility, ease of use, and vast repository of content. YouTube is now a leading platform for educational videos, covering topics ranging from basic school-level subjects to advanced university courses.

However, despite its vast content base, YouTube lacks a structured system to deliver curriculum-specific and verified content to students. Students often face difficulties in identifying quality videos relevant to their syllabus. This is where a customized educational platform becomes essential. The **Online Educational System** proposed in this project aims to act as a bridge between quality content on YouTube and students seeking structured academic learning. Faculty members can upload YouTube links categorized by subjects and topics, creating a verified and structured repository of learning material.

This system benefits both faculty and students. Faculty members can ensure that the content they recommend is directly related to the subject matter being taught, maintaining the academic integrity of the course. On the other hand, students save time and effort by accessing only the most relevant, faculty-approved content without having to navigate through unrelated or misleading videos on YouTube.

Another important aspect is accessibility. Many students face challenges attending regular classes due to distance, time constraints, or personal circumstances. This platform enables them to learn at their own pace and convenience. It promotes self-paced learning while maintaining a direct link between students and instructors through carefully selected resources.

Furthermore, the proposed system uses a role-based login mechanism, ensuring that only authorized users can perform specific actions. Faculty will have access to upload and organize content, while students will only have access to view and interact with it. This improves security, accountability, and content integrity.

With a clean and user-friendly interface, the system is designed to be simple and effective. It utilizes Firebase for real-time database and authentication services, ensuring smooth and secure operation. The frontend will be developed using HTML, CSS, and JavaScript to ensure compatibility with different devices.

Overall, the **Online Educational System** is a well-structured and efficient platform that combines the flexibility of YouTube learning with the structure and reliability of a school or college curriculum. It empowers teachers to take control of the online learning experience and provides students with a streamlined and focused environment for academic growth. This project not only addresses the problems associated with open-ended online learning but also enhances the quality and accessibility of education

### 1.1. Problem Definition

The modern educational landscape is evolving rapidly with the rise of online learning tools, digital platforms, and virtual classrooms. However, while there are numerous sources of information available online, the biggest challenge students face today is not the lack of content, but rather the lack of proper guidance, organization, and validation of that content. One of the most widely used platforms for learning videos is YouTube. It contains a vast collection of educational videos created by both professionals and content creators. While this availability of resources may seem beneficial, it presents several significant problems that impact the overall learning process of students.

- Unstructured Content YouTube is an open platform where anyone can upload content. There is no centralized control over video categorization based on academic curriculum, subject relevance, or syllabus requirements. Students searching for a particular topic often come across multiple videos, many of which may be irrelevant, outdated, or of low quality. With no guidance, students can become confused about which video to trust, wasting valuable time and effort in the process. This leads to unstructured and scattered learning, which hampers the academic growth of students.
- Distraction and Misleading Information Another major issue with using YouTube directly as a learning tool is the presence of distracting and non-educational content. Even when a student finds a useful video, the recommended videos on the sidebar or autoplay suggestions can easily divert them to entertainment or unrelated topics. This not only wastes time but also breaks the flow of learning. Furthermore, students may unknowingly consume inaccurate or misleading information from unverified content creators, which may result in misconceptions or confusion about the subject matter.
- Lack of Personalization and Institutional Control Currently, educational institutions do not have direct control over the content available on YouTube. Faculty members may share links through messaging apps like WhatsApp, Telegram, or email, but this approach lacks personalization, security, and centralized access. There is no platform where faculty can curate and manage the content specific to their course syllabus, resulting in inconsistency in learning material distribution. Moreover, these informal channels lack organization — students may lose links, forget the context, or mix them with other irrelevant messages.
- No Role-Based Access or Authentication In traditional systems like WhatsApp or Google Docs, there is no proper authentication or user role differentiation. Any student can edit shared documents, forward links out of context, or even miss out on updates. This lack of control can lead to confusion, duplication, and potential misuse of content. There is a growing need for a platform that enables secure, role-based access — where faculty can upload and manage content while students can only view and interact with it as learners.

## 1.2. Existing System

In today's digital age, students and educators are increasingly relying on online platforms for accessing and sharing educational resources. One of the most widely used platforms for academic content is YouTube, thanks to its vast collection of subject-related videos and tutorials. However, the current method of using YouTube in education is highly unstructured and lacks system-level support, especially in educational institutions where no Learning Management System (LMS) or virtual classroom is implemented.

- Informal Sharing of YouTube Links
  The most common way educational videos are currently shared by faculty is through informal channels like WhatsApp, Telegram, or email. A faculty member simply finds a useful YouTube video and shares the link with students via these apps. While this method may work in small, informal learning groups, it becomes unmanageable and unorganized as the number of students or video links grows.
  There is no proper organization, categorization, or tracking of what links have been shared, whether students have accessed them, or if the links are still working. Over time, shared links get buried in chat history, and students are unable to revisit or revise older topics. This method is unreliable for long-term academic use, especially when covering a syllabus systematically.

- No Subject-wise or Topic-wise Organization
  In the current system, there is no dedicated platform where YouTube links are categorized based on subjects, topics, or chapters. Students often get confused about which link corresponds to which part of the syllabus. They must rely on memory or scroll through long chat histories to find the right video. This lack of organization affects learning continuity and creates difficulty in revising or referencing content later.
  For example, if a teacher shares five different YouTube links over a month, students have no central dashboard or repository where these links are stored systematically. If a student misses a message or deletes a chat, the content is lost. This creates dependency on messaging apps, which are not designed for academic content management.

- Lack of Authentication and Control
  Currently, anyone with access to the link can share or misuse it. Since there is no authentication system, there is no control over who is uploading, sharing, or accessing the content. Faculty members cannot manage their content in one place or restrict unauthorized access. Students, in turn, do not have a platform where they can securely and systematically access only the content meant for them

### 1.3. Proposed System

The proposed system is a **web-based Online Educational System** designed to simplify and streamline the way educational content is delivered to students using **YouTube video links**. In the current educational environment, especially after the rise of remote learning, students and educators face several challenges in sharing and accessing quality video content. Our system is specifically built to eliminate these issues by offering a structured, secure, and easy-to-use platform without the need for a traditional classroom or a full Learning Management System (LMS).

This platform focuses on allowing faculty members to **curate useful YouTube videos**, organize them by subject and topic, and make them easily accessible to students in a **systematic and distraction-free** environment. Students can view the videos any time, ensuring **flexibility and independent learning**, while faculty can manage the content with ease.

**1. System Architecture and User Roles**

The system involves two types of users:

- **Faculty**:
  - They can log in using a secure password.
  - After login, they can upload YouTube links.
  - Faculty can assign these links to specific subjects, topics, and chapters.
  - They can edit or delete any previously added links if needed.
- **Students**:
  - They sign in to access the system.
  - They can only view YouTube links shared by faculty.
  - They are not allowed to upload or edit links.
  - Optionally, they may give feedback or ratings to the videos.

This separation of roles helps maintain **security and control**, ensuring that only authenticated faculty can manage content while students have read-only access.

**2. Main Features**

The proposed system contains the following core features:

- **Organized Content**: Videos are categorized by subject, unit, and topic, making it easier for students to find what they need.
- **Role-Based Access**: Faculty and students have different access levels, increasing security and preventing unauthorized edits.
- **YouTube Link Management**: The system doesn't host any videos. It only stores and organizes YouTube URLs, making the platform lightweight.
- **User Authentication**: Both students and faculty must log in to use the system, ensuring controlled access.
- **Responsive Design**: The website is designed to work on both mobile and desktop devices, providing flexibility to users.
- **Feedback Mechanism (Optional)**: Students can give feedback or rate the videos, helping faculty improve their content selection.
- **Search Functionality**: Students can search for topics or keywords to find specific videos quickly.

### 1.4. Literature Review

The emergence of digital platforms has transformed the traditional education landscape, especially with the integration of multimedia resources such as video lectures. Among these, **YouTube** has become one of the most powerful tools for disseminating knowledge in both formal and informal learning environments. This literature review explores existing research, academic insights, and previous works related to the use of video-based learning, role-based systems, and lightweight educational platforms. It provides a foundation for understanding the relevance and potential impact of the proposed system that curates and delivers **YouTube video links** to students through a structured web platform.

**1. The Rise of YouTube in Education**

Several studies have emphasized YouTube's effectiveness as an educational tool. According to a report by **Snelson, Rice, and Wyzard (2012)**, teachers found YouTube beneficial for supplementing classroom instruction, improving student engagement, and enhancing conceptual understanding. It allows students to learn at their own pace and revisit difficult topics multiple times. However, the same study pointed out that unrestricted access to YouTube also leads to distractions, such as entertainment suggestions, comments, and ads. This problem highlights the importance of building a platform where educational YouTube content is isolated and well-organized — exactly what the proposed system aims to achieve.

**2. Challenges in Current Online Learning Practices**

While Learning Management Systems (LMS) like Moodle, Blackboard, and Google Classroom have been widely adopted, research by **Lonn and Teasley (2009)** found that many institutions face challenges in terms of cost, complexity, and user experience. For example, most LMS platforms are not user-friendly for beginners and require IT support for maintenance and deployment. Moreover, they often do not integrate YouTube-based content in a clean, minimal way. This gap presents an opportunity to build **lightweight, role-based educational platforms** focused purely on curated video content.

**3. Structured Learning and Categorized Content**

A 2020 paper titled *"Organized Learning Systems for Online Environments"* by Kumar and Singh highlighted the importance of structured categorization in educational content delivery. Students learn better when material is logically grouped by topic or difficulty. The proposed system implements this recommendation by grouping videos under subject names, units, and specific topics, enabling students to find relevant content quickly and efficiently.

## 2. System Requirements

### 2.1. Hardware Requirements

| Component | Minimum Requirement |
|---|---|
| **PROCESSOR** | **Intel Core i3 or AMD equivalent (for development)** |
| **RAM** | **4 GB (minimum), 8 GB** |
| **STORAGE** | **100 GB HDD/SSD (for project files and dependencies)** |
| **DISPLAY** | **1024 x 768 resolution (or higher)** |
| **INTERNET** | **Internet connection (essential for accessing YouTube Device** |

### 2.2. Software Requirements (SRS)

Operating Systems: Windows 10, MacOS 10.13+, Linux distributions like

Tools for content creation such as video editing software and multimedia integration capabilities.

Additional Considerations
Mobile Support: Platforms should support iOS (14.2+) and Android (7.0+) devices with updated browsers like Chrome or Safari.

Specialized Needs: Courses in fields like Computer Science may require higher RAM and storage, while music courses may need high-quality microphones.

## 3. System Design

### 3.1. Modules of System

The Online Educational System that delivers curated YouTube video links to students is divided into several key modules. Each module plays an essential role in the functioning of the system, ensuring a smooth, secure, and user-friendly experience for both faculty and students. Below is a detailed explanation of the major modules included in the system:

#### 3.1.1. User Authentication Module

This is the entry point of the system where users identify themselves as either faculty or student. The login process is managed using Firebase Authentication, which provides secure sign-in through email or other identity providers.

Faculty Login: Faculty members log in using verified credentials. Their accounts are typically pre-approved to ensure only authorized persons can upload educational content.

