1.Create a new React Application with the name “myfirstreact”, Run the application to print “welcome to the first session of React” as heading of that page.

CODE:

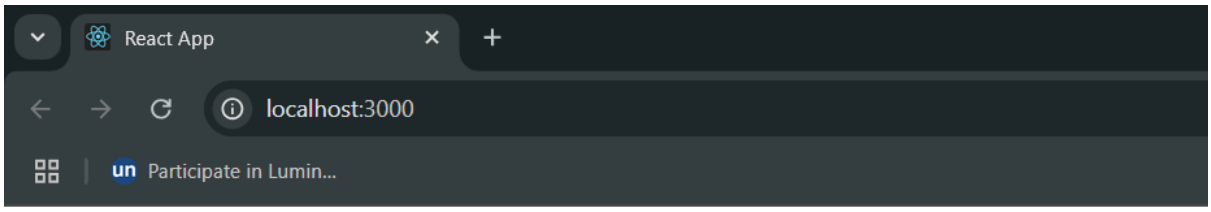
npm install -g create-react-app

npx create-react-app project

cd project

```
function App() {
  return (
    <div>
      <h1>Welcome to the first session of React</h1>
    </div>
  );
}
export default App;
```

OUTPUT:



Welcome to the first session of React

2.Create a react app for Student Management Portal named StudentApp and create a component named Home which will display the Message “Welcome to the Home page of Student Management Portal”.

CODE:

App.js:

```
import React from 'react';
import Home from './Components/Home';
import About from './Components/About';
import Contact from './Components/Contact';

function App() {
  return (
    <div>
      <Home />
      <About />
      <Contact />
    </div>
  );
}

export default App;
```

Home.js:

```
import React from 'react';

function Home() {
  return (
    <div>
      <h2>Welcome to the Home page of Student Management Portal</h2>
    </div>
  );
}

export default Home;
```

About.js;

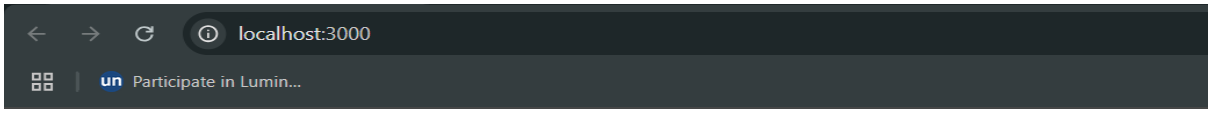
```
import React from 'react';

function About() {
  return (
    <div>
      <h2>Welcome to the About page of the Student Management Portal</h2>
    </div>
  );
```

```
}
export default About;
```

Components.js:

```
import React from 'react';

function Contact() {
  return (
    <div>
      <h2>Welcome to the Contact page of the Student Management Portal</h2>
    </div>
  );
}
export default Contact;
```

OUTPUT:



Welcome to the Home page of Student Management Portal

Welcome to the About page of the Student Management Portal

Welcome to the Contact page of the Student Management Portal

3.Create a react app for Student Management Portal named scorecalculatorapp and create a function component named "CalculateScore" which will accept Name, School, Total and goal in order to calculate the average score of a student and display the same.

CODE:

CalculateScore.js:

```
import React, { useState } from 'react';
import '../Stylesheets/mystyle.css';

function CalculateScore() {
  const [name, setName] = useState('');
  const [school, setSchool] = useState('');
  const [total, setTotal] = useState('');
  const [goal, setGoal] = useState('');
  const [average, setAverage] = useState(null);

  const handleSubmit = (e) => {
    e.preventDefault();
    const avg = (parseFloat(total) / parseFloat(goal)).toFixed(2);
    setAverage(avg);
  };

  return (
    <div className="form-container">
      <h2>Student Score Calculator</h2>
      <form onSubmit={handleSubmit}>
        <input type="text" placeholder="Name" onChange={(e) => setName(e.target.value)}
required />
        <input type="text" placeholder="School" onChange={(e) => setSchool(e.target.value)}
required />
        <input type="number" placeholder="Total Score" onChange={(e) =>
setTotal(e.target.value)} required />
        <input type="number" placeholder="Goal" onChange={(e) => setGoal(e.target.value)}
required />
        <button type="submit">Calculate Average</button>
      </form>

      {average && (
        <div className="result">
          <p>Name: {name}</p>
          <p>School: {school}</p>
          <p>Average Score: {average}</p>
        </div>
      )}
    </div>
```

```
  );
}
export default CalculateScore;
```

mystyle.css:

