

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

NAME: Anish Sharma
ROLL NO: I011
SAP ID: 60003220045
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:

```
2. const fs = require('fs');
3. fs.readFile('sample.txt', 'utf8', (err, data) => {
4.    if (err) {
5.        console.error(err); return;
6.    } console.log(data);
7. });
```

```
    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:

```
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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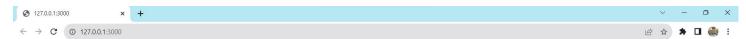
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Task2: Handling HTTP Requests

1. Creating a Basic Web Server:

```
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/



Hello, World!



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2. Sending an HTTP Request:

```
3. const http = require('http');
4.
5. const options = {
       hostname: 'api.coindesk.com',
6.
       path: '/v1/bpi/currentprice.json',
8.
       method: 'GET',
9.
       port: 80,
10.};
11.
12.const req = http.request(options, (res) => {
       let data = '';
       res.on('data', (chunk) => {
14.
15.
           data += chunk;
16.
       });
       res.on('end', () => {
17.
18.
           console.log(data);
19.
       });
20.});
21.
22.req.on('error', (e) => {
       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":"\$", "rate":"38,446.8511", "description":"United States Dollar", "rate_float":38446.8511}, "GBP":{"code":"GBP", "symbol":"£", "rate":"32,125.8812", "description":"British Pound Sterling", "rate_float":32125.8812}, "EUR":{"code":"EUR", "symbol":"€", "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.



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EXPERIMENT NO. 10

CO/LO: Develop web applications.

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

BACKEND

Index.js

```
const express = require('express');
const Users = require('./models/users');
const cors = require('cors');
require('./models/config');
const app = express();
app.use(express.json());
app.use(cors());
app.post("/signup", async (req, res) => {
    let data = new Users(req.body);
    let result = await data.save();
    result = result.toObject();
    delete result.password;
    if (result) {
        if (err) {
            res.send({ result: "Something went wrong, Please tryagain later" })
        res.send({ result, auth: token });
});
app.post("/login", async (req, res) => {
```



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```
if (req.body.password && req.body.email) {
    let user = await Users.findOne(req.body).select("-password");
    if (user) {
        if (err) {
            res.send({ result: "Something went wrong, Please tryagain later" })
        }
        res.send({ user, auth: token });
    }
    else {
        res.send({ result: "No User found" })
    }
} else {
        res.send({ result: "No User found" })
}
app.listen(3000);
```

models/config.js

```
const mongoose = require('mongoose');
mongoose.connect("mongodb+srv://gofood:mern123@cluster0.otuonrs.mongodb.net/gofoodmern?retryWr
ites=true&w=majority");
```

models/Users.js

```
const mongoose = require('mongoose');

const userSchema = new mongoose.Schema({
    name:String,
    email:String,
    password:String
});

module.exports= mongoose.model('users',userSchema);
```



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FRONTEND

\src\App.js

```
import './App.css';
import Nav from './Components/Nav';
import SignUp from './Components/SignUp';
import PrivateComponent from './Components/PrivateComponent';
import { BrowserRouter, Routes, Route } from 'react-router-dom';
import Login from './Components/Login';
function App() {
  return (
    <div className="App">
      <BrowserRouter>
      <Nav/>
      <Routes>
        <Route element={<PrivateComponent />} >
             <Route path="/" element={<Home/>} />
        </Route>
        <Route path="/signup" element= {<SignUp/>} />
        <Route path="/login" element={<Login/>} />
      </Routes>
      </BrowserRouter>
    </div>
  );
export default App;
```



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src\components\SignUp.js

```
import React, {useState, useEffect} from "react";
import { useNavigate } from "react-router-dom"; //used to redirect after signup
const SignUp = () =>{
    const navigate=useNavigate(); //imp to use with navigate
    useEffect(() => {
                                  //very imp to note
        const auth = JSON.parse(localStorage.getItem("user"));
        if (auth) {
          navigate("/");
      }, []);
    const [name, setName]=useState("");
    const [email, setEmail]=useState("");
    const [password, setPassword]=useState("");
    const collectData =async () =>{
        console.warn(name,email,password);
        let result = await fetch("http://localhost:3000/signup",{
            method:'post',
            body:JSON.stringify({name,email,password}),
            headers:{
                'Content-Type': 'application/json'
        });
        result= await result.json();
        console.warn(result);
        localStorage.setItem("user", JSON.stringify(result)); //storing data locally in browser
        if(result)
            navigate('/');
    return(
      <div className="registerContainer">
```



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```
<div className="register">
             <h1>REGISTER</h1>
            <input</pre>
               className="inputBox"
              value={name}
              onChange={(e) => setName(e.target.value)}
               type="text"
              placeholder="Enter name"
            <input</pre>
              className="inputBox"
              value={email}
               onChange={(e) => setEmail(e.target.value)}
              type="text"
               placeholder="Enter email"
            <input</pre>
               className="inputBox"
              value={password}
               onChange={(e) => setPassword(e.target.value)}
              type="password"
               placeholder="Enter password"
            <button
               className="signupbutton"
               type="button"
               onClick={collectData}
              SignUp
             </button>
          </div>
        </div>
export default SignUp;
```



