

LearnSphere

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Abstract

LearnSphere is a digital academic platform created using HTML and CSS to simplify access to subject-based study materials. The portal provides students an elegant and intuitive interface to navigate through subjects and modules. Each module links directly to its PDF, offering an efficient and organized approach to digital learning. This project emphasizes the use of front-end web technologies to design an accessible and professional educational website.

1 Introduction

Technology has become an essential part of the education system. With increasing demand for remote access to study materials, LearnSphere provides a bridge between traditional classroom methods and modern digital tools. This platform acts as a central hub for students, enabling them to select subjects like Electronics, Artificial Intelligence, Physics, Mathematics, Python, and Kannada, and access their respective learning modules in PDF form.

The portal is entirely developed using HTML and CSS, focusing on usability and design simplicity. It ensures that even beginners can easily browse, open, and study digital content without any login or backend setup.

2 Objectives

- Design an interactive and user-friendly learning portal.
- Provide subject-wise access to module PDFs.
- Ensure compatibility with all major browsers.
- Encourage the use of basic web technologies for academic projects.
- Create a foundation for future extension into a complete Learning Management System.

3 System Design

The LearnSphere project follows a simple folder-based architecture where each subject has its own HTML page, and every page contains links to module PDFs. The main index page displays all subjects in a grid layout, allowing students to click and navigate intuitively.

Folder Structure

LearnSphere/

```
index.html
electronics.html
ai.html
mathematics.html
physics.html
python.html
kannada.html
pdfs/
  electronics_module1.pdf
  ai_module1.pdf
  physics_module1.pdf
  ...
styles.css
```

4 Implementation

The project was implemented using two primary technologies:

- **HTML5** for page structure and linking.
- **CSS3** for layout design, grid arrangement, and hover effects.

PDF Integration

Each module on the subject page links directly to a corresponding PDF file located inside the “pdfs” folder. For example, clicking on “Module 1” in the Physics page opens `pdfs/physics_module1.pdf`. This simple linking system keeps the structure organized and makes updating easy.

User Interface

The UI has been designed for clarity and minimalism:

- A central grid layout to display subject tiles.
- Hover animations for better interactivity.
- Consistent font styles using Poppins.
- Clean white background with subtle shadows.

5 Working with PDF Modules

One of the key features of LearnSphere is its ability to organize and display study materials in the form of PDF modules. Each subject page contains clickable links to PDF files stored in a dedicated folder structure. When a student selects a module, the file opens directly in a new browser tab, ensuring seamless access without the need to download manually.

This system keeps all academic materials organized by subject and module number. For example, within the `pdfs/` directory, each file follows a naming pattern such as `ai_module1.pdf` or `mathematics_module3.pdf`. Such naming conventions maintain clarity and make file updates simpler for instructors.

Furthermore, using local file linking allows LearnSphere to work even offline, which means it can be shared among students as a folder package without requiring a server.

6 Future Enhancements

- Introduce user authentication and personalized dashboards.
- Enable admin uploads for new PDF modules.
- Add responsive design using frameworks like Bootstrap.
- Integrate video lessons and quizzes.

7 Testing and User Feedback

After implementing the project, testing was performed on multiple browsers such as Google Chrome, Edge, and Firefox to ensure compatibility. The site layout was responsive and loaded efficiently in all tested environments.

Feedback collected from students indicated that the website was intuitive, visually appealing, and easy to navigate. The inclusion of hover effects, module cards, and organized structure made it simple to locate the required subject materials. Based on feedback, additional future features such as user accounts and performance dashboards were planned for upcoming versions.

8 Conclusion

LearnSphere demonstrates how simple front-end technologies can produce functional and appealing academic tools. It can easily scale with additional backend support to become a complete LMS (Learning Management System). The modular structure allows continuous

improvement and makes it suitable for schools, colleges, and self-learning environments.

Keywords: HTML, CSS, Educational Portal, AI, Web Design, Learning System.