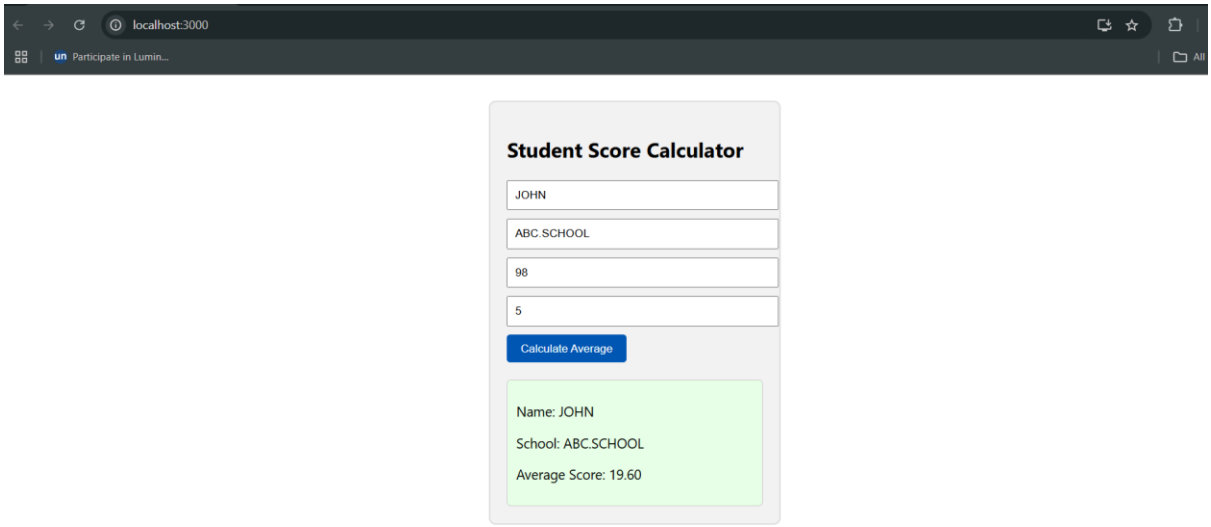
```
.form-container {
  width: 300px;
  margin: 30px auto;
  padding: 20px;
  border: 2px solid #ddd;
  border-radius: 8px;
  background-color: #f2f2f2;
}

input {
  display: block;
  width: 100%;
  padding: 8px;
  margin: 10px 0;
}

button {
  padding: 8px 16px;
  background-color: #007bff;
  color: white;
  border: none;
  cursor: pointer;
  border-radius: 4px;
}

button:hover {
  background-color: #0056b3;
}

.result {
  margin-top: 20px;
  padding: 10px;
  background-color: #e6ffe6;
  border: 1px solid #ccc;
  border-radius: 5px;
}
```

App.js:

```
import React from 'react';

import CalculateScore from './Components/CalculateScore';
function App() {
  return (
```

```
    <div className="App">
      <CalculateScore />
    </div>
  );
}
export default App;
```

OUTPUT:



4.Create a new react application using *create-react-app* tool with the name as “blogapp”

CODE:

Post.js:

```
class Post {
  constructor(userId, id, title, body) {
    this.userId = userId;
    this.id = id;
    this.title = title;
    this.body = body;
  }
}

export default Post;
```

Posts.js:

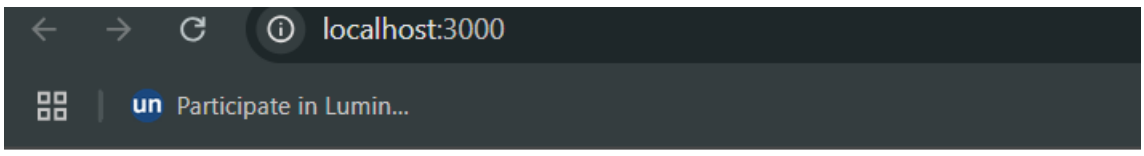
```
import React, { Component } from 'react';
import Post from './Post';

class Posts extends Component {
  constructor(props) {
    super(props);
    this.state = {
      posts: [],
      error: null
    };
  }

  loadPosts() {
    fetch('https://jsonplaceholder.typicode.com/posts')
      .then(response => response.json())
      .then(data => {
        const postObjects = data.map(
          item => new Post(item.userId, item.id, item.title, item.body)
        );
        this.setState({ posts: postObjects });
      })

 .catch(error => {
        this.setState({ error });
      });
  }

  componentDidMount() {
    this.loadPosts();
  }
```

```
  componentDidCatch(error, info) {
    alert('An error occurred in Posts component.');
  }

  render() {
    const { posts } = this.state;

    return (
      <div>
        <h1>Blog Posts</h1>
        {posts.map(post => (
          <div key={post.id}>
            <h2>{post.title}</h2>
            <p>{post.body}</p>
            <hr />
          </div>
        ))}
      </div>
    );
  }
}

export default Posts;
```

