

REACT ASSIGNMENT 01

EC/2021/006

W.K.G.K JAYAWARDHANA

React Tutorial Part 01

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.26280.7171]
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D:\(D) Documents\Lessons\Year 03 Sem 02\BECS 32263 - Full-Stack Software Development\Full-Stack-Development-Practical-Guides\Assignment_01>npm create vite@latest

> npx
> create-vite

|
| Project name:
|   ReactAssignment
|
| Package name:
|   reactassignment
|
| Select a framework:
|   React
|
| Select a variant:
|   TypeScript
|
| Use rolldown-vite (Experimental)?:
|   No
|
| Install with npm and start now?
|   No
|
| Scaffolding project in D:\(D) Documents\Lessons\Year 03 Sem 02\BECS 32263 - Full-Stack Software Development\Full-Stack-Development-Practical-Guides\Assignment_01\ReactAssignment...
|
-- Done. Now run:

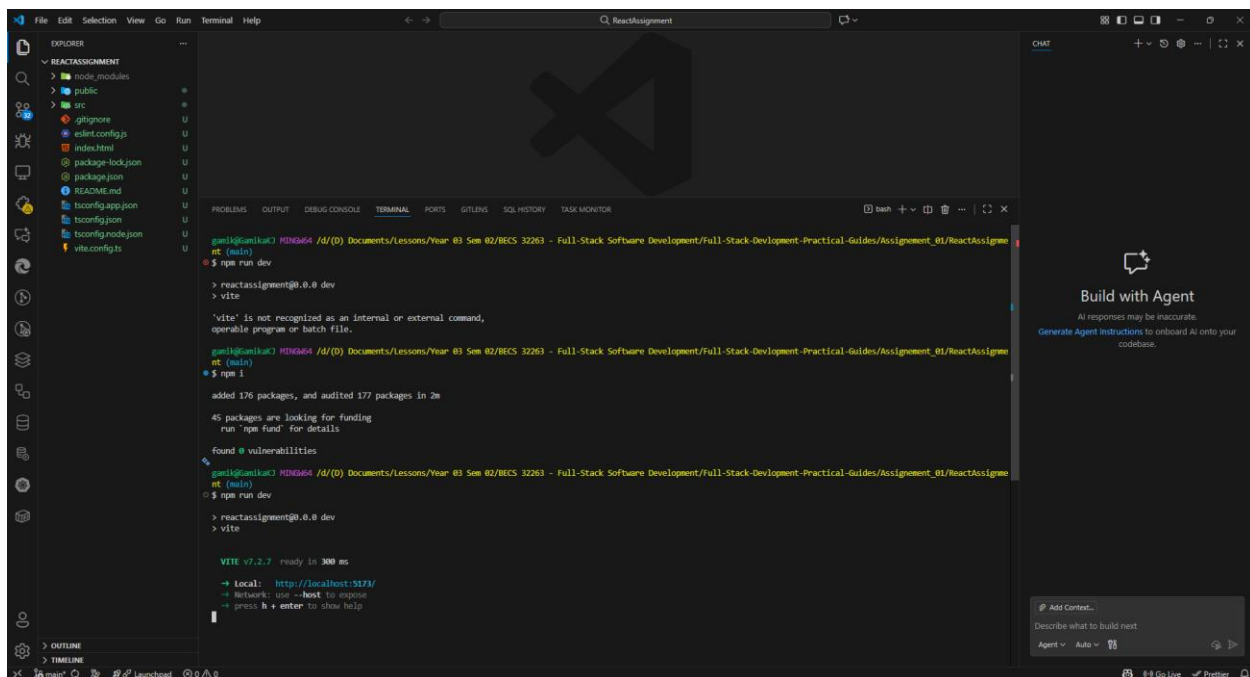
cd ReactAssignment
npm install
npm run dev

npm notice
npm notice New patch version of npm available! 11.6.2 -> 11.6.4
npm notice Changelog: https://github.com/npm/cli/releases/tag/v11.6.4
npm notice To update run: npm install -g npm@11.6.4
npm notice

D:\(D) Documents\Lessons\Year 03 Sem 02\BECS 32263 - Full-Stack Software Development\Full-Stack-Development-Practical-Guides\Assignment_01>cd ReactAssignment

D:\(D) Documents\Lessons\Year 03 Sem 02\BECS 32263 - Full-Stack Software Development\Full-Stack-Development-Practical-Guides\Assignment_01\ReactAssignment>code .