Appendix – Source Code

index.html

```
<!DOCTYPE html>
<html>
<head>
  <title>LearnSphere - Subjects</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <div class="container">
    <a href="electronics.html" class="subject">Electronics</a>
    <a href="ai.html" class="subject">Artificial Intelligence</a>
    <a href="mathematics.html" class="subject">Mathematics</a>
    <a href="physics.html" class="subject">Physics</a>
    <a href="python.html" class="subject">Python</a>
    <a href="kannada.html" class="subject">Kannada</a>
  </div>
</body>
</html>
```

electronics.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Electronics - LearnSphere</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h2>Electronics</h2>
  <div class="modules">
    <a href="pdfs/electronics_module1.pdf" class="module">Module 1</a>
    <a href="pdfs/electronics_module2.pdf" class="module">Module 2</a>
    <a href="pdfs/electronics_module3.pdf" class="module">Module 3</a>
    <a href="pdfs/electronics_module4.pdf" class="module">Module 4</a>
    <a href="pdfs/electronics_module5.pdf" class="module">Module 5</a>
  </div>
</body>
</html>
```

ai.html

```
<!DOCTYPE html>
<html>
<head>
  <title>AI - LearnSphere</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h2>Artificial Intelligence</h2>
  <div class="modules">
    <a href="pdfs/ai_module1.pdf" class="module">Module 1</a>
    <a href="pdfs/ai_module2.pdf" class="module">Module 2</a>
    <a href="pdfs/ai_module3.pdf" class="module">Module 3</a>
    <a href="pdfs/ai_module4.pdf" class="module">Module 4</a>
    <a href="pdfs/ai_module5.pdf" class="module">Module 5</a>
  </div>
</body>
</html>
```

mathematics.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Mathematics - LearnSphere</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h2>Mathematics</h2>
  <div class="modules">
    <a href="pdfs/mathematics_module1.pdf" class="module">Module 1</a>
    <a href="pdfs/mathematics_module2.pdf" class="module">Module 2</a>
    <a href="pdfs/mathematics_module3.pdf" class="module">Module 3</a>
    <a href="pdfs/mathematics_module4.pdf" class="module">Module 4</a>
    <a href="pdfs/mathematics_module5.pdf" class="module">Module 5</a>
  </div>
</body>
</html>
```

physics.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Physics - LearnSphere</title>
```

```
<link rel="stylesheet" href="styles.css">
</head>
<body>
  <h2>Physics</h2>
  <div class="modules">
    <a href="pdfs/physics_module1.pdf" class="module">Module 1</a>
    <a href="pdfs/physics_module2.pdf" class="module">Module 2</a>
    <a href="pdfs/physics_module3.pdf" class="module">Module 3</a>
    <a href="pdfs/physics_module4.pdf" class="module">Module 4</a>
    <a href="pdfs/physics_module5.pdf" class="module">Module 5</a>
  </div>
</body>
</html>
```

python.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Python - LearnSphere</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h2>Python</h2>
  <div class="modules">
    <a href="pdfs/python_module1.pdf" class="module">Module 1</a>
    <a href="pdfs/python_module2.pdf" class="module">Module 2</a>
    <a href="pdfs/python_module3.pdf" class="module">Module 3</a>
    <a href="pdfs/python_module4.pdf" class="module">Module 4</a>
    <a href="pdfs/python_module5.pdf" class="module">Module 5</a>
  </div>
</body>
</html>
```

kannada.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Kannada - LearnSphere</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h2>Kannada</h2>
  <div class="modules">
```



```
<a href="pdfs/kannada_module1.pdf" class="module">Module 1</a>
<a href="pdfs/kannada_module2.pdf" class="module">Module 2</a>
<a href="pdfs/kannada_module3.pdf" class="module">Module 3</a>
<a href="pdfs/kannada_module4.pdf" class="module">Module 4</a>
<a href="pdfs/kannada_module5.pdf" class="module">Module 5</a>
</div>
</body>
</html>
```

styles.css

```
body {
  font-family: 'Poppins', sans-serif;
  background-color: #f8f9fa;
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
}
.container {
  display: grid;
  grid-template-columns: repeat(auto-fit, minmax(200px, 1fr));
  gap: 20px;
}
.subject {
  background: white;
  border-radius: 12px;
  box-shadow: 0 4px 10px rgba(0,0,0,0.1);
  padding: 40px;
  text-align: center;
  font-size: 1.2em;
  text-decoration: none;
  color: #333;
  transition: 0.3s;
}
.subject:hover {
  background-color: #007BFF;
  color: white;
  transform: scale(1.05);
}
.modules {
  display: flex;
  flex-direction: column;
  align-items: center;
  gap: 15px;
  margin-top: 40px;
}
```

```
}  
.module {  
  background: white;  
  padding: 15px 30px;  
  border-radius: 8px;  
  box-shadow: 0 2px 5px rgba(0,0,0,0.1);  
  text-decoration: none;  
  color: #333;  
  transition: 0.3s;  
}  
.module:hover {  
  background-color: #007BFF;  
  color: white;  
  transform: scale(1.03);  
}
```

End of Report