App.js:

```
import React from 'react';
import Posts from './Posts';

function App() {
  return (
    <div className="App">
      <Posts />
    </div>
  );
}

export default App;
```

OUTPUT:



Blog Posts

5.My Academy team at Cognizant want to create a dashboard containing the details of ongoing and completed cohorts. A react application is created which displays the detail of the cohorts using react component. You are assigned the task of styling these react components.

CODE:

App.js:

```
import React from 'react';
import CohortDetails from './coho/CohortDetails';

const cohorts = [
  {
    id: 'INTADMDF10',
    tech: '.NET FSD',
    startDate: '22-Feb-2022',
    status: 'Scheduled',
    coach: 'Aathma',
    trainer: 'Jojo Jose',
  },
  {
    id: 'ADM21JF014',
    tech: 'Java FSD',
    startDate: '10-Sep-2021',
    status: 'Ongoing',
    coach: 'Apoorv',
    trainer: 'Elisa Smith',
  },
  {
    id: 'CDBJF21025',
    tech: 'Java FSD',
    startDate: '24-Dec-2021',
    status: 'Ongoing',
    coach: 'Aathma',
    trainer: 'John Doe',
  }
];

function App() {
  return (
    <div>
      <h1>Cohorts Details</h1>
      {cohorts.map((cohort, index) => (
        <CohortDetails key={index} cohort={cohort} />
      ))}
    </div>
  );
}
```

```
export default App;
```

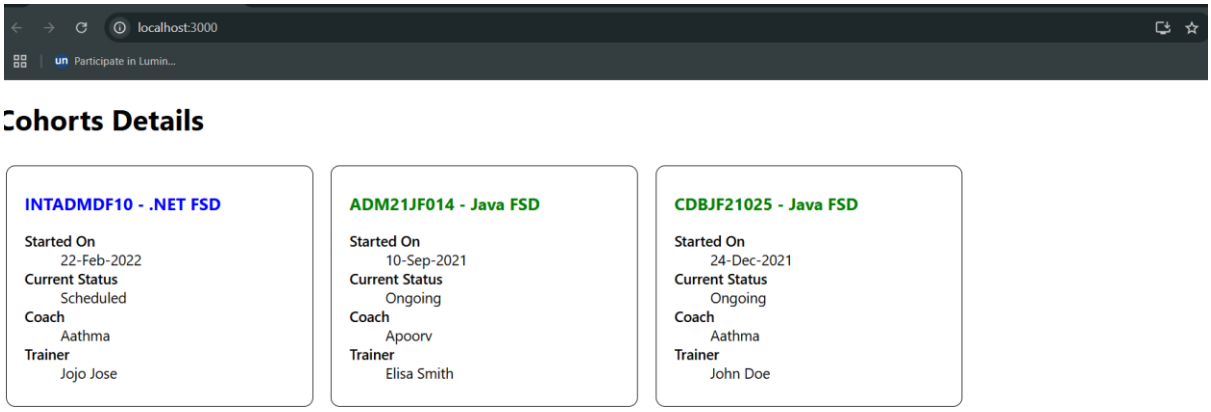
CohortDetails.js:

```
import React from 'react';
import styles from './CohortDetails.module.css';

function CohortDetails({ cohort }) {
  const titleStyle = {
    color: cohort.status === 'Ongoing' ? 'green' : 'blue',
  };

  return (
    <div className={styles.box}>
      <h3 style={titleStyle}>{cohort.id} - {cohort.tech}</h3>
      <dl>
        <dt>Started On</dt>
        <dd>{cohort.startDate}</dd>

        <dt>Current Status</dt>
        <dd>{cohort.status}</dd>

        <dt>Coach</dt>
        <dd>{cohort.coach}</dd>

        <dt>Trainer</dt>
        <dd>{cohort.trainer}</dd>
      </dl>
    </div>
  );
}

export default CohortDetails;
```

