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PROJECT REPORT

Webpage Development and Hosting using Raspberry Pi

Introduction:

This project demonstrates how to create and host a simple responsive webpage using Raspberry Pi. The webpage is developed using HTML, CSS, and JavaScript and is executed through the Raspberry Pi system.Raspberry Pi acts as a small computer and local server that runs the webpage. The webpage can be accessed through a browser using the Raspberry Pi IP address or localhost.This project helps in understanding how Raspberry Pi can be used for basic web development and hosting applications.

Objective:

The objectives of this project are:

- To design a simple webpage using HTML, CSS, and JavaScript.
- To run and host the webpage using Raspberry Pi.
- To understand how Raspberry Pi can work as a local web server.
- To access the webpage through a browser using an IP address.

Hardware Components:

- Raspberry Pi board
- MicroSD card with Raspberry Pi OS
- Power supply
- Monitor
- Keyboard
- Mouse

Software Components:

- Raspberry Pi OS
- Chrome Web Browser
- Text Editor (Nano / Geany / VS Code)
- HTML, CSS, JavaScript

Program

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>My Webpage</title>
    <style>
        /* Reset */
        * {
            margin: 0;
            padding: 0;
            box-sizing: border-box;
            font-family: Arial, sans-serif;
        }

        body {
            line-height: 1.6;
            background-color: #f4f4f4;
        }

        /* Header */
        header {
            background: #333;
            color: #fff;
            padding: 1rem 0;
            text-align: center;
        }

        /* Navigation */
        nav {
            background: #444;
            padding: 0.5rem;
            text-align: center;
        }
```

```
nav a {
    color: white;
    text-decoration: none;
    margin: 0 15px;
    font-weight: bold;
}

nav a:hover {
    color: #f4f4f4;
    text-decoration: underline;
}

/* Main Section */
.container {
    padding: 20px;
    max-width: 1000px;
    margin: auto;
}

.card {
    background: white;
    padding: 20px;
    margin: 20px 0;
    border-radius: 5px;
    box-shadow: 0 2px 5px rgba(0,0,0,0.1);
}

/* Button */
.btn {
    display: inline-block;
    padding: 10px 15px;
    background: #007BFF;
    color: white;
    border: none;
    border-radius: 5px;
    cursor: pointer;
```

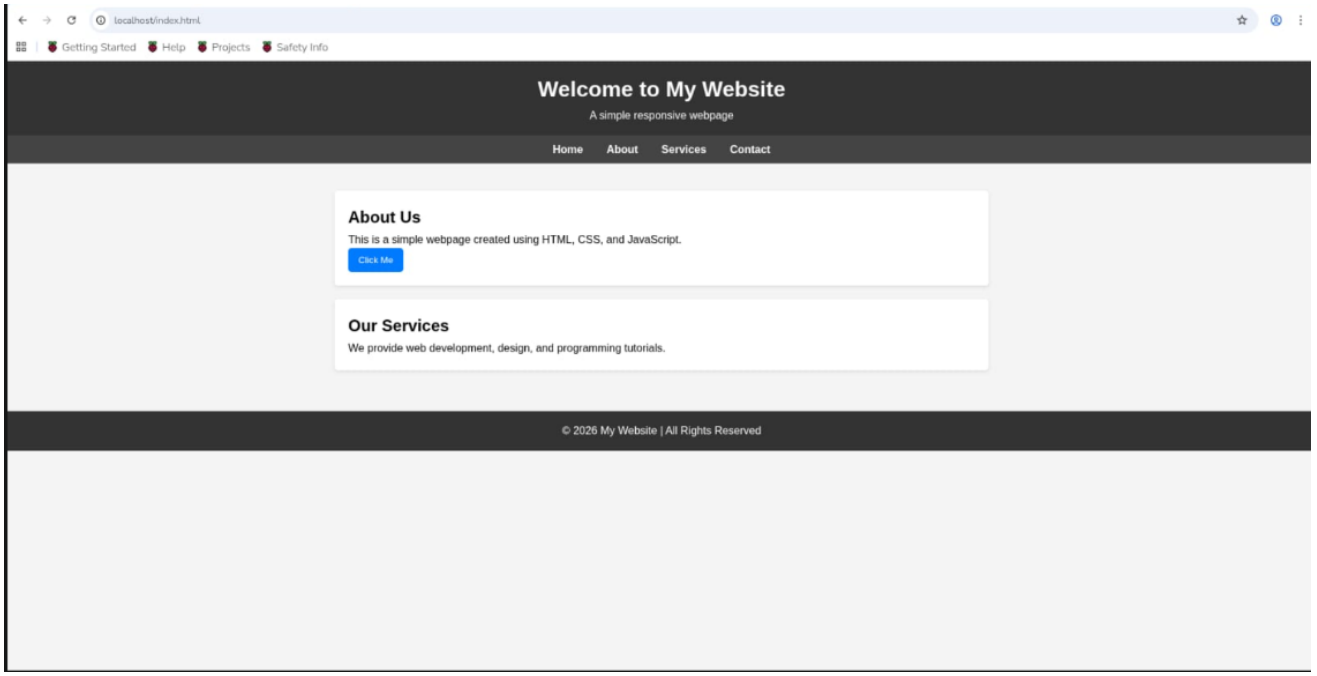
```
        }