Student Login: Students can register or log in using their email and basic details. Once authenticated, they can access all the available learning materials.

The system ensures that every user session is securely managed, preventing unauthorized access.

#### 3.1.2. Role-Based Access Module

This module handles the access rights of users based on their selected role.

Faculty Role: Faculty members have access to the upload panel where they can add new YouTube links, categorize them based on subjects, and manage the content.

Student Role: Students can only view the uploaded content, filtered by subject and topic. They are restricted from modifying any data.

This role separation is crucial to maintain the structure, security, and purpose of the platform.

#### 3.1.3. Content Management Module

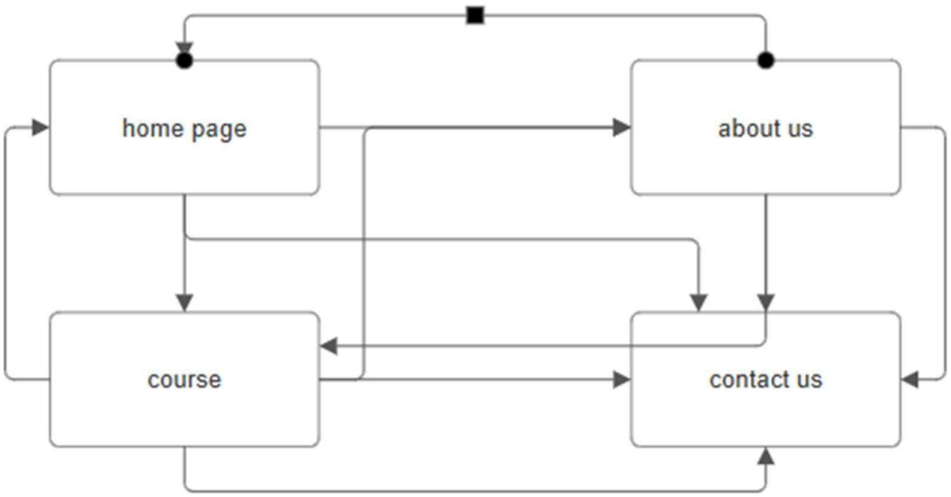
This module allows faculty to upload, update, and manage YouTube links that serve as learning resources.

The faculty member inputs details such as video title, YouTube URL, subject name, topic, and description.

These details are stored in a Firebase Realtime Database or Firestore, making them available instantly to students.

Faculty can also edit or remove any content they previously uploaded.

### 3.2.UML DIAGRAM




## 4. Implementation

### 4.1. Codes of webpages

#### 4.1.1. Homepage

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>home</title>

  <!-- font awesome cdn link  -->
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/6.1.2/css/all.min.css">

  <!-- custom css file link  -->
  <link rel="stylesheet" href="css/style.css">
  <style>
    body {
    margin: 0;
     padding: 0;
     display: flex;
     overflow-x: hidden; /* Prevents unwanted horizontal scrolling */
  }

  .side-bar {
```

```
    position: fixed;
    top: 0;
    left: -260px; /* Start hidden */
    width: 250px;
    height: 100%;
    background: #222;
    transition: 0.3s ease-in-out;
    padding: 15px;
    z-index: 1000;
    overflow-y: auto;
}

.main-content {
    flex: 1;
    width: 100%;
    transition: margin-left 0.3s ease-in-out;
}

.side-bar.active {
    left: 0;
}

.main-content.shifted {
    margin-left: 250px;
}
body.dark-mode {
    background-color: #121212;
    color: #ffffff;
}

.dark-mode .header,
.dark-mode .side-bar {
    background-color: #1e1e1e;
}

.dark-mode .footer {
    background-color: #1e1e1e;
    color: white;
}

.dark-mode a, .dark-mode button {
    color: white;
}
```

```
.dark-mode #toggle-btn::before {
    content: "\f186"; /* Moon icon */
    font-family: "Font Awesome 6 Free";
    font-weight: 900;
}


</style>


</head>
<body>
    <div class="side-bar">

        <div class="profile">
            <img src="images/pic-5.jpg" class="image" alt="">
            <h3 class="name">Srujana</h3>
            <p class="role">student</p>
            <a href="profile.html" class="btn">view profile</a>
        </div>
        <nav class="navbar">
            <a href="index.html"><i class="fas fa-
home"></i><span>home</span></a>
            <a href="about.html"><i class="fas fa-
question"></i><span>about</span></a>
            <a href="courses.html"><i class="fas fa-graduation-
cap"></i><span>courses</span></a>
            <a href="contact.html"><i class="fas fa-headset"></i><span>contact
us</span></a>
        </nav>
    </div>

    <div class="main-content">
        <header class="header">
            <section class="flex">
                <a href="index.html" class="logo">
                    <img src="images/website.png" alt="Learnify" class="logo-image"
length="100" width="100">
                </a>
                <div class="icons">
                    <div id="menu-btn" class="fas fa-bars"></div>

                    <div id="toggle-btn" class="fas fa-sun"></div>
                </div>
```

```
            <div class="profile">
               <img src="images/pic-5.jpg" class="image" alt="">
               <h3 class="name">Srujana</h3>
               <p class="role">student</p>
               <a href="profile.html" class="btn">view profile</a>
               <div class="flex-btn">
                  <a href="login.html" class="option-btn">login</a>
                  <a href="register.html" class="option-btn">register</a>
               </div>
            </div>
         </section>
      </header>

<section class="home-grid">

  <h1 class="heading">quick options</h1>

  <div class="box-container">

    <div class="box">
      <h3 class="title">likes and comments</h3>
      <p class="likes">total likes : <span>0</span></p>
      <p class="likes">total comments : <span>0</span></p>
      <p class="likes">saved playlists : <span>0</span></p>
    </div>

    <div class="box">
      <h3 class="title">top categories</h3>
      <div class="flex">
        <a href="bussines.html"><i class="fas fa-chart-
simple"></i><span>business</span></a>
        <a href="desgin_courses.html"><i class="fas fa-
pen"></i><span>design</span></a>
        <a href="photo_course.html"><i class="fas fa-
camera"></i><span>photography</span></a>
        <a href="software.html"><i class="fas fa-
cog"></i><span>software</span></a>
      </div>
    </div>

    <div class="box">
      <h3 class="title">popular topics</h3>
      <div class="flex">
        <a href="playlist.html"><i class="fab fa-
```

```
html5"></i><span>HTML</span></a>
        <a href="css1.html"><i class="fab fa-css3"></i><span>CSS</span></a>
        <a href="js1.html"><i class="fab fa-js"></i><span>javascript</span></a>
        <a href="sass.html"><i class="fab fa-sass"></i><span>SASS</span></a>
        <a href="jquary.html"><i class="fab fa-code"></i><span>JQuery</span></a>
        <a href="bootstrap.html"><i class="fab fa-
bootstrap"></i><span>bootstrap</span></a>
      </div>
    </div>
  </div>

</section>



<section class="courses">

  <h1 class="heading">our courses</h1>

  <div class="box-container">

    <div class="box">
      <div class="tutor">
        <img src="images/shradha.jpeg" alt="">
        <div class="info">
          <h3>Shradha Khapra</h3>
          <span>20-02-2025</span>
        </div>
      </div>
      <div class="thumb">
        <img src="images/thumb-1.png" alt="">

      </div>
      <h3 class="title">complete HTML tutorial</h3>
      <a href="playlist.html" class="inline-btn">view video </a>
    </div>

    <div class="box">
      <div class="tutor">
        <img src="images/shradha.jpeg" alt="">
        <div class="info">
          <h3>shradha khapra</h3>
          <span>20-02-2025</span>
        </div>
```

```
  </div>
  <div class="thumb">
    <img src="images/thumb-2.png" alt="">

  </div>
  <h3 class="title">complete CSS tutorial</h3>
  <a href="css1.html" class="inline-btn">view video </a>
</div>

<div class="box">
  <div class="tutor">
    <img src="images/shradha.jpeg" alt="">
    <div class="info">
      <h3>shradha khapra</h3>
      <span>20-02-2025</span>
    </div>
  </div>
  <div class="thumb">
    <img src="images/thumb-3.png" alt="">
  </div>
  <h3 class="title">complete JS tutorial</h3>
  <a href="js1.html" class="inline-btn">view video</a>
</div>

<div class="box">
  <div class="tutor">
    <img src="images/download.jpeg" alt="">
    <div class="info">
      <h3>freecodecamp</h3>
      <span>20-02-2025</span>
    </div>
  </div>
  <div class="thumb">
    <img src="images/thumb-4.png" alt="">
  </div>
  <h3 class="title">complete Boostrap tutorial</h3>
  <a href="bootstrap.html" class="inline-btn">view video</a>
</div>

<div class="box">
  <div class="tutor">
    <img src="images/simplilearn.png" alt="">
    <div class="info">
      <h3>simplilearn</h3>
```

```
            <span>20-02-2025</span>
          </div>
        </div>
        <div class="thumb">
          <img src="images/thumb-5.png" alt="">
        </div>
        <h3 class="title">complete JQuery tutorial</h3>
        <a href="jquary.html" class="inline-btn">view vedio</a>
      </div>

      <div class="box">
        <div class="tutor">
          <img src="images/download.jpeg" alt="">
          <div class="info">
            <h3>freecodecamp</h3>
            <span>20-02-2025</span>
          </div>
        </div>
        <div class="thumb">
          <img src="images/thumb-6.png" alt="">

        </div>
        <h3 class="title">complete SASS tutorial</h3>
        <a href="sass.html" class="inline-btn">view video</a>
      </div>
    </div>
  </section>
  <footer class="footer">

    &copy; copyright @ 2025 by <span>Lernify</span> | all rights reserved!