CohortDetails.module.css:

```
.box {
  width: 300px;
  display: inline-block;
  margin: 10px;
  padding: 10px 20px;
  border: 1px solid black;
  border-radius: 10px;
  vertical-align: top;
}

dt {
  font-weight: 500;
}
```

OUTPUT:


localhost:3000
Participate in Lumin...
Cohorts Details
INTADMDF10 - .NET FSD
Started On
22-Feb-2022
Current Status
Scheduled
Coach
Aathma
Trainer
Jojo Jose
ADM21JF014 - Java FSD
Started On
10-Sep-2021
Current Status
Ongoing
Coach
Apoorv
Trainer
Elisa Smith
CDBJF21025 - Java FSD
Started On
24-Dec-2021
Current Status
Ongoing
Coach
Aathma
Trainer
John Doe

6.Cognizant Academy teams want to maintain a list of trainers along with their expertise in a SPA using React as the technology. You are assigned the task of creating this React app.

CODE:

App.js:

```
import React from 'react';
import { BrowserRouter as Router, Routes, Route, Link } from 'react-router-dom';
import Home from './Home';
import TrainersList from './TrainersList';
import TrainerDetails from './TrainerDetails';

function App() {
  return (
    <Router>
      <div>
        <h1>My Academy Trainers App</h1>
        <nav>
          <Link to="/">Home</Link> | <Link to="/trainers">Show Trainers</Link>
        </nav>
        <hr />
        <Routes>
          <Route path="/" element={<Home />} />
          <Route path="/trainers" element={<TrainersList />} />
          <Route path="/trainer/:id" element={<TrainerDetails />} />
        </Routes>
      </div>
    </Router>
  );
}

export default App;
```

Home.js:

```
import React from 'react';

function Home() {
  return (
    <div>
      <h1>My Academy Trainers App</h1>
      <p>Welcome to the home page of My Academy Trainers App</p>
    </div>
  );
}

export default Home;
```

TrainerDetails.js:

```
import React from 'react';
import { useParams } from 'react-router-dom';
import trainers from './TrainersMock';

function TrainerDetails() {
  const { id } = useParams();
  const trainer = trainers.find(t => t.trainerId === id);

  if (!trainer) return <p>Trainer not found</p>;

  return (
    <div>
      <h2>Trainers Details</h2>
      <h3>{trainer.name} ({trainer.technology})</h3>
      <p>{trainer.email}</p>
      <p>{trainer.phone}</p>
      <ul>
        {trainer.skills.map((skill, idx) => (
          <li key={idx}>{skill}</li>
        ))}
      </ul>
    </div>
  );
}

export default TrainerDetails;
```

TrainersList.js:

```
import React from 'react';
import { Link } from 'react-router-dom';
import trainers from './TrainersMock';

function TrainersList() {
  return (
    <div>
      <h2>Trainers List</h2>
      <ul>
        {trainers.map((trainer) => (
          <li key={trainer.trainerId}>
            <Link to={`/trainer/${trainer.trainerId}`}>{trainer.name}</Link>
          </li>
        ))}
      </ul>
    </div>
  );
}

export default TrainersList;
```

TrainersMock.js:

```
import Trainer from "./trainer";

const trainers = [
  new Trainer(
    "T001",
    "Syed Khaleelullah",
    "khaleelullah@cognizant.com",
    "97676516962",
    ".NET",
    ["C#", "SQL Server", "React", ".NET Core"]
  ),
  new Trainer(
    "T002",
    "Jane Doe",
    "jane.doe@cognizant.com",
    "9876543210",
    "Java",
    ["Java", "Spring Boot", "Hibernate"]
  )
];

export default trainers;
```

Trainer.js:

```
class Trainer {
  constructor(trainerId, name, email, phone, technology, skills) {
    this.trainerId = trainerId;
    this.name = name;
    this.email = email;
    this.phone = phone;
    this.technology = technology;
    this.skills = skills;
  }
}

export default Trainer;
```

