

EXPERIMENT NO.4

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Section/Group: 23MCA6-A

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Subject: Back End Technologies

Subject Code:23CAH 705

- **Aim/Overview of the practical:**

- Apply the knowledge and skills acquired to develop and deploy back-end applications, using tools such as Node.js

- **Task to be done:**

Create a Signup page and store the inputted data by user in file.

To create a signup page and store the inputted data by the user in a file, we need to follow these steps:

1. Set up an Express server.
2. Create a form for user signup.
3. Handle form submission on the server.
4. Store the user data in a file.

- **Concept used:**

Node.js, HTML, CSS, Javascript, json file

- **Steps/Commands involved to perform practical:**

1. **Login.html**

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8" />
```

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

```
<title>Login Page</title>
```

```

<!-- Bootstrap 4 CSS CDN -->
<link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/twitter-
bootstrap/4.5.2/css/bootstrap.min.css" />
<!-- Fontawesome CSS CDN -->
<link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.14.0/css/all.min.css" />
<link rel="stylesheet" href="css/style.css" />
</head>
<body class="bg-info">
<header class="container mt-3">
<div class="row">
<div class="col-lg-6 d-flex flex-column myColor p-4">
<h1>Login Form</h1>
</div>
<div class="col-md-6 text-right">
<a href="#" style="color:black;">Home</a> | <a href="#"
style="color:black;">About</a> | <a href="#"
style="color:black;">Contact</a>
</div>
</div>
</header>
<!-- Login Form Start -->
<div class="container-fluid">
<div class="row justify-content-center wrapper">
<div class="col-lg-10 my-auto myShadow">
<div class="row">
<div class="col-lg-6 d-flex flex-column justify-content-
center myColor bg-white p-4">
<h1 class="text-center font-weight-bold text-
primary">Sign in to Account</h1>
<hr class="my-3" />
<form action="/login" method="POST" class="px-3">
<div class="input-group input-group-lg form-group">
<div class="input-group-prepend">
<span class="input-group-text rounded-0"><i
class="far fa-envelope fa-lg fa-fw"></i></span>
</div>

```

```

        <input type="email" id="email" name="email"
class="form-control rounded-0" placeholder="E-Mail" required />
    </div>
    <div class="input-group input-group-lg form-group">
        <div class="input-group-prepend">
            <span class="input-group-text rounded-0"><i
class="fas fa-key fa-lg fa-fw"></i></span>
        </div>
        <input type="password" id="password"
name="password" class="form-control rounded-0" minlength="5"
placeholder="Password" required autocomplete="off" />
    </div>
    <div class="form-group clearfix">
        <div class="custom-control custom-checkbox float-
left">
            <input type="checkbox" class="custom-control-
input" id="customCheck" name="rem" />
            <label class="custom-control-label"
for="customCheck">Remember me</label>
        </div>
        <div class="forgot float-right">
            <a href="#" id="forgot-link">Forgot
Password?</a>
        </div>
    </div>
    <div class="form-group">
        <input type="submit" id="login-btn" value="Sign
In" class="btn btn-primary btn-lg btn-block myBtn" />
    </div>
</form>
<div class="text-center">
    <p>Don't have an account? <a href="/" class="text-
primary">Signup here</a></p>
</div>
</div>
<div class="col-lg-6 d-flex flex-column p-4">
    
</div>

```

```
</div>
</div>
</div>
</div>
<!-- Login Form End -->
<footer class="container mt-4">
  <div class="row">
    <div class="col-md-12 text-center">
      <p>&copy; 2024 The News. All rights reserved.</p>
    </div>
  </div>
</footer>
<!-- jQuery CDN -->
<script
src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.5.1/jquery.min.js">
</script>
<script src="script.js"></script>
</body>
</html>
```

2. Users.json

```
[
  {
    "username": "johndoe",
    "email": "johndoe@example.com",
    "password": "hashedpassword123"
  },
  {
    "username": "janedoe",
    "email": "janedoe@example.com",
    "password": "hashedpassword456"
  },
  {
    "username": "DIBYA",
    "email": "divyadas2727@gmail.com",
    "password": "qwerty"
  },
  {
    "username": "ivy",
    "email": "1234@asd",
    "password": "12345",
  }
]
```