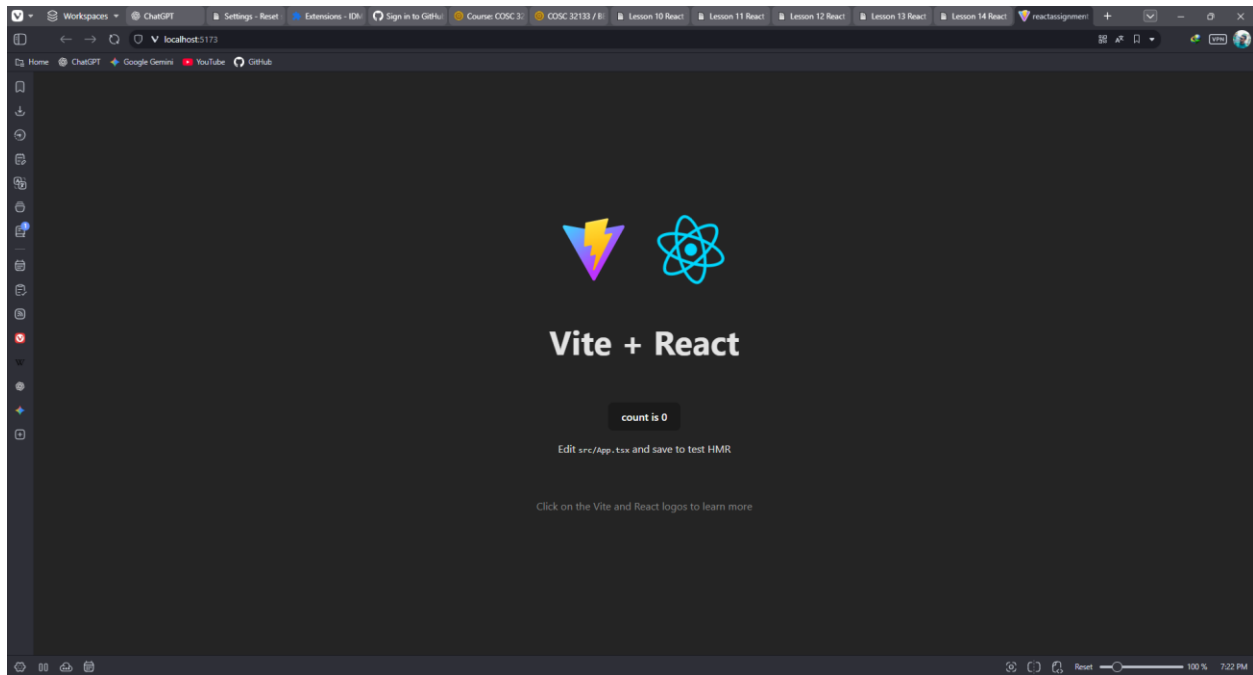
D:\(D) Documents\Lessons\Year 03 Sem 02\BECS 32263 - Full-Stack Software Development\Full-Stack-Development-Practical-Guides\Assignment_01\ReactAssignment>
```



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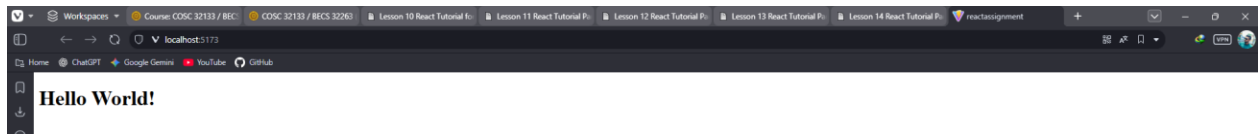
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```
function HelloWorld(){  
  const UOK = "UOK";  
  return <h1>Hello World!</h1>;  
};  
export default HelloWorld;
```

```
import HelloWorld from "./HelloWorld"  
  
function App() {  
  return (  
    <>  
    <HelloWorld />  
    </>  
  )  
}  
  
export default App
```