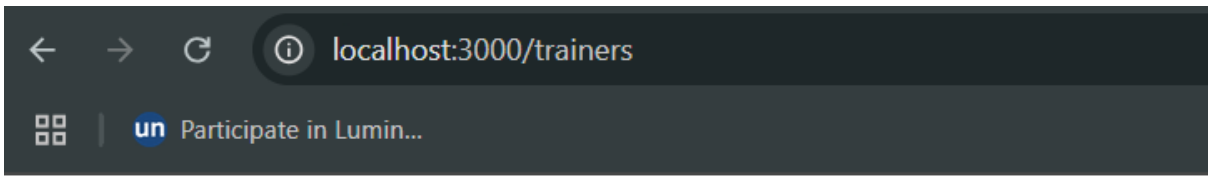
OUTPUT:

My Academy Trainers App

Home | Show Trainers

My Academy Trainers App

Welcome to the home page of My Academy Trainers App



My Academy Trainers App

Home | Show Trainers

Trainers List

- Syed Khaleelullah
- Jane Doe

My Academy Trainers App

Home | Show Trainers

Trainers Details

Syed Khaleelullah (.NET)

khaleelullah@cognizant.com

97676516962

- C#
- SQL Server
- React
- .NET Core

7.Create a React Application named “shoppingapp” with a class component named “OnlineShopping” and “Cart”.

CODE:

App.js:

```
import React, { Component } from 'react';
import './App.css';

class Cart extends Component {
  render() {
    return (
      <tr>
        <td>{this.props.item.Itemname}</td>
        <td>{this.props.item.Price}</td>
      </tr>
    );
  }
}

class OnlineShopping extends Component {
  constructor() {
    super();
    this.items = [
      { Itemname: "Laptop", Price: 80000 },
      { Itemname: "TV", Price: 120000 },
      { Itemname: "Washing Machine", Price: 50000 },
      { Itemname: "Mobile", Price: 30000 },
      { Itemname: "Fridge", Price: 70000 },
    ];
  }

  render() {
    return (
      <div className="App">
        <h2>Items Ordered :</h2>
        <table>
          <thead>
            <tr>

     <th>Name</th>
              <th>Price</th>
            </tr>
          </thead>
          <tbody>
            {this.items.map((item, index) => (
              <Cart key={index} item={item} />
            ))}
```

```
          </tbody>
        </table>
      </div>
    );
  }
}

export default OnlineShopping;
```

App.css:

```
.App {
  text-align: center;
  margin-top: 50px;
}

h2 {
  color: green;
}

table {
  margin: auto;
  border-collapse: collapse;
  font-family: Arial, sans-serif;
}

table, th, td {
  border: 1px solid gray;
  padding: 10px 20px;
}

th {

background-color: #d0f0d0;

  color: green;
}

td {
  color: teal;
}
```

OUTPUT:

Items Ordered :

Name	Price
Laptop	80000
TV	120000
Washing Machine	50000
Mobile	30000
Fridge	70000

8.Create a React App “counterapp” which will have a component named “CountPeople” which will have 2 methods.

CODE:

CountPeople.js:

```
import React, { Component } from 'react';

class CountPeople extends Component {
  constructor(props) {
    super(props);
    this.state = {
      entryCount: 0,
      exitCount: 0
    };
  }

  updateEntry = () => {
    this.setState((prevState) => ({
      entryCount: prevState.entryCount + 1
    }));
  };

  updateExit = () => {
    this.setState((prevState) => ({
      exitCount: prevState.exitCount + 1
    }));
  };

  render() {
    const { entryCount, exitCount } = this.state;

    return (
      <div style={{ textAlign: 'center', marginTop: '100px' }}>
        <button onClick={this.updateEntry} style={{ backgroundColor: 'lightgreen', padding:
'10px', marginRight: '10px' }}>
          Login
        </button>
        <span>{entryCount} People Entered!!!</span>

        <button onClick={this.updateExit} style={{ backgroundColor: 'lightgreen', padding:
'10px', marginLeft: '50px', marginRight: '10px' }}>
          Exit
        </button>
        <span>{exitCount} People Left!!!</span>
      </div>
    );
  }
```

```
}

export default CountPeople;
```

App.js:

```
import React from 'react';
import CountPeople from './CountPeople';

function App() {
  return (
    <div className="App">
      <CountPeople />
    </div>
  );
}

export default App;
```

OUTPUT: