SHRI VILEPARLE KELAVANI MANDAL'S
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)
DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE CODE: DJS22ITL307   **DATE: 05/11/2023**

COURSE NAME: Web Programming Laboratory   **CLASS:SY. BTech**

DEPARTMENT OF INFORMATION TECHNOLOGY

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BRANCH: Information Technology
BATCH: 1

EXPERIMENT NO. 9

CO/LO: Develop web applications.

AIM / OBJECTIVE: Program based on inbuilt functions in Node.js.

Task 1: Working with File System

1. Reading a File:

```
const fs = require('fs');
fs.readFile('sample.txt', 'utf8', (err, data) => {
    if (err) {
        console.error(err); return;
    } console.log(data);
});
```

```
● PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs> node .\readFile.js
  "This is sample file"
○ PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs>
```

2. Writing to a File:

```
const fs = require('fs'); fs.writeFile('output.txt', 'Hello, Node.js!', (err) => {
    if (err) {
        console.error(err);
        return;
    } console.log('File written successfully!');
});
```

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```
PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs> node .\writeFile.js
File written successfully!
PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs>
```

3. Checking if a File Exists:

```javascript
const fs = require('fs');
fs.access('check.txt', fs.constants.F_OK, (err) => {
    if (err) {
        console.error(err); return;
    } console.log('File exists!');
});
```

```
PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs> node .\fileExists.js
File exists!
PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs>
```

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Task2: Handling HTTP Requests

1. Creating a Basic Web Server:

```javascript
const http = require('http');
const server = http.createServer((req, res) => {
    res.writeHead(200, { 'Content-Type': 'text/html' });
    res.end('<h1>Hello, World!</h1>');
});
server.listen(3000, '127.0.0.1', () => {
    console.log('Server is running on http://127.0.0.1:3000/');
});
```

```
PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs> node .\basicServer.js
Server is running on http://127.0.0.1:3000/
```

127.0.0.1:3000   × +

← → C ① 127.0.0.1:3000

Hello, World!

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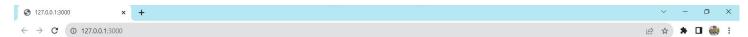**COURSE CODE: DJS22ITL307**   **DATE: 05/11/2023**

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2. Sending an HTTP Request:

```
3.  const http = require('http');
4.
5.  const options = {
6.      hostname: 'api.coindesk.com',
7.      path: '/v1/bpi/currentprice.json',
8.      method: 'GET',
9.      port: 80,
10. };
11.
12. const req = http.request(options, (res) => {
13.     let data = '';
14.     res.on('data', (chunk) => {
15.         data += chunk;
16.     });
17.     res.on('end', () => {
18.         console.log(data);
19.     });
20. });
21.
22. req.on('error', (e) => {
23.     console.error(`Problem with request: ${e.message}`);
24. });
25.
26. req.end();
```

```
PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs> node .\httpRequest.js
{"time":{"updated":"Dec 2, 2023 09:59:00 UTC","updatedISO":"2023-12-02T09:59:00+00:00","updateduk":"Dec 2, 2023 at 09:59 GMT"},"disclaimer":"This data was
 produced from the CoinDesk Bitcoin Price Index (USD). Non-USD currency data converted using hourly conversion rate from openexchangerates.org","chartName
":"Bitcoin","bpi":{"USD":{"code":"USD","symbol":"&#36;","rate":"38,446.8511","description":"United States Dollar","rate_float":38446.8511},"GBP":{"code":"
GBP","symbol":"&pound;","rate":"32,125.8812","description":"British Pound Sterling","rate_float":32125.8812},"EUR":{"code":"EUR","symbol":"&euro;","rate":
"37,452.8462","description":"Euro","rate_float":37452.8462}}}
PS C:\Users\91720\Documents\Web Development\College Web Programming\NODEjs>
```

BOOKS AND WEB RESOURCES:

1. Tailwind CSS From Scratch | Learn By Building Projects by Brad Traversy

2. Tailwind CSS: A Modern Way To Build Websites Using CSS
CONCLUSION: I learned about file System module and implemented http requests.