React Tutorial Part 02

```
import React from "react";
const ListGroup: React.FC = () => {
  const cities: string[] = ["Colombo", "Kandy", "Galle"];
  return (
    <>
      <h3>Cities in Sri Lanka</h3>
      <ul className="list-group">
        {cities.map((city, index) => (
          <li key={index} className="list-group-item">
            {city}
          </li>
        ))}
      </ul>
    </>
  );
};
export default ListGroup;
```

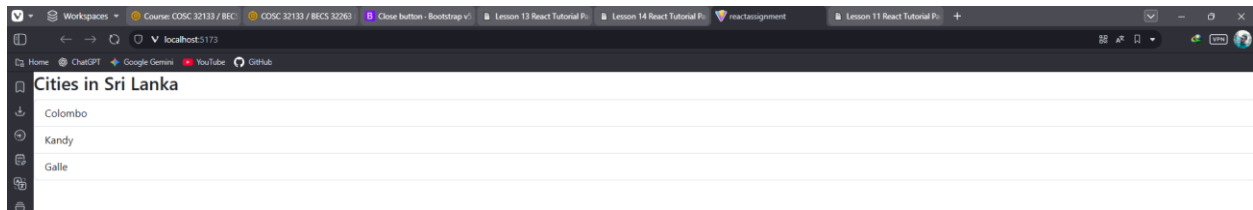
```
import React from 'react';
import ListGroup from './components/ListGroup';

const App: React.FC = () => {
  return (
    <div>
      <ListGroup />
    </div>
  );
};
export default App;
```

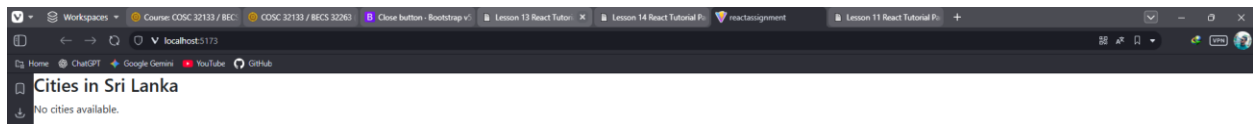
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```
import React from "react";
const ListGroup: React.FC = () => {
  const cities: string[] = ["Colombo", "Kandy", "Galle"];
  return (
    <>
      <h3>Cities in Sri Lanka</h3>
      {cities.length === 0 ? (
        <p>No cities available.</p>
      ) : (
        <ul className="list-group">
          {cities.map((city, index) => (
            <li key={index} className="list-group-item">
              {city}
            </li>
          ))}
        </ul>
      )}
    </>
  );
};
export default ListGroup;
```



```
import React from "react";
const ListGroup: React.FC = () => {
  const cities: string[] = [];
  // "Colombo", "Kandy", "Galle"
  return (
```

```

    <>
      <h3>Cities in Sri Lanka</h3>
      {cities.length === 0 ? (
        <p>No cities available.</p>
      ) : (
        <ul className="list-group">
          {cities.map((city, index) => (
            <li
              key={index}
              className="list-group-item"
              onClick={() => console.log(index)}
            >
              {city}
            </li>
          ))}
        </ul>
      )}
    </>
  );
};
export default ListGroup;

```

```

import React from "react";
const ListGroup: React.FC = () => {
  const cities: string[] = ["Colombo", "Kandy", "Galle"];
  const handleClick = (
    event: React.MouseEvent<HTMLLIElement>,
    index: number
  ) => {
    console.log(`City index: ${index}`, event);
  };

  return (
    <>
      <h3>Cities in Sri Lanka</h3>
      {cities.length === 0 ? (
        <p>No cities available.</p>

```

```

    ) : (
      <ul className="list-group">
        {cities.map((city, index) => (
          <li
            key={index}
            className="list-group-item"
            onClick={(e) => handleClick(e, index)}
          >
            {city}
          </li>
        ))}
      </ul>
    )}
  </>
);
};
export default ListGroup;

```

```

import React, { useState } from 'react';
const ListGroup: React.FC = () => {
  const cities = ["Colombo", "Kandy", "Galle"];
  const [selectedIndex, setSelectedIndex] = useState<number | null>(null);
  return (
    <ul className="list-group">
      {cities.map((city, index) => (
        <li
          key={index}
          className={`list-group-item ${
            selectedIndex === index ? "active" : ""
          }`}
          onClick={() => setSelectedIndex(index)}
        >
          {city}
        </li>
      ))}
    </ul>
  )
}

```

