Ganpat University
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----------PRACTICAL 02----------

❖ Question (TASK) :

You have a

requirement for deploying a NodeJS-based application on the local server. Implement

it using a suitable code editor and deploy this application in the quickest way

possible.

Go through the scenario of development and
deployment and perform the following tasks:

Practical 2.1: Develop a NodeJS application to create any website GUI (use HTML, CSS, JavaScript) using a suitable code editor Sample GUI should contain two buttons, with one button to
turn ON the bulb provided in the user interface and a second button to turn OFF the bulb.

Practical 2.2: Developing NodeJS
application to create a website GUI (use HTML, CSS, JavaScript) to Click on the
light bulb to turn on/off the light.

❖ STEPS TO PERFORM THIS TASK :

➨ **Step 1 :**

» Create Project Files.

» Create a new Folder for this Project.

» Inside the project folder create the html , css & script files as below

✓ **Index.html :-**

```
<html>

<head>
    <title>Light Bulb On/Off With Sound</title>
    <link rel="stylesheet" href="style.css">
    <script src="script.js" async></script>
</head>

<body>
    <a class="btn-shine" target="_blank">Practical 2 - deploying a NodeJS-
based application on the local server
    </a>
    <div class="light">
        <div class="wire"></div>
        <div class="bulb">
            <span></span>
            <span></span>
        </div>

        <div class="switch">
            <div class="power-switch">
                <input type="checkbox" />
                <div class="button">
                    <svg class="power-off">
                        <use xlink:href="#line" class="line" />
                        <use xlink:href="#circle" class="circle" />
                    </svg>
                    <svg class="power-on">
                        <use xlink:href="#line" class="line" />
                        <use xlink:href="#circle" class="circle" />
                    </svg>
                </div>
            </div>

            <!-- SVG -->
            <svg xmlns="http://www.w3.org/2000/svg" style="display:
none;">
                <symbol xmlns="http://www.w3.org/2000/svg" viewBox="0 0
150 150" id="line">
                    <line x1="75" y1="34" x2="75" y2="58" />
                </symbol>
```

```
                <symbol xmlns="http://www.w3.org/2000/svg" viewBox="0 0
150 150" id="circle">
                    <circle cx="75" cy="80" r="35" />
                </symbol>
            </svg>
            <div class="btn"></div>
        </div>
    </div>

</body>

</html>
```

✓ **Script.js :-**

```
let button = document.querySelector('.power-switch');
let bulb = document.querySelector('.bulb');
let body = document.querySelector('body');
let audio = document.querySelector('#audio');
// 2.1
button.onclick = function () {
    body.classList.toggle('on');
    audio.play();
}

// 2.2
bulb.onclick = function () {
    body.classList.toggle('on');
    audio.play();
}
```

Step 2 :

» Open Code Editor and navigate to project folder.

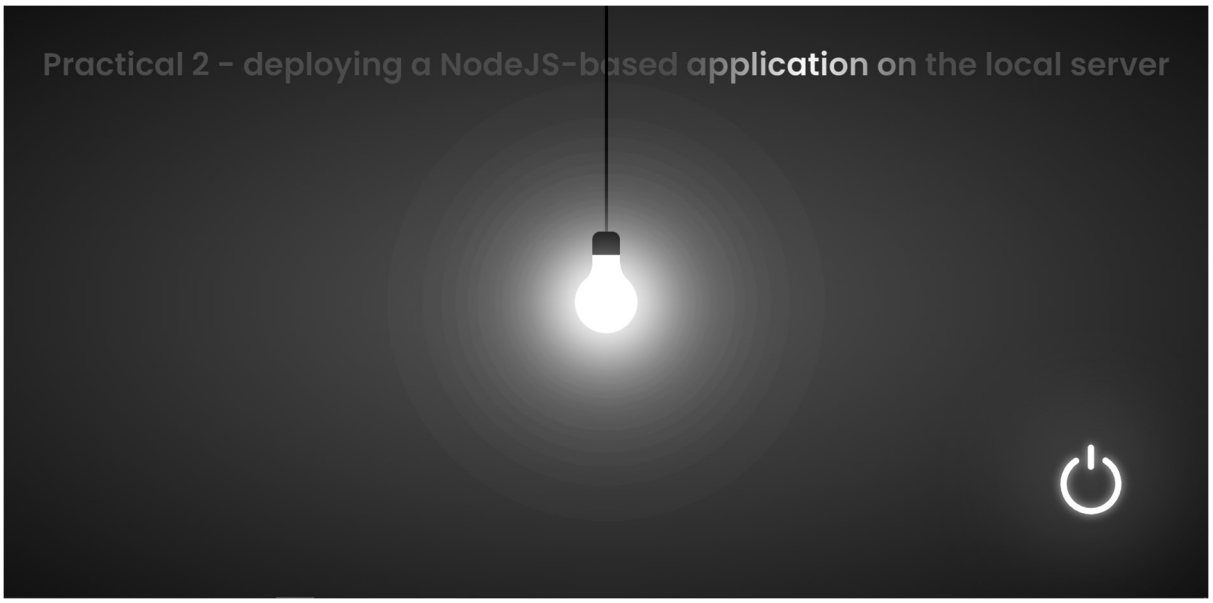
» Create a new file named ‘server.js’.

✓ **server.js :-**

```
const express = require('express');
const app = express();
const path = require('path');

const PORT = 8080;

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

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

- **Step 3 :**
- Install Dependencies.
- Open a Terminal or command prompt and navigate to project folder.
- Run this following command to install the EXPRESS Module : `npm install express`
- **Step 4 :**
- Start the local server.
- In the Terminal/CMD , run this following command to start the NodeJS Server: `node server.js`
- You should see the message “Server running on the *http://localhost:3000*
- **Step 5 :**
- Access your project locally
- Open web browser and enter the following address: *http://localhost:3000*
- You will see your NodeJS-based project with HTML , CSS , JavaScript running on the local server. You can interact with the buttons and see the bulb power on & off.
- That’s it! Your NodeJS project with HTML , CSS , JavaScript is now running on a local server, and you can access it from your web browser.

✓ 2.1 Bulb on/off with switch button :-



✓ 2.2 Bulb on/off with click on bulb :-