



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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**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/
```





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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":"$","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}}}
```

## 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?retryWrites=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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**COURSE CODE: DJS22ITL307****DATE: 05/11/2023****COURSE NAME: Web Programming Laboratory****CLASS:SY. BTech****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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**COURSE CODE: DJS22ITL307****DATE: 05/11/2023****COURSE NAME: Web Programming Laboratory****CLASS:SY. BTech**

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
    className="inputBox"
    value={name}
    onChange={(e) => setName(e.target.value)}
    type="text"
    placeholder="Enter name"
  />
  <input
    className="inputBox"
    value={email}
    onChange={(e) => setEmail(e.target.value)}
    type="text"
    placeholder="Enter email"
  />
  <input
    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">
        <input
            className="inputBox"
            type="text"
            value={email}
            onChange={(e) => setEmail(e.target.value)}
            placeholder="Enter Email"
        />
        <input
            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}>
        LOGIN
    </button>
    </>
);
};

export default Login;
```



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← → ↻ localhost:3000/createuser

GoFood Home Login Signup

Name  
hello

Email address  
hello@gmail.com

Address  
mumbai

Password  
\*\*\*\*\*

Submit Already a user





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← → ↻ localhost:3000/login

GoFood Home Login Signup

Email address

hello@gmail.com

We'll never share your email with anyone.

Password

\*\*\*\*\*

Submit New User



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The screenshot shows the Atlas MongoDB web interface. On the left is a sidebar with navigation options: Overview, DEPLOYMENT, Database (selected), SERVICES, and SECURITY. The main panel displays the 'gofoodmern' database with a list of collections: food\_items, foodcategories, orders, sample, and users. The 'users' collection is selected, showing its details: STORAGE SIZE: 36KB, LOGICAL DATA SIZE: 691B, TOTAL DOCUMENTS: 4, INDEXES TOTAL SIZE: 36KB. Below this, there are tabs for Find, Indexes, Schema Anti-Patterns, Aggregation, and Search Indexes. The 'Find' tab is active, showing a query filter bar and a list of documents. The first document is:

```
{
  "_id": ObjectId("656774d17c8c4965645eb2ab"),
  "name": "hello",
  "location": "Delhi",
  "email": "hello@gmail.com",
  "password": "$2a$10$FUCX9gBaB0dwFgap8MtonecPRe20j18rLCg3QUdCj/CMz15X2cjvK",
  "date": "2023-11-29T17:28:49.142+00:00",
  "__v": 0
}
```

The second document is:

```
{
  "_id": ObjectId("656a1bfd9f0bf7da7755f001"),
  "name": "Laxmi",
  "location": "Maharashtra",
  "email": "gazi@gmail.com",
  "password": "$2a$10$SHbCIXP3HH.yIDddWCamcut78smFpOyjfZbtIak0k.OzonqDzBozS",
  "date": "2023-12-01T17:46:37.439+00:00",
  "__v": 0
}
```

**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 learnt to integrate mongoDB with frontend and backend and successfully created and integrated signup and login api.