  </footer>

  <!-- custom js file link  -->
  <script>
    document.addEventListener("DOMContentLoaded", function () {
      let menuBtn = document.querySelector("#menu-btn");
      let sidebar = document.querySelector(".side-bar");
      let mainContent = document.querySelector(".main-content");
      let toggleBtn = document.querySelector("#toggle-btn");
      let body = document.body;

      // Load dark mode preference from localStorage
      if (localStorage.getItem("darkMode") === "enabled") {
```

```
        body.classList.add("dark-mode");
        toggleBtn.classList.replace("fa-sun", "fa-moon");
    }

    // Sidebar toggle
    menuBtn.addEventListener("click", function (event) {
        event.stopPropagation();
        sidebar.classList.toggle("active");
        mainContent.classList.toggle("shifted");
    });

    // Close sidebar when clicking outside
    document.addEventListener("click", function (event) {
        if (!sidebar.contains(event.target) && !menuBtn.contains(event.target)) {
            sidebar.classList.remove("active");
            mainContent.classList.remove("shifted");
        }
    });

    // Dark mode toggle
    toggleBtn.addEventListener("click", function () {
        body.classList.toggle("dark-mode");
        if (body.classList.contains("dark-mode")) {
            localStorage.setItem("darkMode", "enabled");
            toggleBtn.classList.replace("fa-sun", "fa-moon"); // Change to moon icon
        } else {
            localStorage.setItem("darkMode", "disabled");
            toggleBtn.classList.replace("fa-moon", "fa-sun"); // Change to sun icon
        }
    });
});
</script>


</body>
</html>
```

#### 4.1.2. About us

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>about us</title>

  <!-- font awesome cdn link  -->
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/6.1.2/css/all.min.css">

  <!-- custom css file link  -->
  <link rel="stylesheet" href="css/style.css">
<style>
  body {
  margin: 0;
   padding: 0;
   display: flex;
   overflow-x: hidden; /* Prevents unwanted horizontal scrolling */
}

.side-bar {
   position: fixed;
   top: 0;
   left: -260px; /* Start hidden */
   width: 250px;
   height: 100%;
   background: #222;
   transition: 0.3s ease-in-out;
   padding: 15px;
   z-index: 1000;
   overflow-y: auto;
}

.main-content {
   flex: 1;
   width: 100%;
   transition: margin-left 0.3s ease-in-out;
}

.side-bar.active {
   left: 0;
}

.main-content.shifted {
   margin-left: 250px;
}
body.dark-mode {
```

```
   background-color: #121212;
   color: #ffffff;
}

.dark-mode .header,
.dark-mode .side-bar {
   background-color: #1e1e1e;
}

.dark-mode .footer {
   background-color: #1e1e1e;
   color: white;
}

.dark-mode a, .dark-mode button {
   color: white;
}

.dark-mode #toggle-btn::before {
   content: "\f186"; /* Moon icon */
   font-family: "Font Awesome 6 Free";
   font-weight: 900;
}


</style>


</head>
<body>
    <div class="side-bar">
       <div class="profile">
          <img src="images/pic-5.jpg" class="image" alt="">
          <h3 class="name">Srujana</h3>
          <p class="role">student</p>
          <a href="profile.html" class="btn">view profile</a>
       </div>
       <nav class="navbar">
          <a href="index.html"><i class="fas fa-home"></i><span>home</span></a>
          <a href="about.html"><i class="fas fa-
question"></i><span>about</span></a>
          <a href="courses.html"><i class="fas fa-graduation-
cap"></i><span>courses</span></a>
          <a href="contact.html"><i class="fas fa-headset"></i><span>contact
```

```
us</span></a>
        </nav>
    </div>

     <div class="main-content">
        <header class="header">
           <section class="flex">
             <a href="index.html" class="logo">
                <img    src="images/website.png"     alt="Learnify"    class="logo-image"
length="100" width="100">
             </a>
             <div class="icons">
                <div id="menu-btn" class="fas fa-bars"></div>

                 <div id="toggle-btn" class="fas fa-sun"></div>
             </div>
           </section>
        </header>

<div class="side-bar">

  <div id="close-btn">
    <i class="fas fa-times"></i>
  </div>

  <div class="profile">
    <img src="images/pic-5.jpg" class="image" alt="">
    <h3 class="name">Srujana</h3>
    <p class="role">student</p>
    <a href="profile.html" class="btn">view profile</a>
  </div>

</div>


<section class="about">

  <div class="row">

    <div class="image">
      <img src="images/about-img.svg" alt="">
    </div>

    <div class="content">
```

```
        <h3>about us?</h3>
        <p>Welcome to Learnify, your go-to platform for aspiring software developers. We provide high-quality video lessons designed to help students learn and master software development skills.</p>

        <p>Want to become a tutor? Contact us at <a href="tel:7569337729">+91 7569337729</a> and join our team!</p>
    </div>

  </div>

  <div class="box-container">

    <div class="box">
      <i class="fas fa-graduation-cap"></i>
      <div>
        <h3>+10k</h3>
        <p>online courses</p>
      </div>
    </div>

    <div class="box">
      <i class="fas fa-user-graduate"></i>
      <div>
        <h3>+40k</h3>
        <p>brilliant students</p>
      </div>
    </div>

    <div class="box">
      <i class="fas fa-chalkboard-user"></i>
      <div>
        <h3>+2k</h3>
        <p>expert tutors</p>
      </div>
    </div>

    <div class="box">
      <i class="fas fa-briefcase"></i>
      <div>
        <h3>100%</h3>
        <p>job placement</p>
      </div>
    </div>
```

```
  </div>

</section>
<footer class="footer">

  &copy; copyright @ 2025 by <span>Lernify</span> | all rights reserved!

</footer>

<script>
  document.addEventListener("DOMContentLoaded", function () {
   let menuBtn = document.querySelector("#menu-btn");
   let sidebar = document.querySelector(".side-bar");
   let mainContent = document.querySelector(".main-content");
   let toggleBtn = document.querySelector("#toggle-btn");
   let body = document.body;

   // Load dark mode preference from localStorage
   if (localStorage.getItem("darkMode") === "enabled") {
      body.classList.add("dark-mode");
      toggleBtn.classList.replace("fa-sun", "fa-moon");
   }

   // Sidebar toggle
   menuBtn.addEventListener("click", function (event) {
      event.stopPropagation();
      sidebar.classList.toggle("active");
      mainContent.classList.toggle("shifted");
   });

   // Close sidebar when clicking outside
   document.addEventListener("click", function (event) {
      if (!sidebar.contains(event.target) && !menuBtn.contains(event.target)) {
         sidebar.classList.remove("active");
         mainContent.classList.remove("shifted");
      }
   });

   // Dark mode toggle
   toggleBtn.addEventListener("click", function () {
      body.classList.toggle("dark-mode");
      if (body.classList.contains("dark-mode")) {
         localStorage.setItem("darkMode", "enabled");
```

```
            toggleBtn.classList.replace("fa-sun", "fa-moon"); // Change to moon icon
        } else {
            localStorage.setItem("darkMode", "disabled");
            toggleBtn.classList.replace("fa-moon", "fa-sun"); // Change to sun icon
        }
    });
});
</script>



</body>
</html>
```

#### 4.1.3. Bootstrap

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>bootstrap</title>

  <!-- font awesome cdn link  -->
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/6.1.2/css/all.min.css">

  <!-- custom css file link  -->
  <link rel="stylesheet" href="css/style.css">
  <style>
    body {
    margin: 0;
     padding: 0;
     display: flex;
     overflow-x: hidden; /* Prevents unwanted horizontal scrolling */
  }

  .side-bar {
     position: fixed;
     top: 0;
     left: -260px; /* Start hidden */
     width: 250px;
     height: 100%;
     background: #222;
```

```
    transition: 0.3s ease-in-out;
    padding: 15px;
    z-index: 1000;
    overflow-y: auto;
}

.main-content {
    flex: 1;
    width: 100%;
    transition: margin-left 0.3s ease-in-out;
}

.side-bar.active {
    left: 0;
}

.main-content.shifted {
    margin-left: 250px;
}
body.dark-mode {
    background-color: #121212;
    color: #ffffff;
}

.dark-mode .header,
.dark-mode .side-bar {
    background-color: #1e1e1e;
}

.dark-mode .footer {
    background-color: #1e1e1e;
    color: white;
}

.dark-mode a, .dark-mode button {
    color: white;
}

.dark-mode #toggle-btn::before {
    content: "\f186"; /* Moon icon */
    font-family: "Font Awesome 6 Free";
    font-weight: 900;
}
```

```
</style>


</head>
<body>
    <div class="side-bar">

        <div class="profile">
            <img src="images/pic-5.jpg" class="image" alt="">
            <h3 class="name">Srujana</h3>
            <p class="role">student</p>
            <a href="profile.html" class="btn">view profile</a>
        </div>
        <nav class="navbar">
            <a href="index.html"><i class="fas fa-
home"></i><span>home</span></a>
            <a href="about.html"><i class="fas fa-
question"></i><span>about</span></a>
            <a href="courses.html"><i class="fas fa-graduation-
cap"></i><span>courses</span></a>
            <a href="contact.html"><i class="fas fa-headset"></i><span>contact
us</span></a>
        </nav>
    </div>

    <div class="main-content">
        <header class="header">
            <section class="flex">
                <a href="home.html" class="logo">
                    <img src="images/website.png" alt="Learnify" class="logo-image"
length="100" width="100">
                </a>
                <div class="icons">
                    <div id="menu-btn" class="fas fa-bars"></div>

                    <div id="toggle-btn" class="fas fa-sun"></div>
                </div>
                <div class="profile">
                    <img src="images/pic-5.jpg" class="image" alt="">
                    <h3 class="name">Srujana</h3>
                    <p class="role">student</p>
                    <a href="profile.html" class="btn">view profile</a>
                    <div class="flex-btn">
```

```
                    <a href="login.html" class="option-btn">login</a>
                    <a href="register.html" class="option-btn">register</a>
                  </div>
                </div>
              </section>
            </header>

<div class="side-bar">

  <div id="close-btn">
    <i class="fas fa-times"></i>
  </div>

  <div class="profile">
    <img src="images/pic-5.jpg" class="image" alt="">
    <h3 class="name">Srujana</h3>
    <p class="role">student</p>
    <a href="profile.html" class="btn">view profile</a>
  </div>

  <nav class="navbar">
    <a href="index.html"><i class="fas fa-home"></i><span>home</span></a>
    <a href="about.html"><i class="fas fa-question"></i><span>about</span></a>
    <a href="courses.html"><i class="fas fa-graduation-
cap"></i><span>courses</span></a>
    <a href="teachers.html"><i class="fas fa-chalkboard-
user"></i><span>teachers</span></a>
    <a href="contact.html"><i class="fas fa-headset"></i><span>contact
us</span></a>
  </nav>

</div>

<section class="playlist-details">

  <h1 class="heading">playlist details</h1>

  <div class="row">

    <div class="column">
      <form action="" method="post" class="save-playlist">
        <button type="submit"><i class="far fa-bookmark"></i> <span>save
playlist</span></button>
      </form>
```

```
        <div class="thumb">
          <img src="images/thumb-4.png" alt="">
        </div>
      </div>
      <div class="column">
        <div class="tutor">
          <img src="images/download.jpeg" alt="">
          <div>
            <h3>freecodecamp</h3>
            <span>20-02-2025</span>
          </div>
        </div>
        <div class="details">
          <h3>complete Boostrap tutorial</h3>
          <p>Bootstrap is a free and open-source CSS framework that provides pre-styled components and a responsive grid system to help you quickly build beautiful and mobile-friendly websites.</p>
          <a href="https://www.youtube.com/watch?v=-qfEOE4vtxE" class="inline-btn">view video</a>
        </div>
      </div>
    </div>
</section>
<footer class="footer">
   &copy; copyright @ 2025 by <span>lernify</span> | all rights reserved!
</footer>
<script>
   document.addEventListener("DOMContentLoaded", function () {
    let menuBtn = document.querySelector("#menu-btn");
    let sidebar = document.querySelector(".side-bar");
    let mainContent = document.querySelector(".main-content");
    let toggleBtn = document.querySelector("#toggle-btn");
    let body = document.body;

    // Load dark mode preference from localStorage
    if (localStorage.getItem("darkMode") === "enabled") {
       body.classList.add("dark-mode");
       toggleBtn.classList.replace("fa-sun", "fa-moon");
    }

    // Sidebar toggle
    menuBtn.addEventListener("click", function (event) {
       event.stopPropagation();
```

```
        sidebar.classList.toggle("active");
        mainContent.classList.toggle("shifted");
    });