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src\components\Login.js

```
import React, { useState, useEffect } from "react";
import { useNavigate } from "react-router-dom";
const Login = () => {
 const navigate = useNavigate();
 useEffect(() => {
    const auth = JSON.parse(localStorage.getItem("user"));
   if (auth) {
     navigate("/");
 }, [navigate]);
 const [email, setEmail] = useState("");
 const [password, setPassword] = useState("");
 const handleLogin = async () => {
    console.warn(email, password);
    try {
     const response = await fetch("http://localhost:3000/login", {
        method: "post",
        body: JSON.stringify({ email, password }),
        headers: {
          "Content-Type": "application/json",
       },
      });
     if (!response.ok) {
        throw new Error("Login failed"); // Handle non-200 status codes
      const result = await response.json();
      console.warn(result);
      if (result.name) {
        localStorage.setItem("user", JSON.stringify(result));
```



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```
navigate("/");
      } else {
        alert("Enter correct password/username");
    } catch (error) {
      console.error("Error during login:", error.message);
      alert("Login failed. Please try again later.");
  };
  return (
      <h1>LOGIN</h1>
      <div className="login">
          className="inputBox"
          type="text"
          value={email}
          onChange={(e) => setEmail(e.target.value)}
          placeholder="Enter Email"
        <input</pre>
          className="inputBox"
          type="password" // Change the input type to 'password'
          value={password}
          onChange={(e) => setPassword(e.target.value)}
          placeholder="Enter Password"
      </div>
      <button className="loginbutton" type="button" onClick={handleLogin}>
      </button>
  );
};
export default Login;
```



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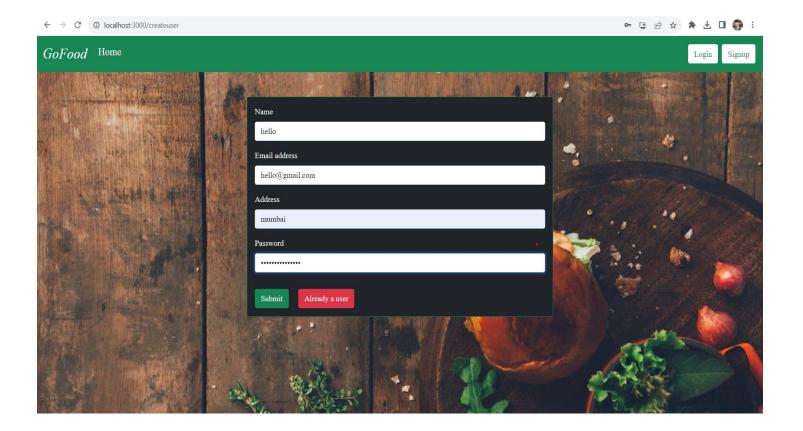


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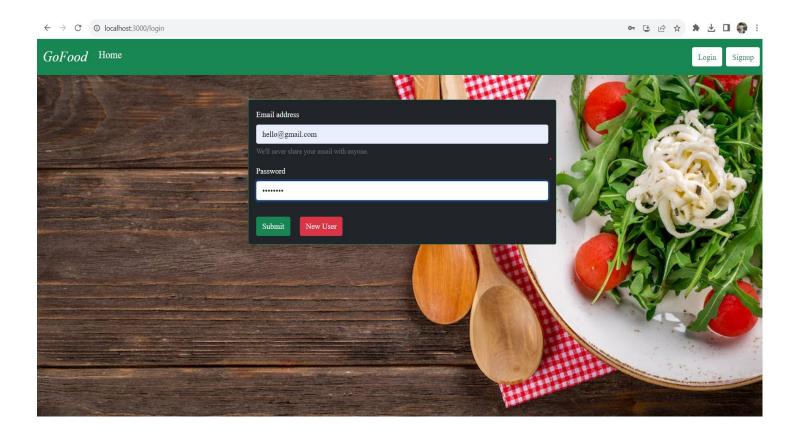
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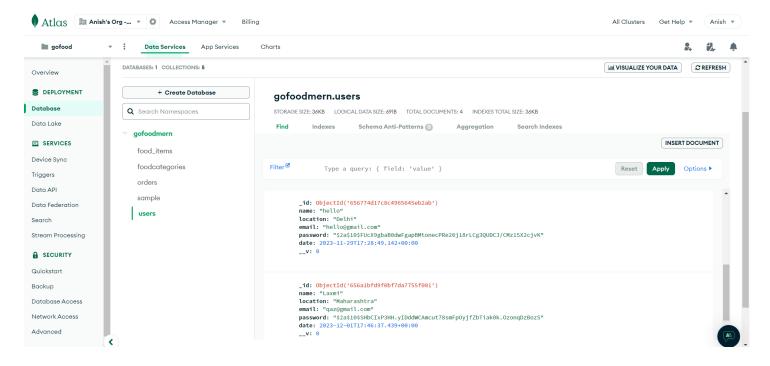
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- 2. Tailwind CSS: A Modern Way To Build Websites Using CSS

CONCLUSION: I learnt to integrate mongoDB with frontend and backend and successfully created and integrated signup and login api.