```

    </ul>
  );
};
export default ListGroup;

```

```

import React, { useState } from 'react';
const ListGroup: React.FC = () => {
  const cities = ["Colombo", "Kandy", "Galle"];
  const [selectedIndex, setSelectedIndex] = useState<number |
null>(null);
  return (
    <ul className="list-group">
      {cities.map((city, index) => (
        <li
          key={index}
          className={`list-group-item ${
            selectedIndex === index ? "active" : ""
          }`}
          onClick={() => setSelectedIndex(index)}
        >
          {city}
        </li>
      ))}
    </ul>
  );
};
export default ListGroup;

```

```

import React from 'react';
import ListGroup from './components/ListGroup';

const App: React.FC = () => {
  return (
    <div>
      <ListGroup />
    </div>
  );
};

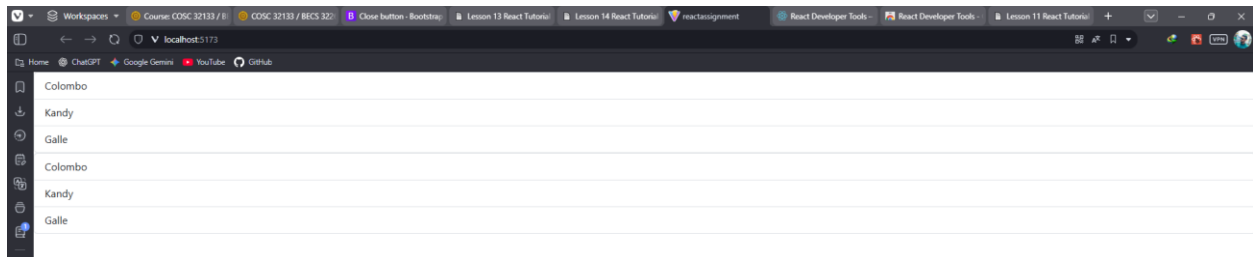
```

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```
    <ListGroup />
  </div>
);
};
export default App;
```



```
interface ListGroupProps {
  heading: string;
  items: string[];
}
const ListGroup: React.FC<ListGroupProps> = ({ heading, items }) => {
  return (
    <>
      <h3>{heading}</h3>
      <ul className="list-group">
        {items.map((item, index) => (
          <li key={index} className="list-group-item">
            {item}
          </li>
        ))}
      </ul>
    </>
  );
};
export default ListGroup;
```

```
import ListGroup from './components/ListGroup';

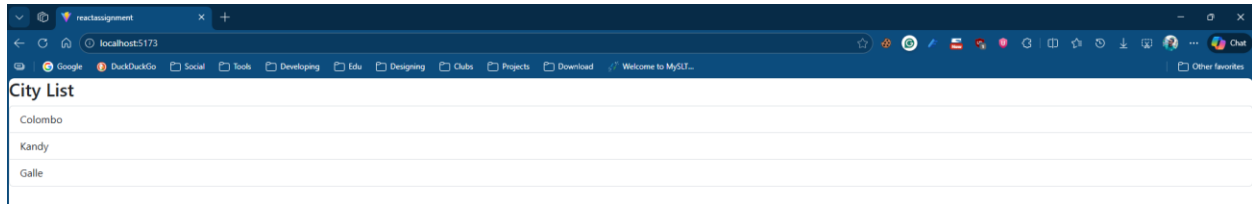
const App = () => {
  const cities = ["Colombo", "Kandy", "Galle"];
```