        .btn:hover {
            background: #0056b3;
        }

        /* Footer */
        footer {
            background: #333;
            color: white;
            text-align: center;
            padding: 1rem 0;
            margin-top: 20px;
        }

        /* Responsive */
        @media (max-width: 600px) {
            nav a {
                display: block;
                margin: 10px 0;
            }
        }
    </style>
</head>
<body>

<header>
    <h1>Welcome to My Website</h1>
    <p>A simple responsive webpage</p>
</header>

<nav>
    <a href="#">Home</a>
    <a href="#">About</a>
    <a href="#">Services</a>
    <a href="#">Contact</a>
```

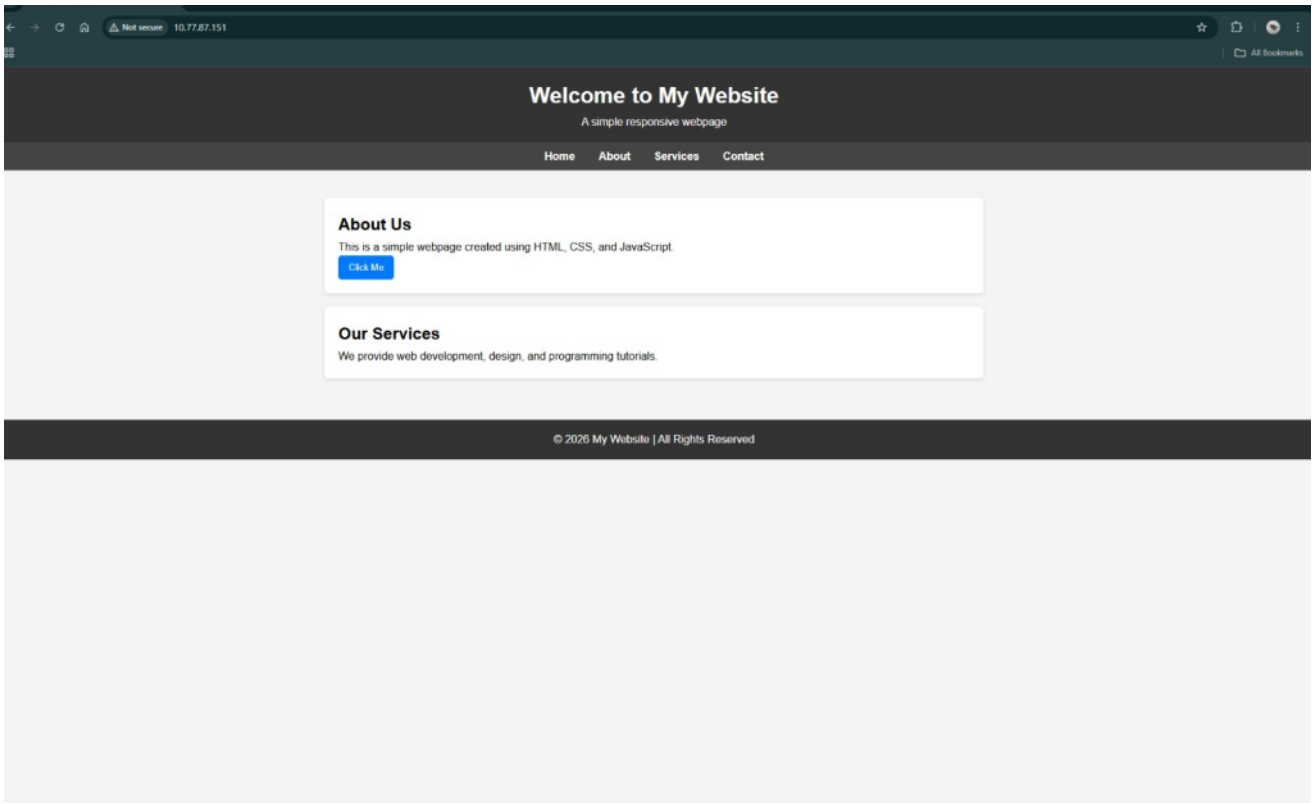
```
</nav>

<div class="container">
    <div class="card">
        <h2>About Us</h2>
        <p>This is a simple webpage created using HTML, CSS, and JavaScript.</p>
        <button class="btn" onclick="showMessage()">Click Me</button>
    </div>

    <div class="card">
        <h2>Our Services</h2>
        <p>We provide web development, design, and programming tutorials.</p>
    </div>
</div>

<footer>
    <p>&copy; 2026 My Website | All Rights Reserved</p>
</footer>

<script>
    function showMessage() {
        alert("Hello! Thanks for visiting our website.");
    }
</script>

</body>
</html>
```

Running the Webpage in Raspberry Pi

1. Create a file named index.html.
2. Write the HTML, CSS, and JavaScript code in the file.
3. Save the file in Raspberry Pi.
4. Open the file using Chromium browser.

Output :





Result:

This project successfully demonstrates how a simple webpage can be created and executed using Raspberry Pi. It shows how Raspberry Pi can act as a mini computer and web server for hosting web applications.