    // Close sidebar when clicking outside
    document.addEventListener("click", function (event) {
        if (!sidebar.contains(event.target) && !menuBtn.contains(event.target)) {
            sidebar.classList.remove("active");
            mainContent.classList.remove("shifted");
        }
    });

    // Dark mode toggle
    toggleBtn.addEventListener("click", function () {
        body.classList.toggle("dark-mode");
        if (body.classList.contains("dark-mode")) {
            localStorage.setItem("darkMode", "enabled");
            toggleBtn.classList.replace("fa-sun", "fa-moon"); // Change to moon icon
        } else {
            localStorage.setItem("darkMode", "disabled");
            toggleBtn.classList.replace("fa-moon", "fa-sun"); // Change to sun icon
        }
    });
});
</script>



</body>
</html>
```

### 4.2. Testcase:

The provided test cases cover a good range of functionalities for a module that displays YouTube links. They address aspects like:

- **Basic Functionality:** Opening the page, displaying links.
- **Link Validity:** Checking for and handling invalid links.
- **Link Functionality:** Ensuring links redirect correctly and videos play.
- **User Experience:** Visibility, organization, responsiveness, empty state.
- **Performance:** Page load speed.
- **Error Handling:** Network issues.
- **UI Elements:** Presence of expected components.

**Suggestions for Improvement or Further Test Cases:**

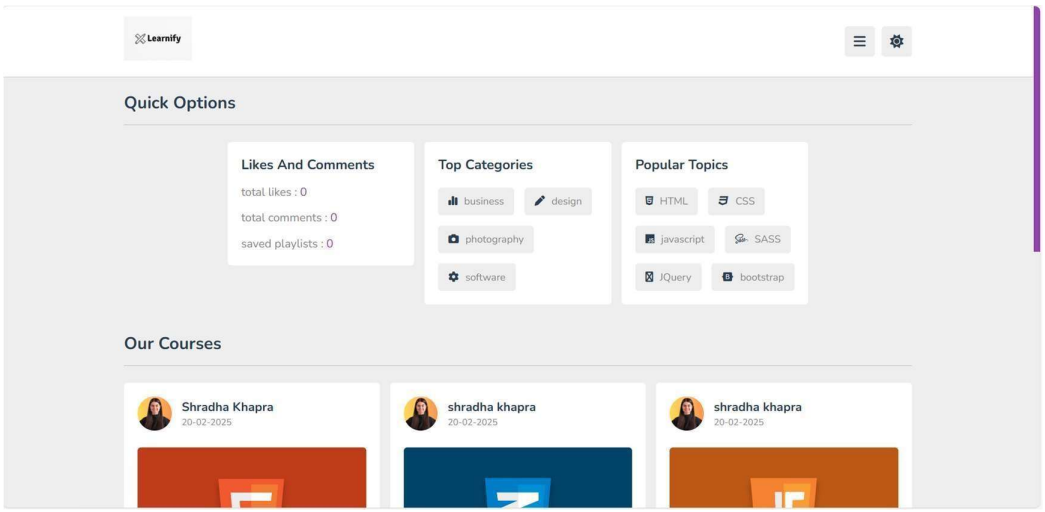
While the current test cases are good, here are a few suggestions for potential additions or refinements:

- **TC13: Broken Link Handling (After Initial Load):** What happens if a linked YouTube video is removed *after* the page has loaded? Does it display an error, or does the link simply fail silently?
- **TC14: Number of Links Displayed:** If there's a large number of links, is there pagination or scrolling implemented? Test the behavior with a significant number of valid links.