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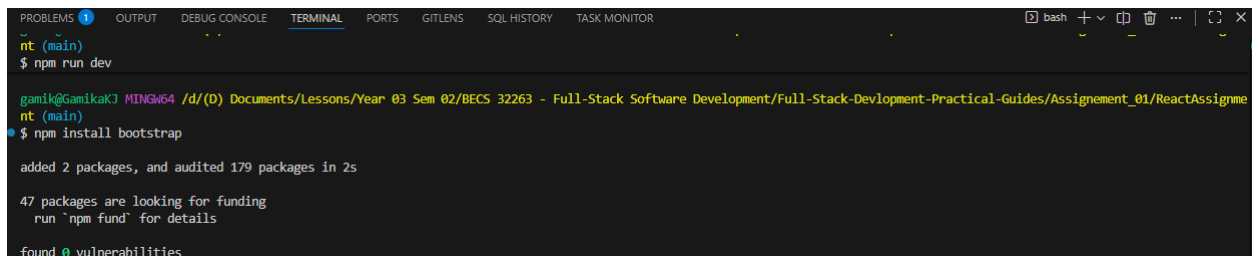
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```
    return <ListGroup heading="City List" items={cities} />;  
  }  
  export default App;
```



React Tutorial Part 03



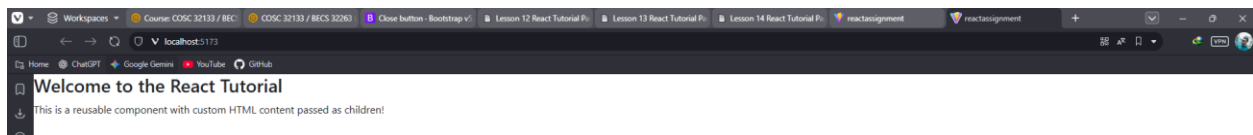
```
import React from 'react';  
interface HiProps {  
  children: React.ReactNode; // Accept any valid React node  
}  
const Hi: React.FC<HiProps> = ({ children }) => {  
  return (  
    <div>  
      {children}  
    </div>  
  );  
};  
  
export default Hi;
```

```
import React from 'react';  
import Hi from './components/Hi';  
  
const App: React.FC = () => {
```

```

return (
  <div>
    <Hi>
    <h3>Welcome to the React Tutorial</h3>
    <p>This is a reusable component with custom HTML
content passed as children!</p>
    </Hi>
  </div>
);
};
export default App;

```



```

import React from "react";
interface HiProps {
  children: React.ReactNode; // ReactNode allows passing HTML or other
components as children
}

const Hi: React.FC<HiProps> = ({ children }) => {

  const handleAlertDismiss = () => {
    alert("You clicked the button! Dismissed successfully.");
  };

  return (
    <div
      className="alert alert-warning alert-dismissible fade show"
      role="alert"
    >
      {children}
      <button
        type="button"
        className="btn-close"
        data-bs-dismiss="alert"

```

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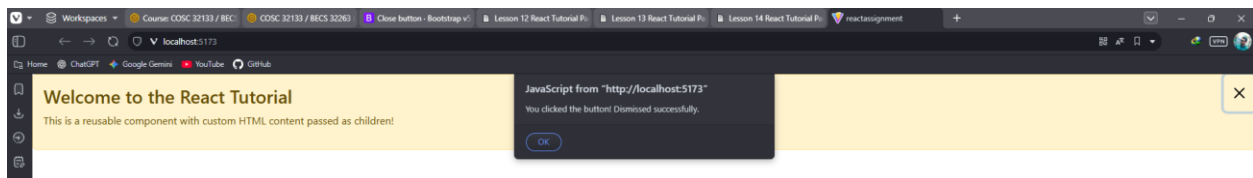
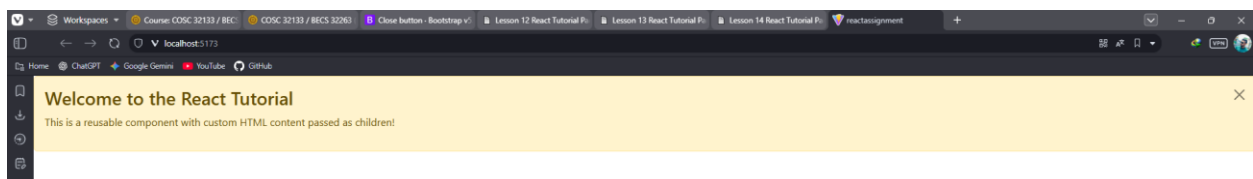
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```
      aria-label="Close"
      onClick={handleAlertDismiss}
    ></button>
  </div>
);
};
export default Hi;

import React from 'react';
import Hi from './components/Hi';

const App: React.FC = () => {
  return (
    <div>
      <Hi>
        <h3>Welcome to the React Tutorial</h3>
        <p>This is a reusable component with custom HTML
content passed as children!</p>
      </Hi>
    </div>
  );
};
export default App;
```



