Project Report: Simple Listing Application using PHP and HTML5

Abstract

This project report presents the development of a simple listing application using PHP and HTML5 elements. The primary objective of this project is to create a functional web application that showcases the integration of PHP and HTML5 for performing basic CRUD (Create, Read, Update, Delete) operations.

Web development is a fundamental skill in today's digital era, and this project serves as an educational resource to provide a foundational understanding of web development using PHP and HTML5. The project includes a detailed exploration of the technologies employed, the application's architecture, user interface design, and the development environment setup.

The application offers a straightforward user flow, allowing users to view, add, edit, and delete items from a list. It demonstrates the key principles of web development, including server-side scripting with PHP, database integration with MySQL, and responsive user interface design using HTML5 and CSS3.

In addition to the technical aspects, this report covers various project-related topics, including testing and debugging strategies, security considerations, performance optimization techniques, deployment options, and user documentation.

Overall, this project provides a comprehensive overview of web application development using PHP and HTML5, serving as an excellent starting point for beginners and offering insights for those looking to expand their web development skills.

Objective

The primary objective of this project is to develop a functional web application that demonstrates the integration of PHP and HTML5 for CRUD (Create, Read, Update, Delete) operations. This project aims to educate and provide hands-on experience in web development, focusing on fundamental concepts.

Key Objectives:

- Create a simple listing application.

- Showcase the integration of PHP and HTML5.

- Serve as an educational resource for web development.

- Provide foundational knowledge in web development.

- Demonstrate server-side scripting with PHP.

- Highlight database integration with MySQL.

- Emphasize responsive user interface design using HTML5 and CSS3.

This project aims to equip individuals with essential skills in web development, preparing them for more advanced web projects and offering a solid foundation in the development of web applications.

Introduction

1] The Significance of Web Development

In today's fast-paced digital world, web applications have become an integral part of our daily lives. From social media platforms and e-commerce websites to productivity tools and entertainment services, web applications encompass a wide array of functions and services that shape our online experiences. The development of web applications is a dynamic and ever-evolving field, driven by the constant demand for new and innovative solutions.

2] The Journey of Web Development

The journey of web development involves a multitude of technologies, each playing a crucial role in bringing web applications to life. These technologies span both the front-end and back-end aspects of web development, encompassing the creation of interactive user interfaces, the management of databases, the processing of user requests, and the delivery of dynamic content. Among the myriad of technologies available, PHP and HTML5 stand out as two fundamental pillars of web development.

3] The Essence of PHP

PHP (Hypertext Preprocessor), a server-side scripting language, has been a cornerstone of web development for decades. Known for its simplicity, versatility, and extensive community support, PHP empowers developers to create dynamic web applications that can process data, interact with databases, and generate HTML content on the fly. It has been the driving force behind countless websites and web applications, making it a valuable asset in the web development toolkit.

4] The Power of HTML5

On the front-end side, HTML5 (Hypertext Markup Language version 5) reigns supreme. It represents the latest evolution of the HTML standard, introducing a host of new features and capabilities that enhance the presentation and functionality of web pages. HTML5 is not merely a markup language; it is a foundation for building rich, interactive web applications that can seamlessly integrate multimedia, responsive design, and user-friendly interfaces.

5]The Fusion of PHP and HTML5

This project brings together the dynamic capabilities of PHP and the interactive features of HTML5 to create a simple listing application. By integrating these technologies, we aim to provide a comprehensive learning experience for

individuals interested in web development. Through this project, we will delve into the world of server-side scripting with PHP, explore the principles of database integration using MySQL, and design responsive user interfaces with HTML5 and CSS3.

6] The Educational Endeavor

This project is not merely about building a functional web application; it is an educational endeavour. It serves as a stepping stone for beginners to acquire foundational knowledge in web development. By examining the development process, from setting up the environment to coding, testing, and deployment, we aim to demystify web development and provide clear insights into the key concepts and practices that underpin the creation of web applications.

Methodology

Technologies Used

- **PHP**: PHP (Hypertext Preprocessor) is a widely used server-side scripting language for web development. It is known for its simplicity and ease of integration with web applications.

- **HTML5**: HTML5 is the latest version of Hypertext Markup Language, providing improved support for multimedia and interactive elements.

- **CSS3:** Cascading Style Sheets (CSS) are used for enhancing the presentation of web pages.