```

    "cpassword": "12345"
  },
  {
    "username": "rose",
    "email": "tftyf@cghch",
    "password": "zxcvb"
  },
  {
    "username": "po",
    "email": "po@gmail.com",
    "password": "poopo"
  },
  {
    "username": "DIBYA",
    "email": "divyadas2727@gmail.com",
    "password": "qwerty123"
  }
]

```

3. Signup.html

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-
scale=1.0" />
  <title>Signup Page</title>
  <!-- Bootstrap 4 CSS CDN -->
  <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/twitter-
bootstrap/4.5.2/css/bootstrap.min.css" />
  <!-- Fontawesome CSS CDN -->
  <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.14.0/css/all.min.css" />
  <link rel="stylesheet" href="css/style.css" />
</head>
<body class="bg-info">
  <header class="container mt-3">
    <div class="row">
      <div class="col-lg-6 d-flex flex-column myColor p-4">
        <h1>Signup Form</h1>
      </div>
      <div class="col-md-6 text-right">

```

```

        <a href="#" style="color:black;">Home</a> | <a href="#"
style="color:black;">About</a> | <a href="#"
style="color:black;">Contact</a>
    </div>
</div>
</header>
<!-- Signup Form Start -->
<div class="container-fluid">
    <div class="row justify-content-center wrapper">
        <div class="col-lg-10 my-auto myShadow">
            <div class="row">
                <div class="col-lg-6 d-flex flex-column justify-
content-center myColor bg-white p-4">
                    <h1 class="text-center font-weight-bold text-
primary">Create Account</h1>
                    <hr class="my-3" />
                    <form action="/signup" method="POST" class="px-
3">
                        <div class="input-group input-group-lg
form-group">
                            <div class="input-group-prepend">
                                <span class="input-group-text
rounded-0"><i class="far fa-user fa-lg fa-fw"></i></span>
                            </div>
                            <input type="text" id="username"
name="username" class="form-control rounded-0" placeholder="Username"
required />
                        </div>
                        <div class="input-group input-group-lg
form-group">
                            <div class="input-group-prepend">
                                <span class="input-group-text
rounded-0"><i class="far fa-envelope fa-lg fa-fw"></i></span>
                            </div>
                            <input type="email" id="email"
name="email" class="form-control rounded-0" placeholder="E-Mail"
required />
                        </div>
                        <div class="input-group input-group-lg
form-group">
                            <div class="input-group-prepend">
                                <span class="input-group-text
rounded-0"><i class="fas fa-key fa-lg fa-fw"></i></span>
                            </div>

```

```

        <input type="password" id="password"
name="password" class="form-control rounded-0" minlength="5"
placeholder="Password" required />
    </div>
    <div class="form-group">
        <input type="submit" id="register-btn"
value="Sign Up" class="btn btn-primary btn-lg btn-block myBtn" />
    </div>
</form>
<div class="text-center">
    <p>Already have an account? <a
href="/login" class="text-primary">Login here</a></p>
</div>
</div>
<div class="col-lg-6 d-flex flex-column p-4">
    
</div>
</div>
</div>
</div>
</div>
<!-- Signup Form End -->
<footer class="container mt-4">
    <div class="row">
        <div class="col-md-12 text-center">
            <p>&copy; 2024 The News. All rights reserved.</p>
        </div>
    </div>
</footer>
<!-- jQuery CDN -->
<script
src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.5.1/jquery.min.js"
></script>
    <script src="script.js"></script>
</body>
</html>