React Tutorial Part 04

```
import React from "react";
const ListEmployeeComponent: React.FC = () => {
  const employees = [
    {
      id: 1,
      firstname: "EC2021006Gamika",
      lastname: "Jayawardhna",
      email: "sandip@example.com",
    },
    {
      id: 2,
      firstname: "Navod",
      lastname: "Gunasinghe",
      email: "navod@example.com",
    },
    {
      id: 3,
      firstname: "Amara",
      lastname: "Senarath",
      email: "amara@example.com",
    },
  ];
  return (
    <div className="container mt-3">
      <h3 className="text-primary">Employee List</h3>
      <table className="table table-bordered table-striped">
        <thead className="table-dark">
          <tr>
            <th>ID</th>
            <th>First Name</th>
            <th>Last Name</th>
            <th>Email</th>
          </tr>
        </thead>
        <tbody>
          {employees.map((employee) => (
```

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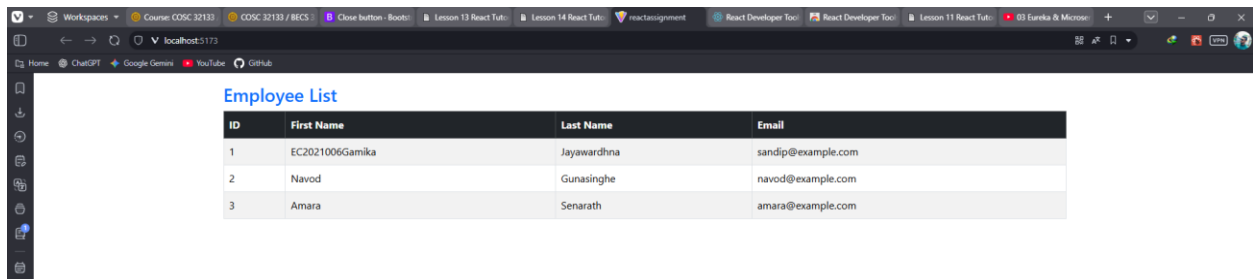
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```
        <tr key={employee.id}>
          <td>{employee.id}</td>
          <td>{employee.firstname}</td>
          <td>{employee.lastname}</td>
          <td>{employee.email}</td>
        </tr>
      )}}
    </tbody>
  </table>
</div>
);
};
export default ListEmployeeComponent;
```

```
import ListEmployeeComponent from
'./components/ListEmployeeComponent';

const App: React.FC = () => {
  return (
    <div>
      <ListEmployeeComponent />
    </div>
  );
};
export default App;
```



ID	First Name	Last Name	Email
1	EC2021006Gamika	Jayawardhna	sandip@example.com
2	Navod	Gunasinghe	navod@example.com
3	Amara	Senarath	amara@example.com

React Tutorial Part 05

```
import React from "react";
const Header: React.FC = () => {
  return (
    <nav className="navbar navbar-expand-lg navbar-dark bgprimary">
      <div className="container">
        <a className="navbar-brand" href="#">
          Employee Management System
        </a>
      </div>
    </nav>
  );
};
export default Header;
```

```
import React from "react";
const Footer: React.FC = () => {
  return (
    <footer className="bg-dark text-center text-white mt-auto py3">
      <div>© 2024 Employee Management System</div>
    </footer>
  );
};
export default Footer;
```