- **TC15: Link Title/Description Display:** If the links have associated titles or descriptions, ensure these are displayed correctly.
- **TC16: Accessibility (A11y):** Consider adding tests for accessibility, such as:
    - **Keyboard Navigation:** Can users navigate the links using only the keyboard?
    - **Screen Reader Compatibility:** Is the content understandable by screen readers (e.g., proper alt text for thumbnails)?
    - **Color Contrast:** Is there sufficient color contrast for text and interactive elements?
- **TC17: Security (Basic):** While likely out of scope for basic link display, consider if there are any potential security implications (e.g., embedding content from untrusted sources, although YouTube is generally trusted).
- **TC18: Sorting/Filtering (If Implemented):** If there's functionality to sort or filter videos (e.g., by date, subject), add test cases for these features.
- **TC19: Error Message Clarity:** For error messages (like TC04 and TC11), ensure the messages are user-friendly and informative.

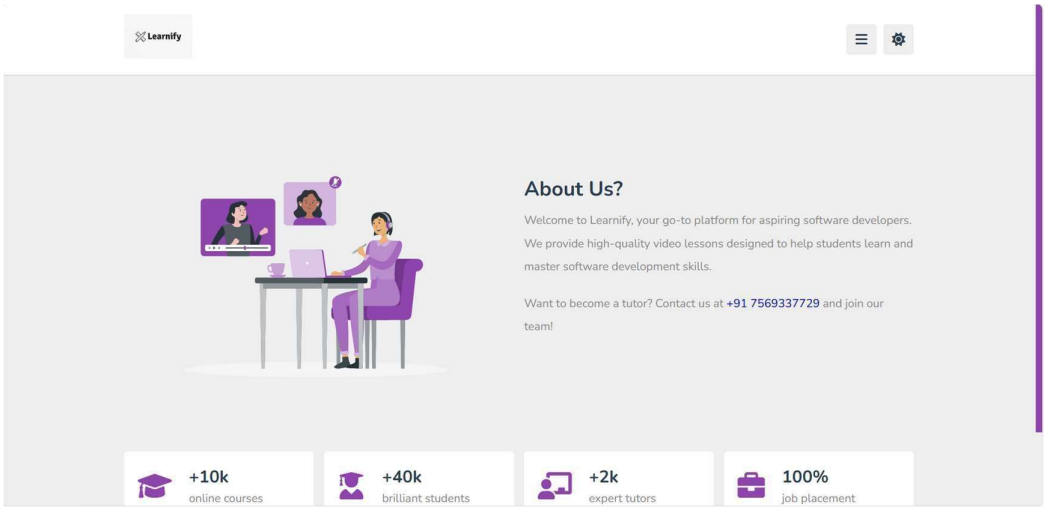
# 5. RESULT

## 5.1 OUTPUT SCREEN

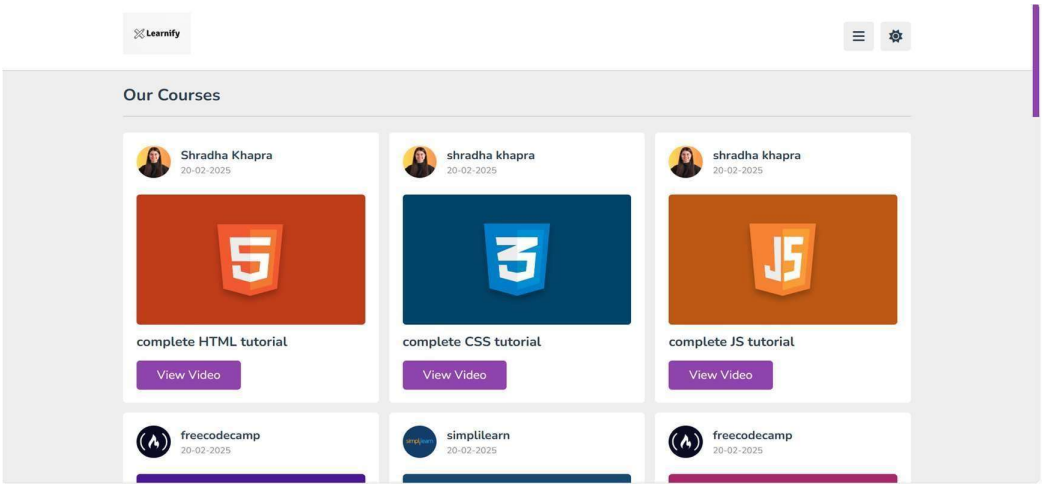
### 5.1.1



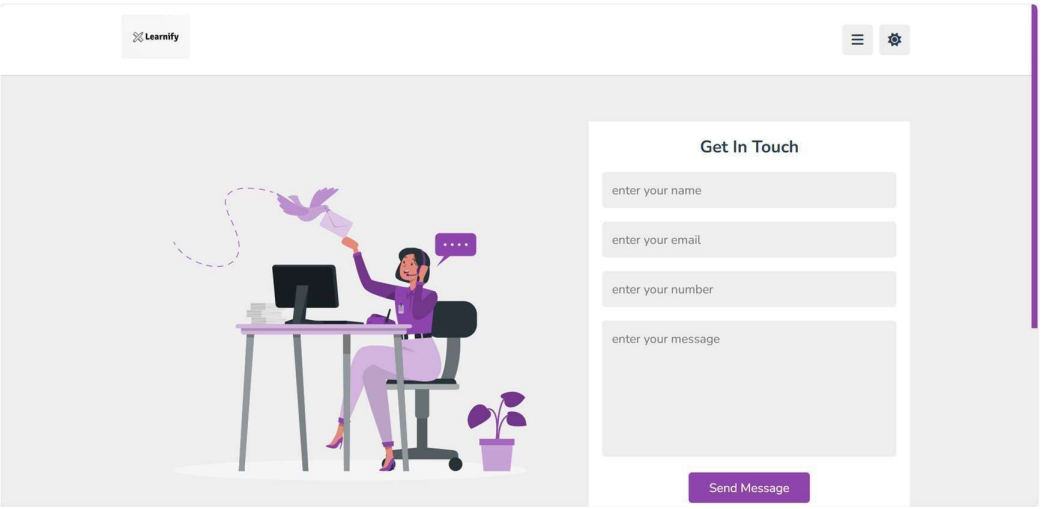

### 5.1.2



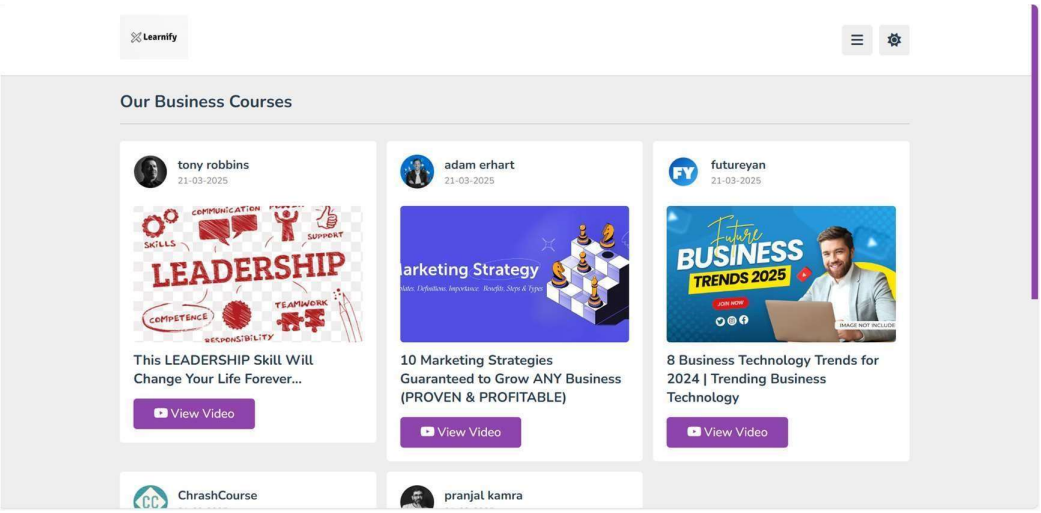
## 5.1.3


Learnify
Our Courses
Shradha Khapra
20-02-2025
complete HTML tutorial
View Video
shradha khapra
20-02-2025
complete CSS tutorial
View Video
shradha khapra
20-02-2025
complete JS tutorial
View Video
freecodecamp
20-02-2025
simplilearn
20-02-2025
freecodecamp
20-02-2025

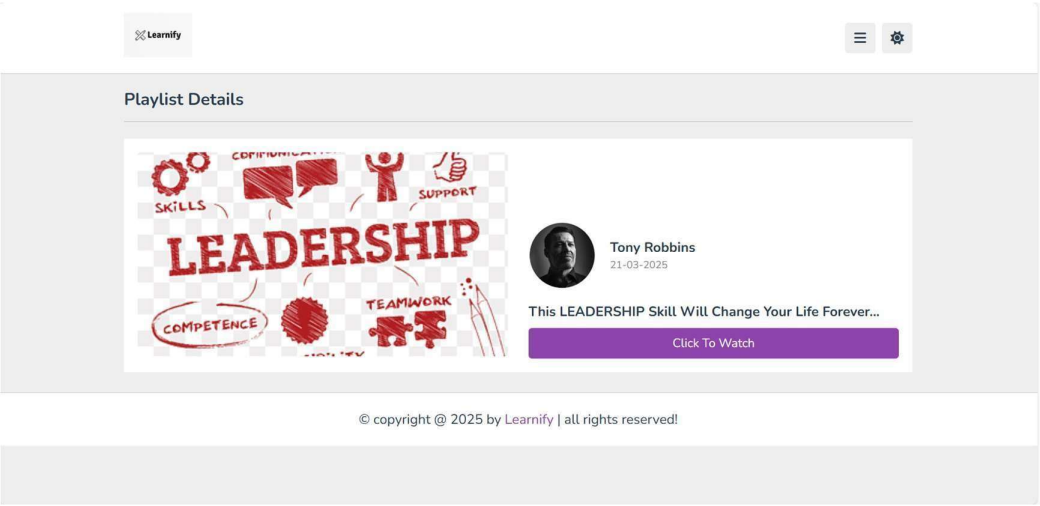
## 5.1.4


Learnify
Get In Touch
enter your name
enter your email
enter your number
enter your message
Send Message

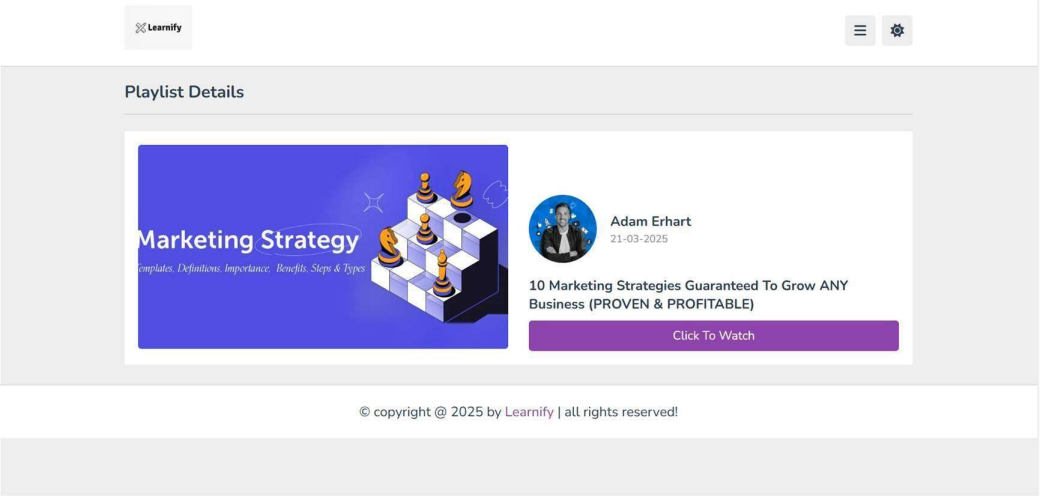
## 5.1.5


Learnify
Our Business Courses
tony robbins
21-03-2025
LEADERSHIP
This LEADERSHIP Skill Will Change Your Life Forever...