```

4. Server.js

```

const express = require('express');
const bodyParser = require('body-parser');

```

```
const ts = require( ts );
const path = require('path');

const app = express();
const port = 8080;

// Middleware to parse JSON and URL-encoded data
app.use(bodyParser.urlencoded({ extended: true }));
app.use(bodyParser.json());

// Serve static files (e.g., HTML) from the public directory
app.use(express.static(path.join(__dirname, 'public')));

// Serve the signup form at the root URL
app.get('/', (req, res) => {
  res.sendFile(path.join(__dirname, 'public', 'signup.html'));
});

// Serve the login form
app.get('/login', (req, res) => {
  res.sendFile(path.join(__dirname, 'public', 'login.html'));
});

// Handle form submission for signup
app.post('/signup', (req, res) => {
  const { username, email, password } = req.body;

  const filePath = path.join(__dirname, 'data', 'users.json');

  // Read existing data
  let users = [];
  if (fs.existsSync(filePath)) {
    const fileData = fs.readFileSync(filePath);
    users = JSON.parse(fileData);
  }

  // Add new user data
  users.push({ username, email, password });

  // Write updated data to file
  fs.writeFileSync(filePath, JSON.stringify(users, null, 2));

  // Redirect to login page
  res.redirect('/login');
});
```



```
// Handle form submission for login
app.post('/login', (req, res) => {
  const { email, password } = req.body;

  const filePath = path.join(__dirname, 'data', 'users.json');

  // Read existing data
  if (fs.existsSync(filePath)) {
    const fileData = fs.readFileSync(filePath);
    const users = JSON.parse(fileData);

    // Check if user exists
    const user = users.find(u => u.email === email && u.password ===
password);
    if (user) {
      // Redirect to employee data page
      res.redirect('/employee');
    } else {
      res.send('Invalid email or password');
    }
  } else {
    res.send('No users found');
  }
});

// Serve the employee data page
app.get('/employee', (req, res) => {
  const filePath = path.join(__dirname, 'data', 'users.json');

  // Read existing data
  let users = [];
  if (fs.existsSync(filePath)) {
    const fileData = fs.readFileSync(filePath);
    users = JSON.parse(fileData);
  }

  // Send the user data to the front-end
  res.send(`
    <!DOCTYPE html>
    <html lang="en">
    <head>
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-
scale=1.0">
```

```

        <title>Employee Data</title>
    </head>
    <body>
        <h1>Employee Data</h1>
        <table border="1">
            <tr>
                <th>Username</th>
                <th>Email</th>
            </tr>
            ${users.map(user => `
                <tr>
                    <td>${user.username}</td>
                    <td>${user.email}</td>
                </tr>
            `).join('')}
        </table>
    </body>
</html>
`);
});

app.listen(port, () => {
    console.log(`Server is running on http://localhost:${port}`);
});

```

5. Employee.html

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Employee Data</title>
</head>
<body>
    <h1>Employee Data</h1>
    <p>Welcome, you have successfully logged in!</p>
</body>
</html>
6.

```

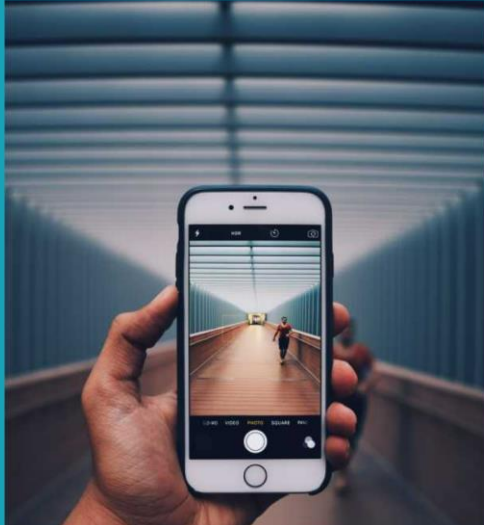
- **Output:**

Home | About | Contact

Signup Form

Create Account

[Already have an account? Login here](#)



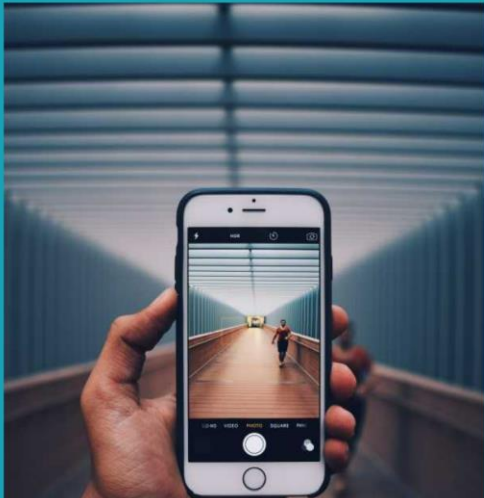
Home | About | Contact

Login Form

Sign in to Account

☐ Remember me [Forgot Password?](#)

[Don't have an account? Signup here](#)



Employee Data

Username	Email
johndoe	johndoe@example.com
janedoe	janedoe@example.com
DIBYA	divyadas2727@gmail.com
ivy	1234@asd
rose	tftyf@cghch
po	po@gmail.com
DIBYA	divyadas2727@gmail.com

- **Learning Outcome :-**

1. Learnt about the concept of Node.js
2. Learnt to create a clickable button that directs us to another url.
3. Login and signup