- **MySQL**: MySQL is an open-source relational database management system (RDBMS) used for storing and retrieving data.

Application Flow

1. **Homepage**: Users are greeted with a simple homepage displaying the current list items.

2. **Add Item**: Users can add new items to the list by entering a title.

3.**Mark as Done Item**: Users can Mark as Done items by clicking on the " Mark as Done " button and the item will be marked as done.

4. **Delete Item**: Items can be deleted by clicking the "Delete" button next to each item.

Code

PHP Code

```php
<?php
// Creating components
$server = "localhost";

$username = "root";

$password = ";

$database = "todo_list";

// Connecting to database
$connect = mysqli_connect($server, $username, $password, $database);

if ($connect->connect_errno) {

    die("Connection to MYSQL is Failed: " . $connect->connect_error);

}


// Creating a Todo item
if (isset($_POST['add'])) {

    $item = $_POST['item'];

    if (!empty($item)) {

        $query = "insert into todo (name) values ('$item')";

        if (mysqli_query($connect, $query)) {

            echo '<center>

            <div class="alert alert-info" role="alert">Item Added Successfully!</div></center>';

        }

    } else {

        echo mysqli_error($connect);

    }

}


// Marking item as Done or deleting item
if (isset($_GET['action'])) {
```
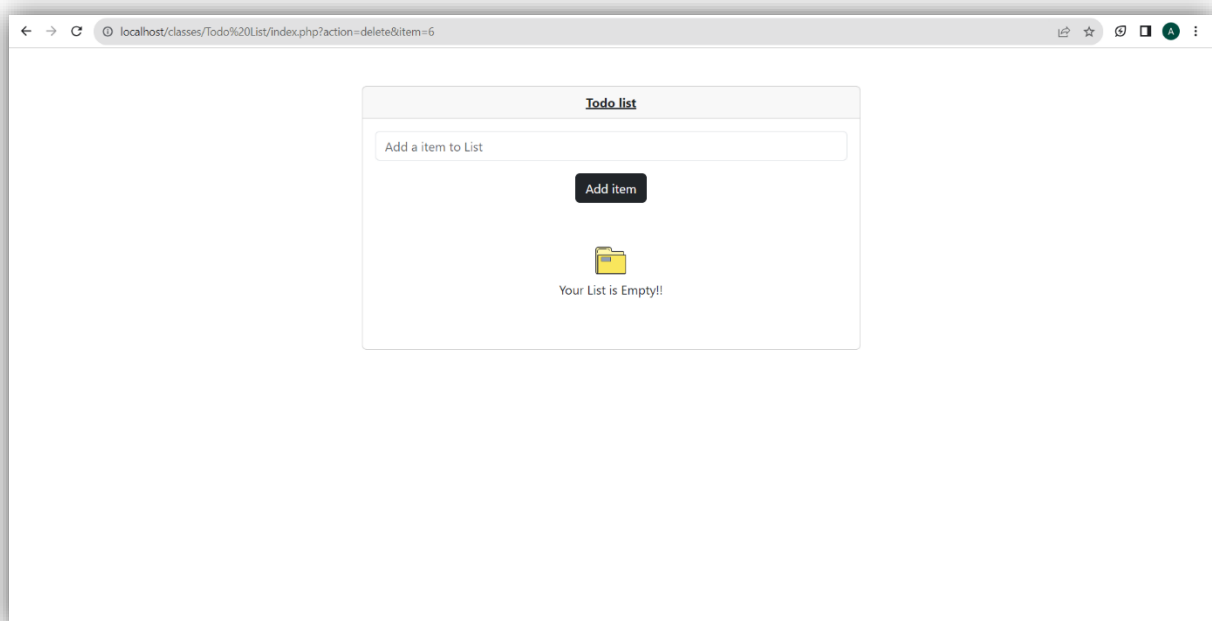
```php
    $itemid = $_GET['item'];

    $action = $_GET['action'];

    if ($_GET['action'] == 'done') {

        $query = "update todo set status=1 where id='$itemid'";

        if (mysqli_query($connect, $query)) {

            echo '<center>

            <div class="alert alert-success" role="alert">Item Marked as Done</div></center>';

        }

    } else if ($_GET['action'] == 'delete') {

        $query = "delete from todo where id='$itemid'";

        if (mysqli_query($connect, $query)) {

            echo '<center>

            <div class="alert alert-danger" role="alert">Item Deleted Successfully</div></center>';

        }

    } else {

        echo mysqli_error($connect);

    }
}?>
```
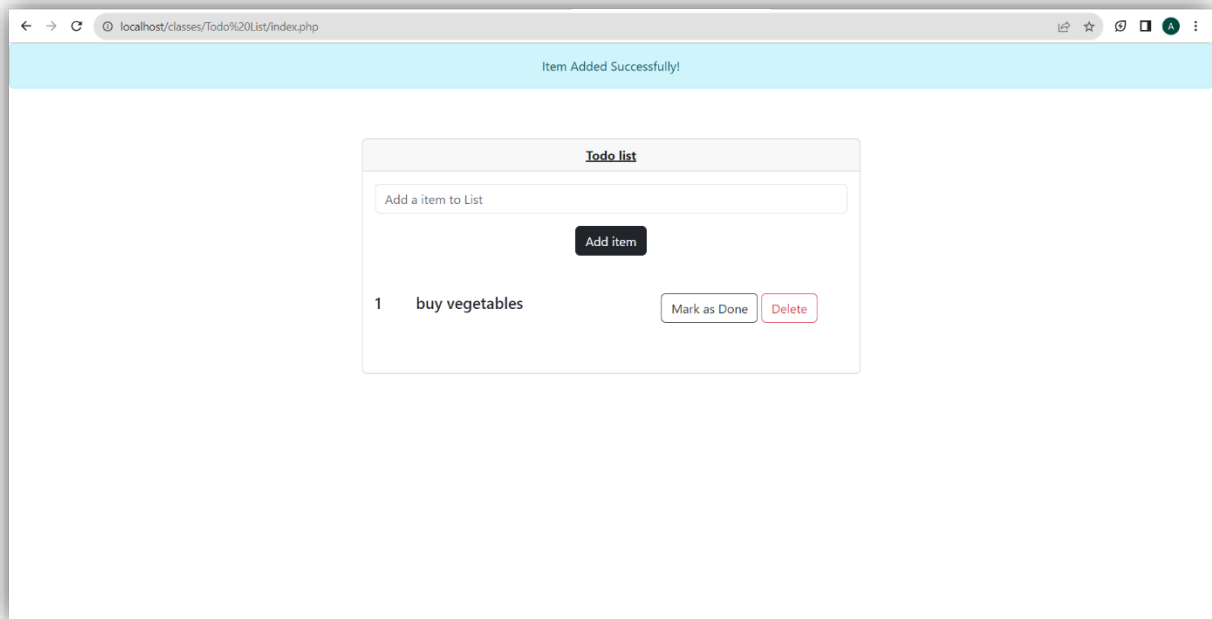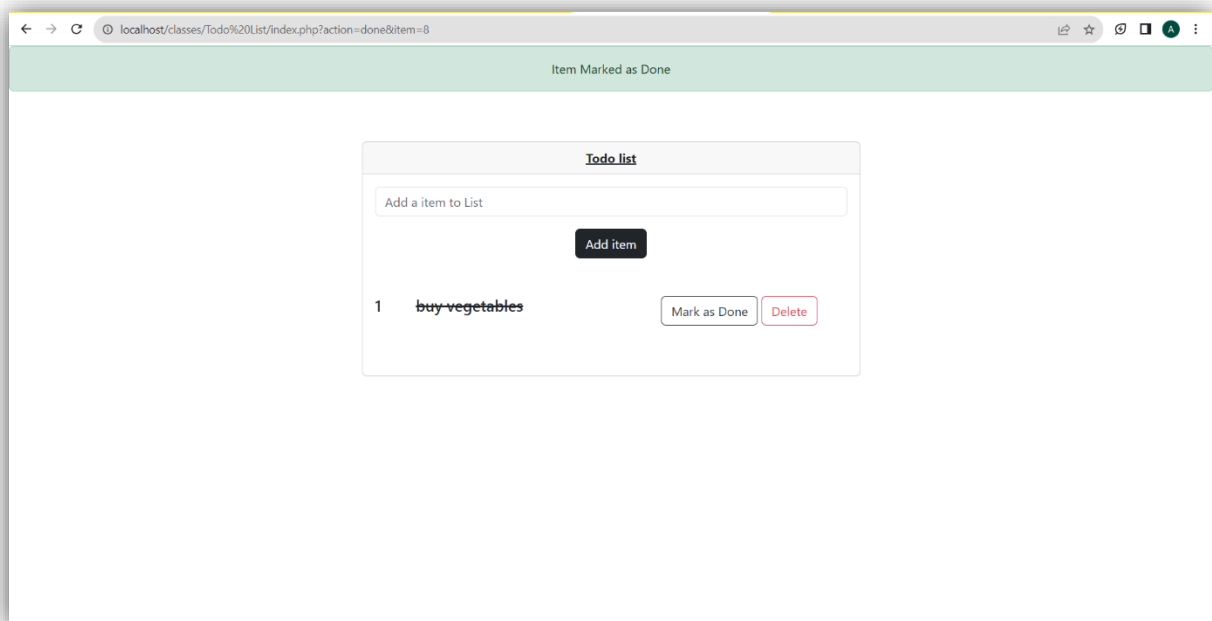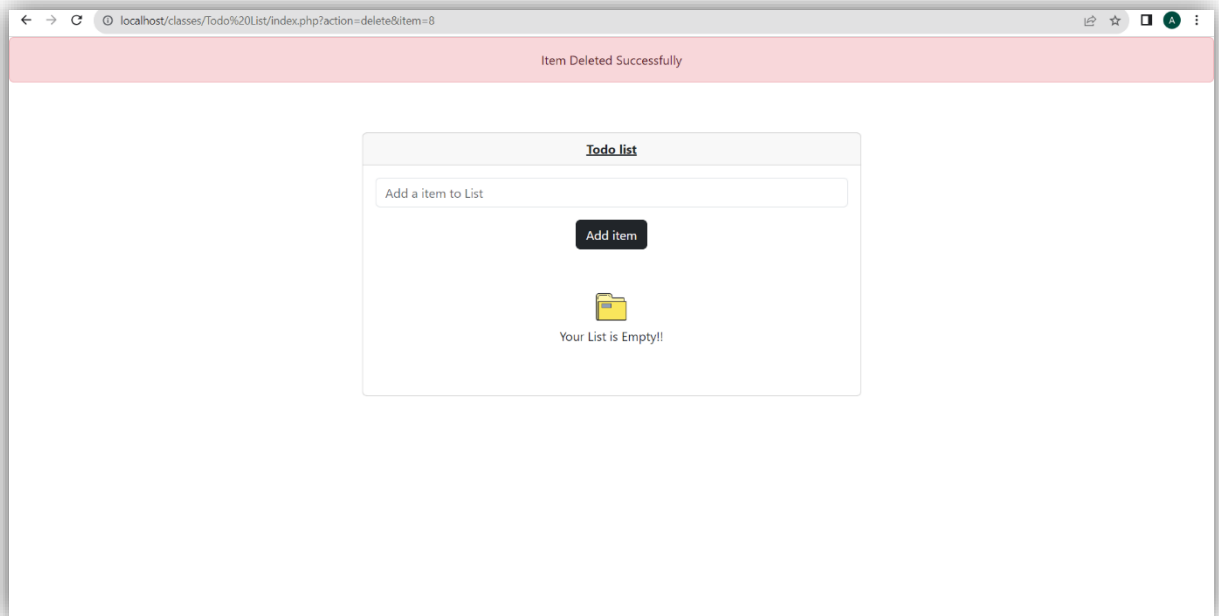
Screenshots of Results and Output

[Homepage]

[Add Item]

[Mark as Done Item]

[Delete Item]

Conclusion

In conclusion, this project has successfully demonstrated the development of a simple listing application using PHP and HTML5. The application allows users to perform basic CRUD operations on a list of items, providing a foundational understanding of web development principles.

By working on this project, beginners can grasp essential concepts such as server-side scripting, database integration, and user interface design. This project serves as a stepping stone for those who aspire to become proficient web developers in the future.

Throughout the project, we have learned how to:

- Set up a basic web application using PHP and HTML5.

- Create a MySQL database to store data.

- Implement CRUD functionality for managing data.

- Design a user-friendly interface for interaction.

Aspiring web developers can further enhance this project by adding additional features, improving the user interface, and implementing more advanced functionalities. Building on this foundation, the possibilities for web development are endless.