View Video
adam erhart
21-03-2025
10 Marketing Strategies Guaranteed to Grow ANY Business (PROVEN & PROFITABLE)
View Video
futureyan
21-03-2025
Future BUSINESS TRENDS 2025
8 Business Technology Trends for 2024 | Trending Business Technology
View Video
ChrashCourse
pranjal kamra

## 5.1.6


Learnify
Playlist Details
SKILLS
SUPPORT
LEADERSHIP
COMPETENCE
TEAMWORK
Tony Robbins
21-03-2025
This LEADERSHIP Skill Will Change Your Life Forever...
Click To Watch
© copyright @ 2025 by Learnify | all rights reserved!

## 5.1.7


Learnify
Playlist Details
Marketing Strategy
Templates, Definitions, Importance, Benefits, Steps & Types
Adam Erhart
21-03-2025
10 Marketing Strategies Guaranteed To Grow ANY Business (PROVEN & PROFITABLE)
Click To Watch
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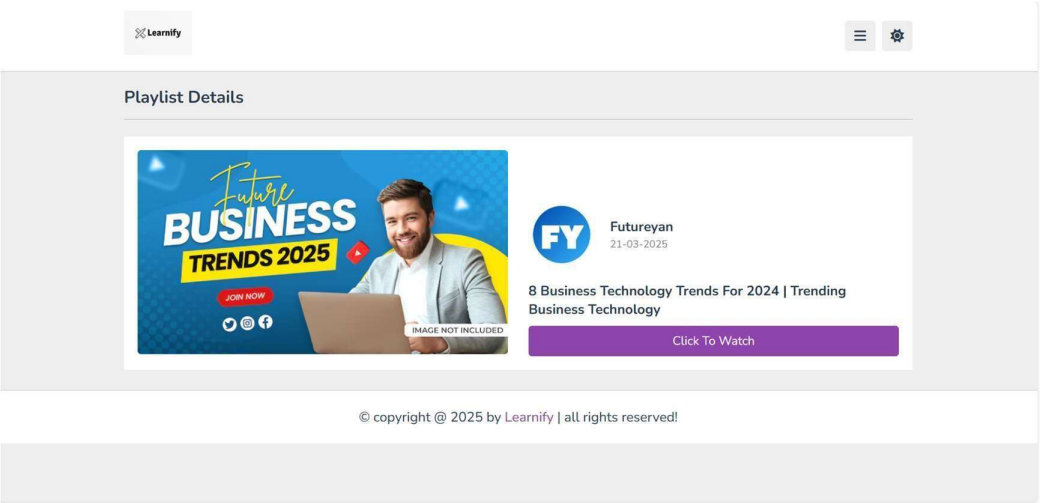
## 5.1.8


Learnify
Playlist Details
Future
BUSINESS
TRENDS 2025
JOIN NOW
IMAGE NOT INCLUDED
FY
Futureyan
21-03-2025
8 Business Technology Trends For 2024 | Trending Business Technology
Click To Watch
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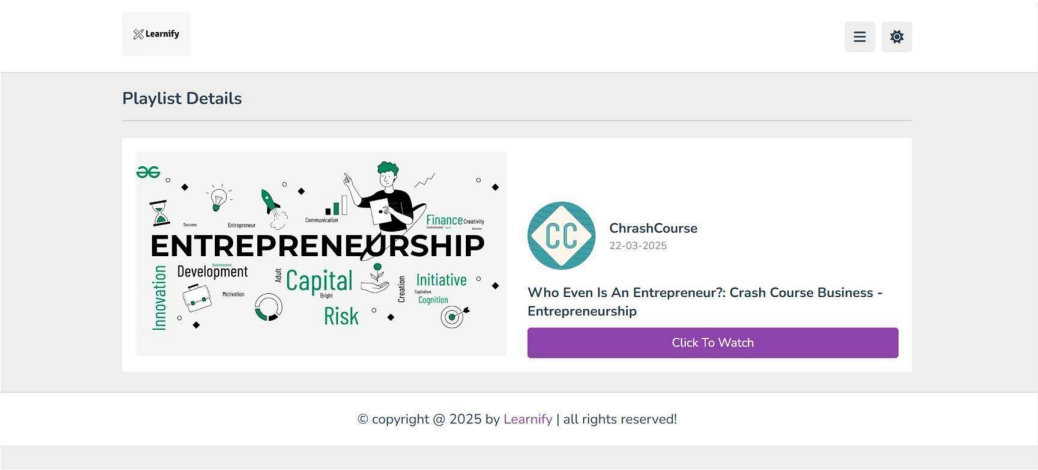
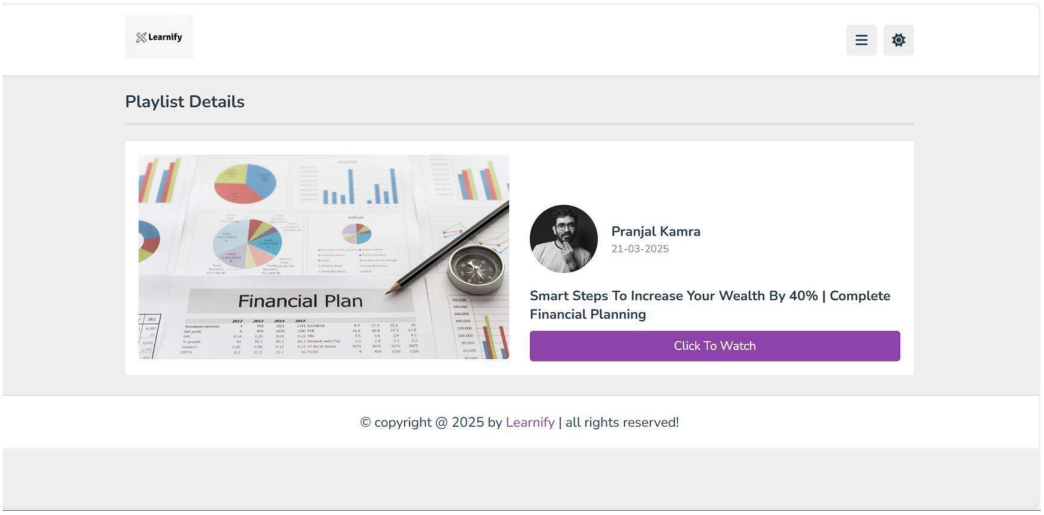
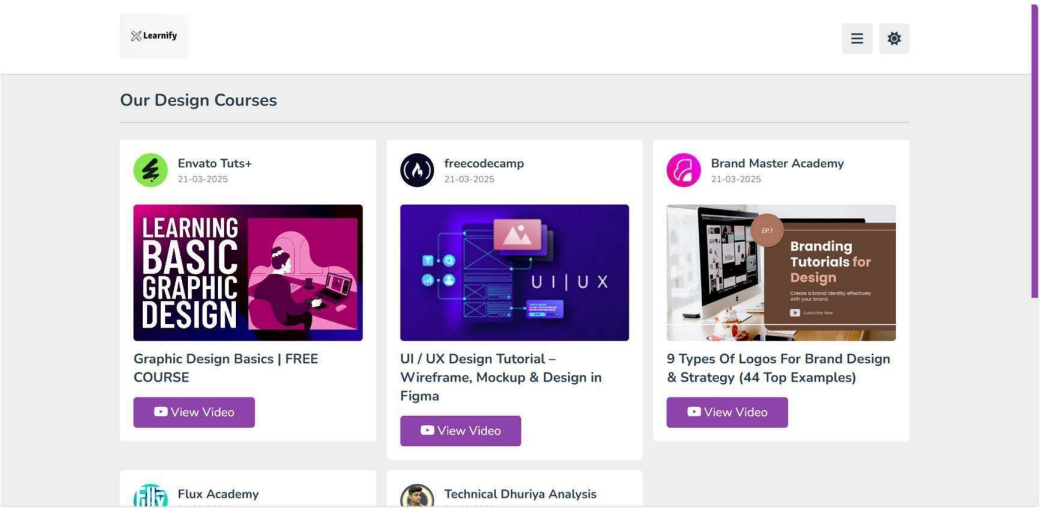
## 5.1.9



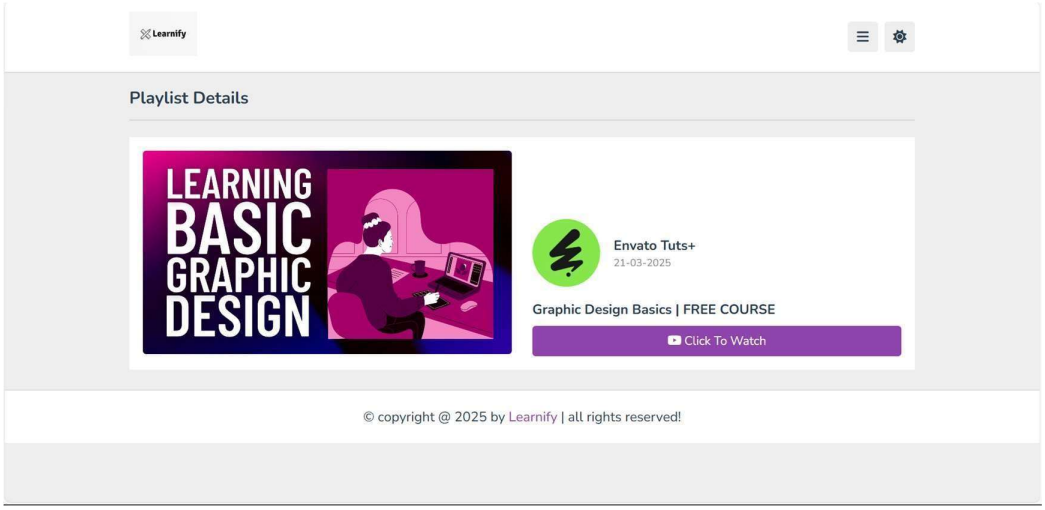

## 5.1.10



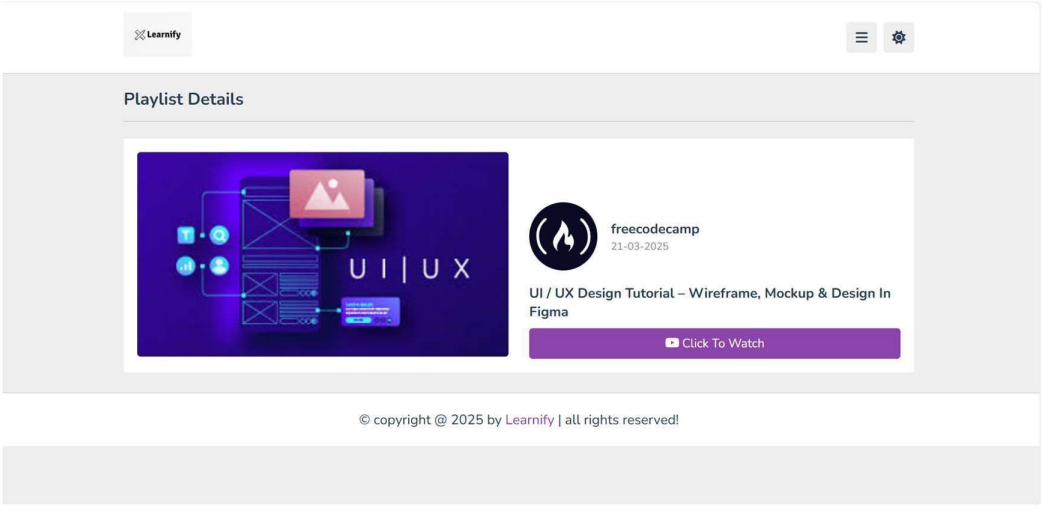

## 5.1.11



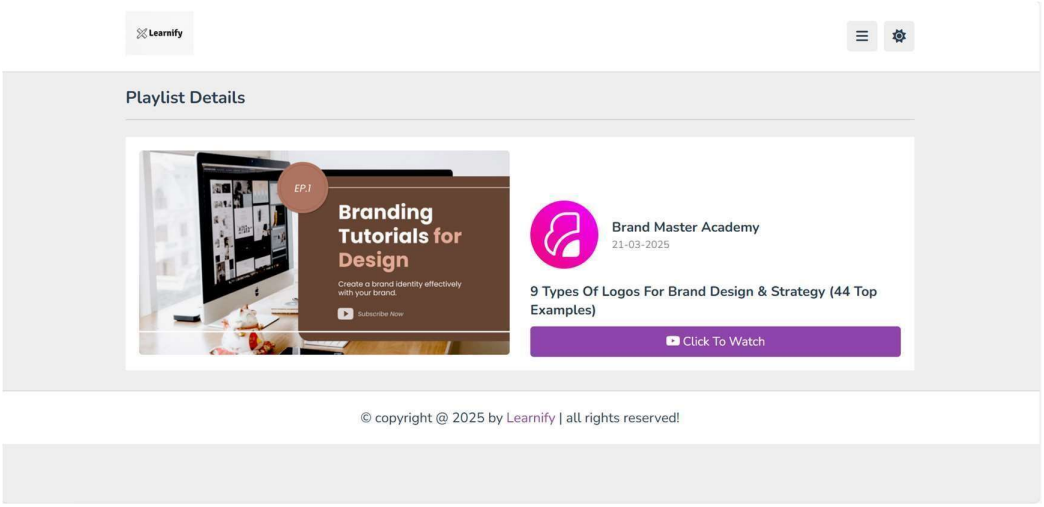
## 5.1.12



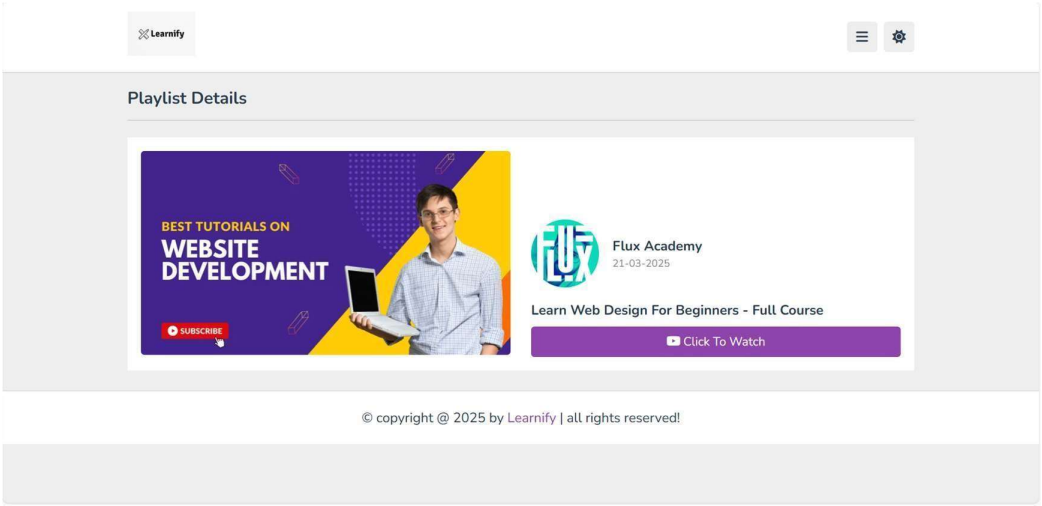

## 5.1.13



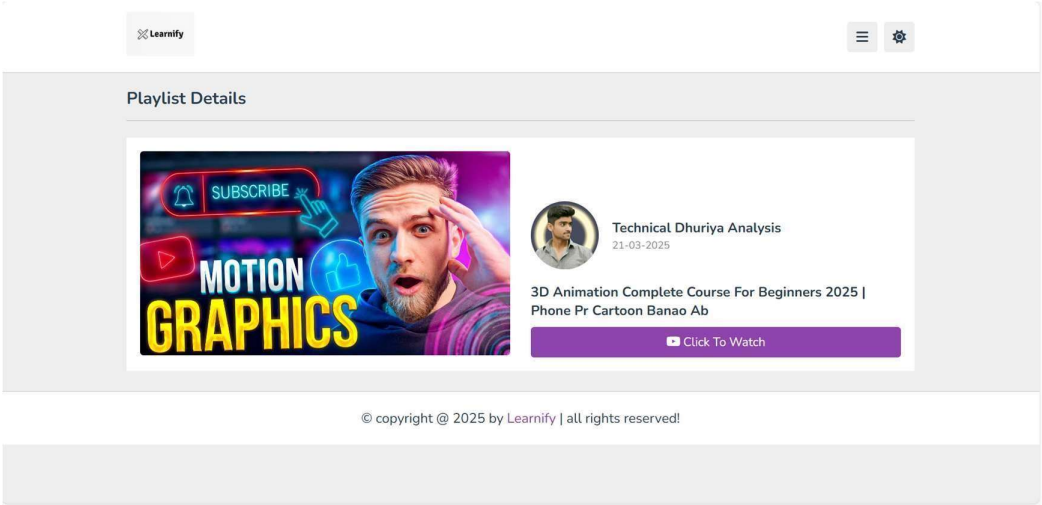

## 5.1.14



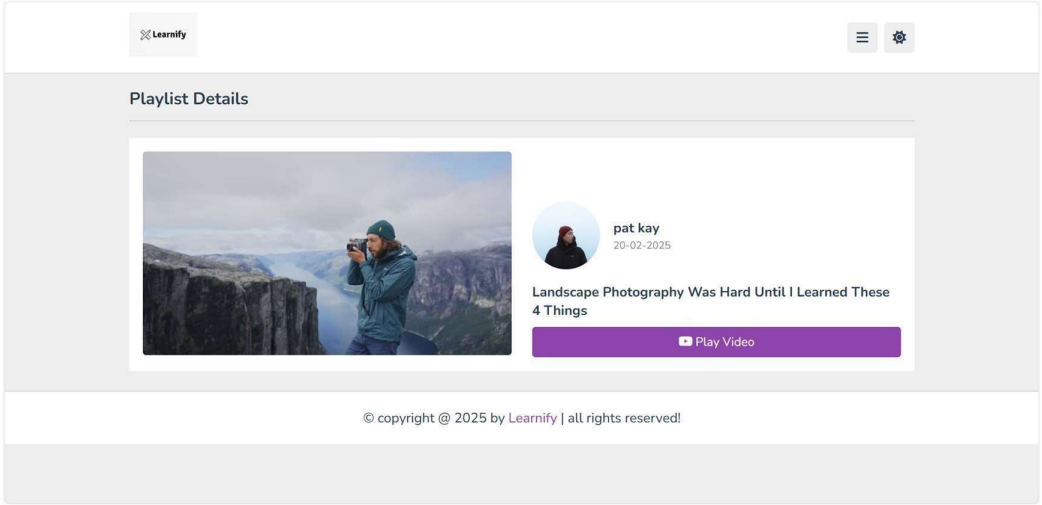
## 5.1.15



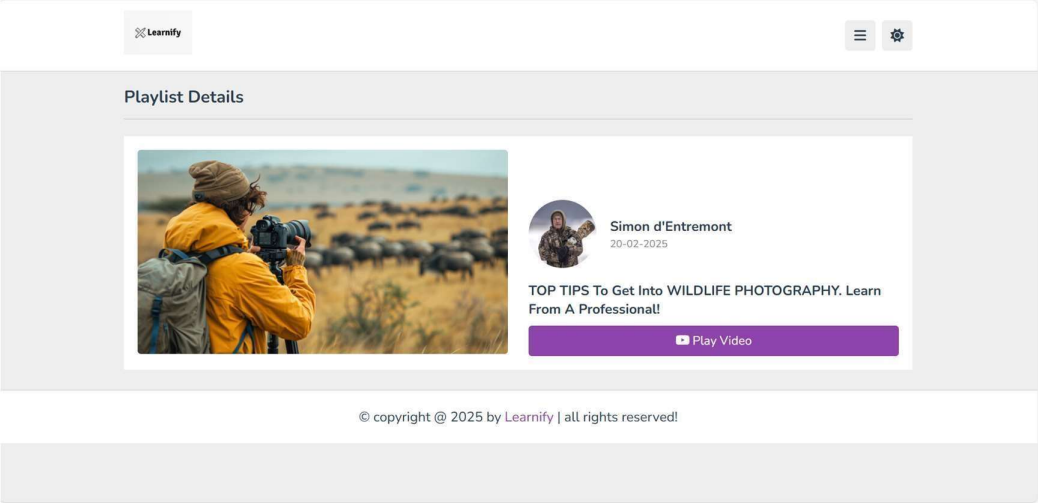

## 5.1.15



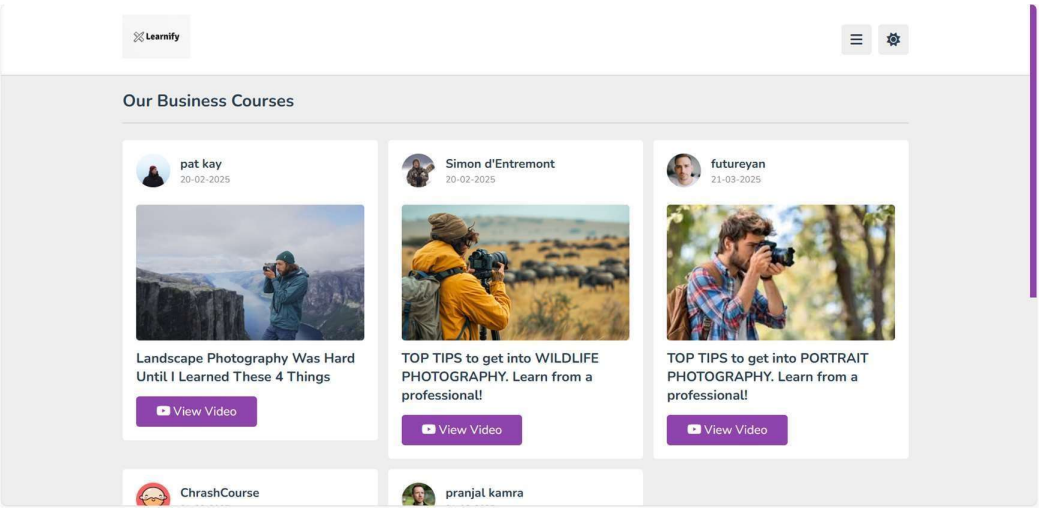

## 5.1.16



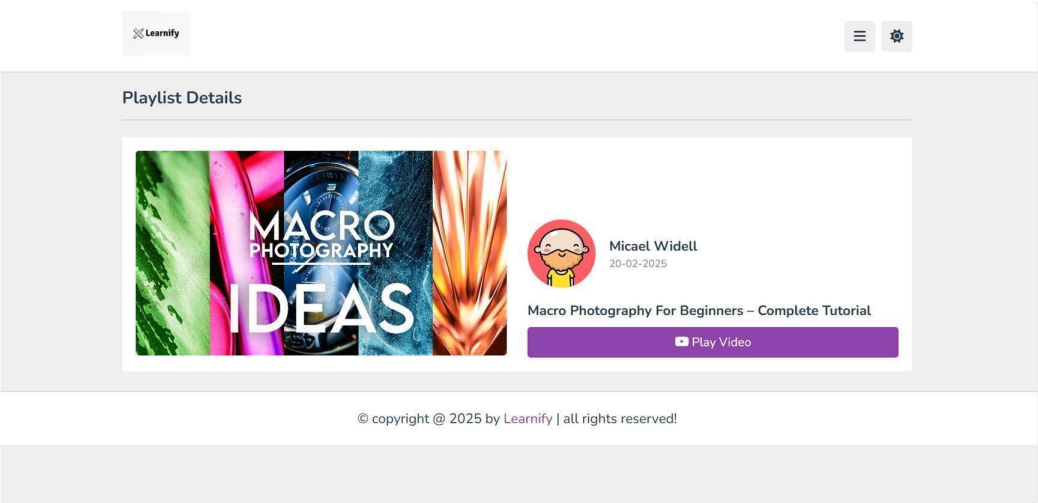
## 5.1.17




## 5.1.18




## 5.1.19



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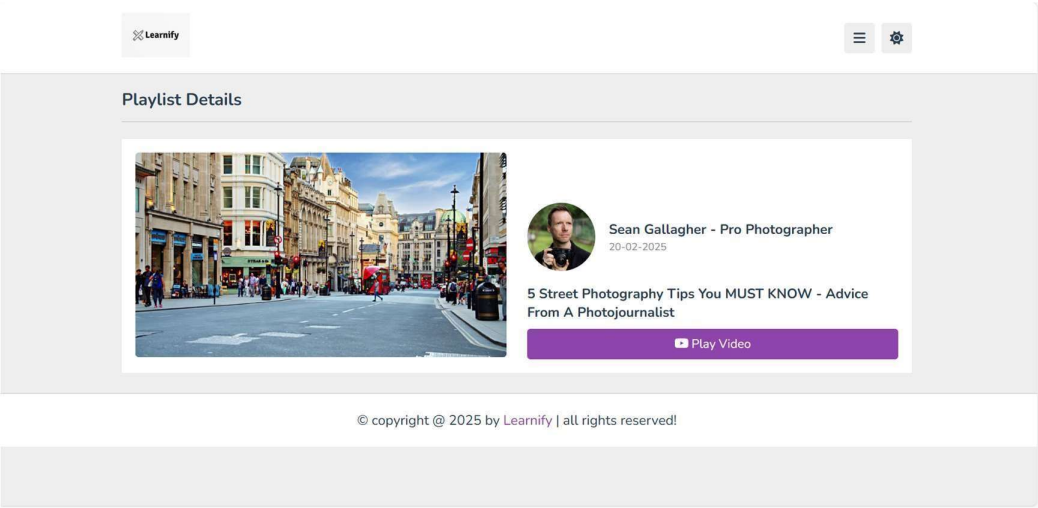


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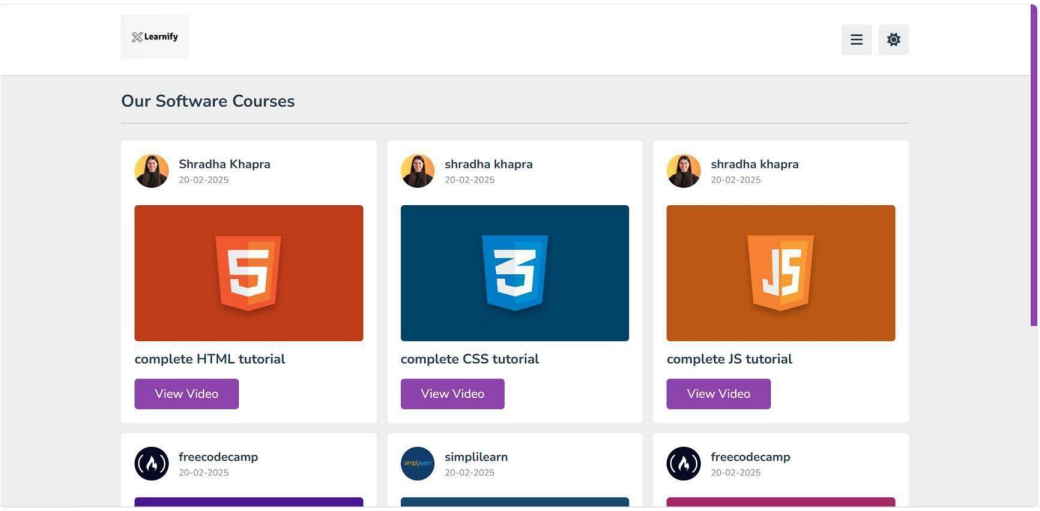


