Department of Computer Science and Engineering

Data Science

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Experiment No. 5

Aim:- Construct front end applications using React and back end using Node.js/express.

Input:

Server.js:

```
var express = require("express");

var mysql = require("mysql");

var app = express();


var con = mysql.createConnection({

  host: "localhost",

  user: "root",

  password: "root",

  database: "students",
```

```javascript
});

app.get("/", async function (req, res) {
  const data = await getAll();
  console.log(data);
  res.writeHead(200, {
    "Content-Type": "text/html",
    "Access-Control-Allow-Origin": "*",
  });
  const putput = JSON.stringify(data);
  res.end(putput);
});

app.get("/insert", async function (req, res) {
  let TestMessage = { body: "data inserted successfully" };
  const jsonContent = JSON.stringify(TestMessage);
  const data = await insertData(req.query.email);
  console.log(data);

  res.writeHead(200, {
    "Content-Type": "text/html",
    "Access-Control-Allow-Origin": "*",
  });
```

```javascript
    if (data.affectedRows > 0) {

      const datas = await getAll();

      const putput = JSON.stringify(datas);

      res.end(putput);

    } else {

      const datas = await getAll();

      const putput = JSON.stringify(datas);

      res.end(putput);

    }

});


var server = app.listen(8000, function () {

  var host = server.address().address;

  var port = server.address().port;

  console.log("Example app listening at http://%s:%s", host, port);

});


const getAll = () => {

  return new Promise((resolve, reject) => {

    con.query("SELECT * FROM std_details", (err, result) => {

      if (err) {

        reject(err);
```

```javascript
    } else {

      resolve(result);

    }

  });

  });

};


const insertData = (email) => {

  return new Promise((resolve, reject) => {

    var sql = "INSERT INTO std_details (email) VALUES ?";

    var values = [[email]];

    con.query(sql, [values], function (err, result) {

      if (err) {

        reject(err);

      } else {

        resolve(result);

      }

    });

  });

};


App.js:

import "./App.css";
```

```jsx
import "./style.css";

import { useState, useEffect } from "react";

import "bootstrap/dist/css/bootstrap.min.css";


function App() {
  const [messages, setMessages] = useState([""]);

  const [email, setEmail] = useState("");


  useEffect(() => {
    fetch("http://localhost:8000/")

      .then((res) => res.json())

      .then((data) => {

        console.log(data);

        setMessages(data);

      });
  }, [email]);


  const handleChange = (event) => {

    setEmail(event.target.value);

  };


  const handeSubmit = (event) => {

    event.preventDefault();
```

```jsx
    fetch("http://localhost:8000/insert?email=" + email)

      .then((res) => res.json())

      .then((data) => {

        setMessages(data);

      });

  };


  return (

    <div className="App">

      <section id="footer">

        <section id="banner">

          <div className="container-fluid" id="banner-container">

            <div className="row" id="banner-row">

              <div className="col-md-4" id="footer-col2"></div>

              <div className="col-md-4" id="footer-col2">

                <h3>Store your email address</h3>

                <form onSubmit={handeSubmit} method="GET">

                  <div className="mb-3">

                    <input

                      type="email"

                      placeholder="Enter Your Email"

                      className="form-control"

                      id="exampleInputEmail1"
```

```jsx
        aria-describedby="emailHelp"

        onChange={handleChange}

      />

      <div id="emailHelp" className="form-text">

        We'll never share your email with anyone else.

      </div>

    </div>

    <button type="submit" className="btn btn-primary">

      Submit

    </button>

  </form>

  <table className="table">

    <thead>

      <tr>

        <th scope="col">#</th>

        <th scope="col">Email</th>

      </tr>

    </thead>

    <tbody>

      {messages.map((message) => (

        <tr key={message.id}>

          <th scope="row">{message.id}</th>

          <td>{message.email}</td>
```

```jsx
                        </tr>
                    ))}
                </tbody>
            </table>
        </div>
      </div>
    </div>
  </section>
 </section>
</div>
 );
}


export default App;
```

App.css and style.css:

```css
/* App.css */
* {
  margin: 0;
  padding: 0;
  font-family: 'Roboto Condensed', sans-serif;
}
```

```css
/* Navbar */

.navbar-nav {

  margin-right: 0 !important;

  padding-right: 100px;

}


.navbar {

  background-color: #0a193d;

  color: white !important;

}


.nav-item a {

  color: white !important;

}


.nav-item {

  padding-left: 2px;

}


.navbar-brand {

  color: white !important;

  padding-left: 100px;
```
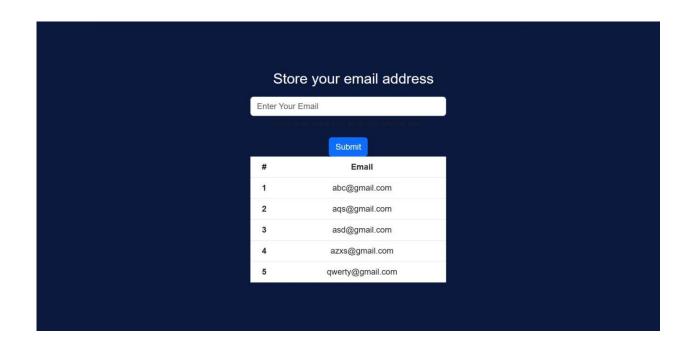
```css
}

#navbar button {

  color: white !important;

}


/* Banner */

#banner-container {

  background-color: #0a193d;

  color: white !important;

  padding-top: 80px;

  padding-bottom: 80px;

}


#banner-row img {

  max-width: 70%;

  height: auto;

  display: block;

  padding-left: 30px;

}


#banner-row h3,

p {
```

```css
  padding-left: 20px;

  padding-top: 20px;

  text-align: center;

}


#banner-row a {

  background-color: white !important;

  color: black !important;

  border: none;

  margin-left: 20px;

  margin-top: 20px;

}


#banner-col {

  padding-left: 20px;

}


/* Footer */
.mb-3 {

  padding-top: 10px;

}


/* Responsive Design */
```

```css
@media only screen and (max-width: 987px) {

  .navbar-brand {

    padding-left: 0px;

  }

}



@media only screen and (max-width: 768px) {

  #banner-row img {

    padding-top: 20px;

  }



  .social-col {

    width: 33%;

  }

}
```

Output:

Conclusion:We have successfully Construct front end applications using React and back end using