```
import axios from 'axios';
const API_URL = 'http://localhost:8080/api/employees'; // Replace
with your backend API URL
export const getEmployees = async () => {
  const response = await axios.get(API_URL);
  return response.data;
};
```

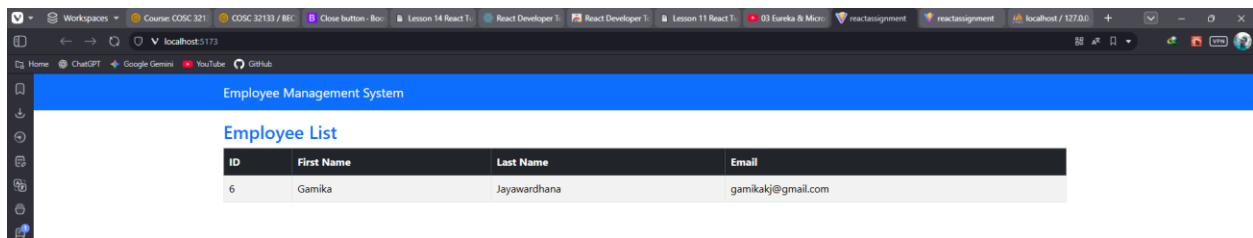
```
import React, { useState, useEffect } from 'react';
import { getEmployees } from '../services/EmployeeService';
interface Employee {
  id: string;
  firstName: string;
  lastName: string;
  email: string;
}
const ListEmployeeComponent: React.FC = () => {
  const [employees, setEmployees] = useState<Employee[]>([]);
  useEffect(() => {
    const fetchEmployees = async () => {
      try {
        const data = await getEmployees();
        setEmployees(data);
      } catch (error) {
        console.error("Failed to fetch employees.");
      }
    };
    fetchEmployees();
  }, []);
  return (
    <div className="container mt-3">
      <h3 className="text-primary">Employee List</h3>
      <table className="table table-bordered table-striped">
        <thead className="table-dark">
          <tr>
            <th>ID</th>
            <th>First Name</th>
            <th>Last Name</th>
            <th>Email</th>
          </tr>
        </thead>
        <tbody>
          {employees.map((employee) => (
            <tr key={employee.id}>
              <td>{employee.id}</td>
              <td>{employee.firstName}</td>
```

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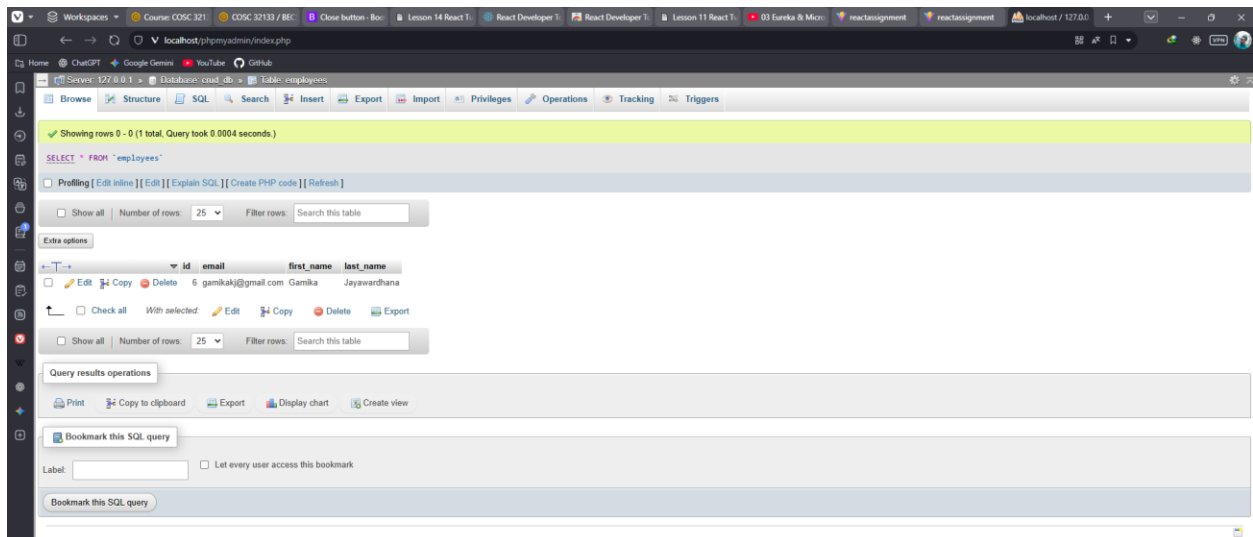
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```
        <td>{employee.lastName}</td>
        <td>{employee.email}</td>
      </tr>
    )})
  </tbody>
</table>
</div>
);
};
export default ListEmployeeComponent;
```



ID	First Name	Last Name	Email
6	Gamika	Jayawardhana	gamikakj@gmail.com



ID	email	first_name	last_name
6	gamikakj@gmail.com	Gamika	Jayawardhana