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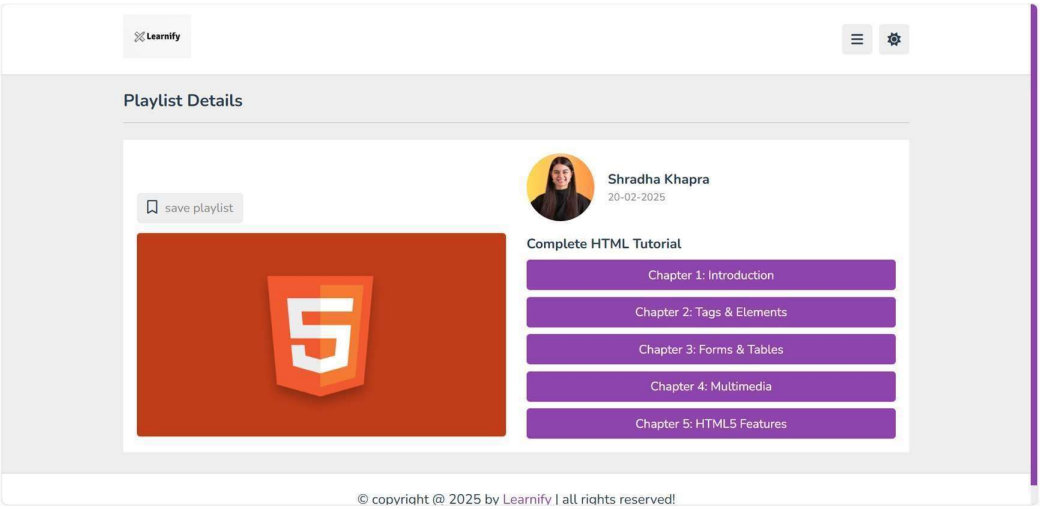

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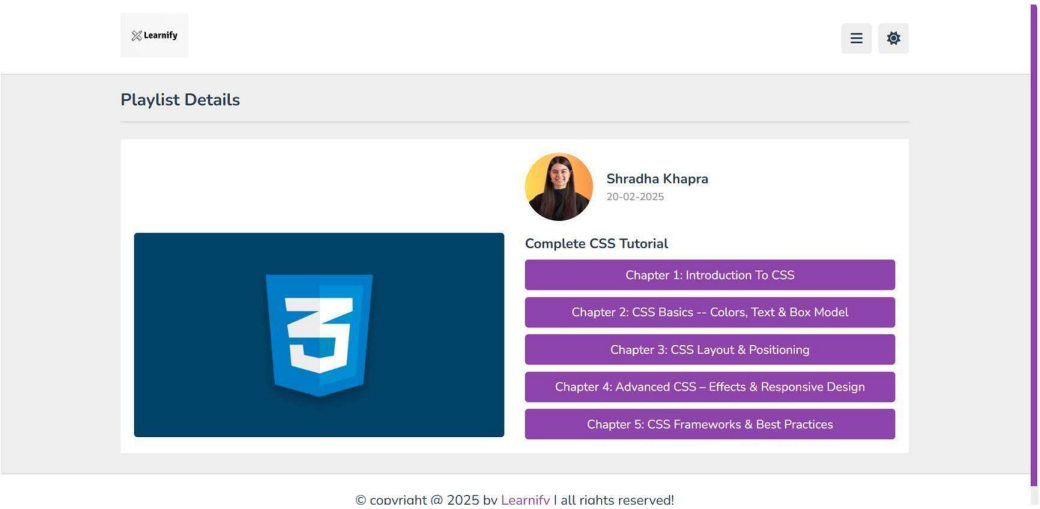


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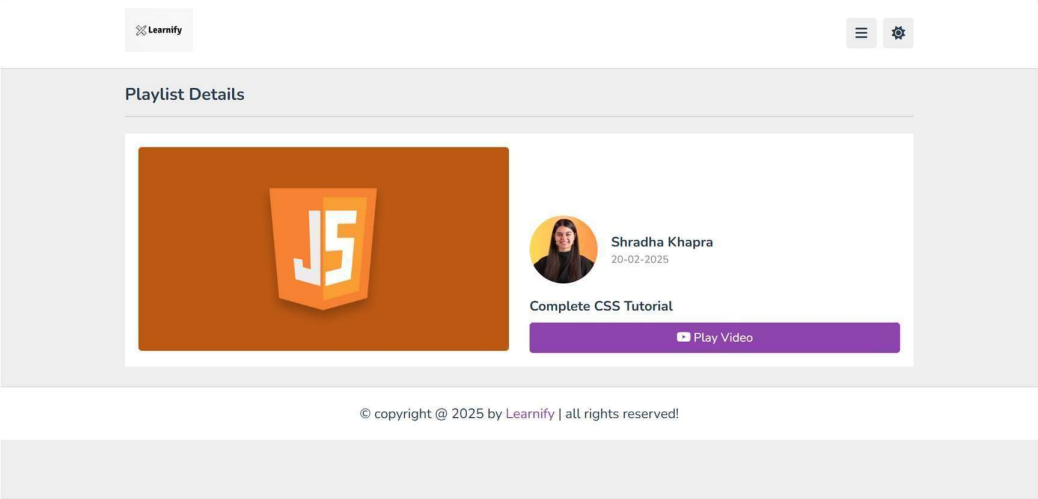


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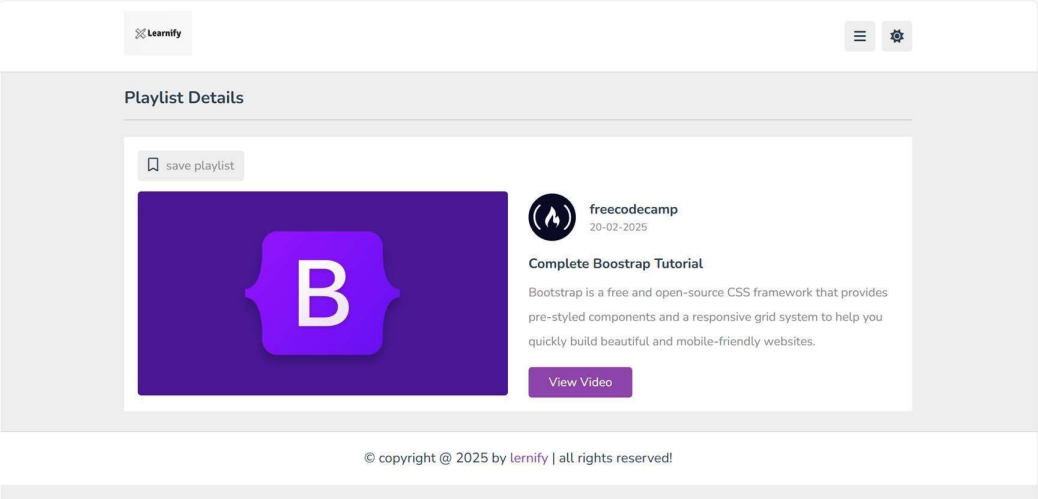

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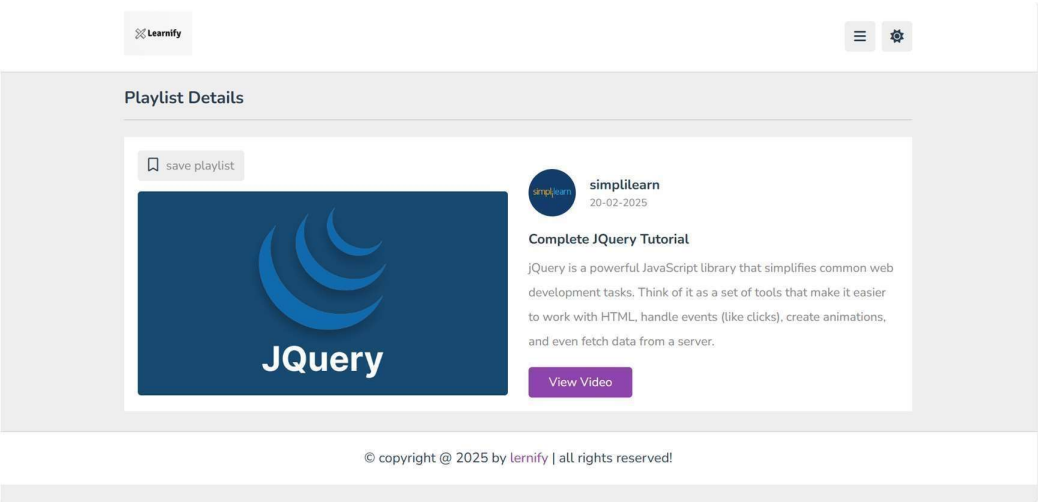
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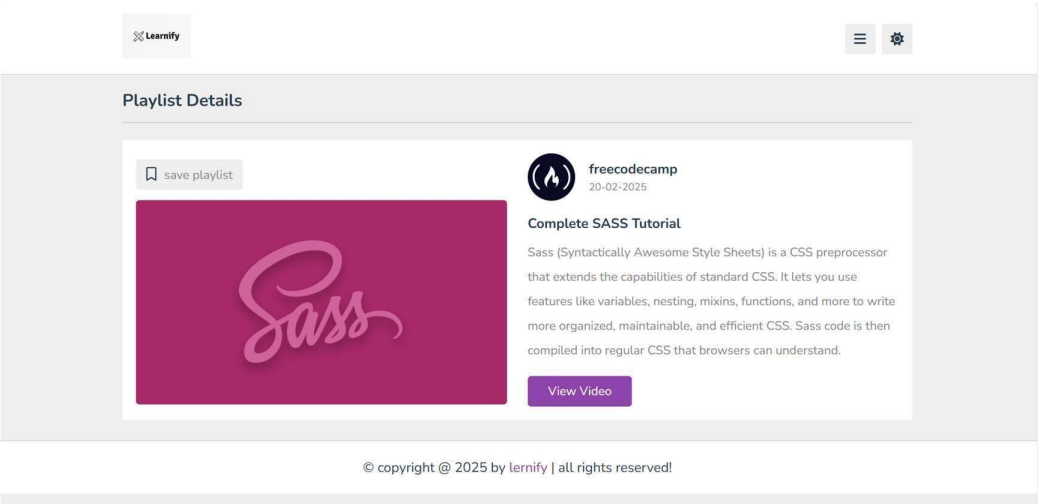
## 5.1.25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## 6. Conclusion:

The development of an online educational platform that utilizes YouTube links to deliver content to students marks a significant shift in how education is delivered and accessed. This project was designed with the core intention of simplifying the learning experience, making it more flexible, accessible, and scalable for both students and educators. By removing the necessity for traditional classrooms and physical infrastructure, this system focuses purely on delivering educational value through curated, high-quality YouTube videos.

Throughout this project, we identified the existing gap in traditional educational systems and even in current e-learning portals, where either content is not centralized or access is limited by paywalls and subscriptions. Our system seeks to bridge this gap by providing a role-based access model where faculty can upload and manage educational video links, and students can view them according to their needs and subjects of study.

One of the major highlights of this platform is its **simplicity and efficiency**. Instead of reinventing the wheel by creating new video content, our system utilizes **already existing, high-quality YouTube content**, which is freely accessible and abundant. This not only saves time and resources but also provides learners with the flexibility to pause, rewind, and revisit the material as needed. The use of YouTube links ensures that students get exposure to global content, bringing a variety of teaching styles and examples into their learning process.

In terms of benefits, this system supports **asynchronous learning**, which is highly beneficial for students who learn at different paces or who might have time constraints due to personal or professional commitments. Furthermore, educators can update or replace links at any time, allowing the curriculum to stay current and relevant without requiring massive structural changes.

From a technical standpoint, the system is built to be lightweight, requiring minimal hardware and software resources. It is accessible from any device with an internet connection, making it ideal for rural and economically challenged areas. No complicated installations are required, and the user interface is designed to be intuitive, ensuring that both tech-savvy and non-tech users can operate the platform with ease.

Security and role management also play an important part in the proposed system. Faculty have special access to upload and manage the video content, ensuring that only relevant and quality educational resources are shared. On the other hand, students have a focused experience where they only see what is meant for their learning path.

However, like any system, it does have limitations. Internet access is a primary requirement, and in areas where connectivity is poor, students might still face difficulties. Despite that, this model has great potential, especially in the post-pandemic world, where online learning has become not only a necessity but a preferred mode of education for many.

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GITHUB LINK

https://github.com/subani248/learnify

HOSTED WEBSITE LINK

https://learnify-gq2h.vercel.app/