Lab2 : Developing React Components

Lab2 : Working Steps:

1) Create the React Project

   MyLabs> create-react-app lab2

2) Remove the following Files from **lab2\public** folder

   - favicon.ico
   - logo192.png
   - logo512.png
   - manifest.json
   - robots.txt

3) Remove the following Files from **lab2\src** folder

   - App.test.js
   - logo.svg
   - reportWebVitals.js
   - setupTests.js

4) Update the following files from **lab2\public** folder

   - index.html

5) Update the following files from **lab2\src** folder

   - index.js
   - index.css
   - App.js
   - App.css

6) Run the App

   npm start

7) Write the Student Component.

   A) Create the Folder called **student** under **src** folder

      src/student

   B) Create File called **Student.js** under **student** folder

      src/student/Student.js

   C) Create File called **Student.css** under **student** folder

      src/student/Student.css

8) Update Student.js file

9) Update Student.css file

10) Include **Student** component in **App** Component

11) Write the Course Component.

        D) Create the Folder called **course** under **src** folder

                src/course

        E) Create File called **Course.js** under **course** folder

                src/student/Course.js

        F) Create File called **Course.css** under **course** folder

                src/student/Course.css

12) Update Course.js file

13) Course Student.css file

14) Include **Course** component in **Student** Component

15) Run the App

        npm start

Lab2 : Files Required

1. index.html	2. index.js
3. index.css	4. App.js
5. App.css	6. Student.js
7. Student.css	8. Course.js
9. Course.css	

1. index.html

```
<!DOCTYPE html>
<html lang="en">
 <head>    <title>Best React Training</title>   </head>
 <body>
  <noscript>You need to enable JavaScript to run this app.</noscript>
  <div id="myroot">
  </div>
  </body>
</html>
```

2. index.js

```
import React from 'react';
import ReactDOM from 'react-dom';
import './index.css';
import App from './App';
ReactDOM.render(
  <React.StrictMode>
    <App />
  </React.StrictMode>,
  document.getElementById('myroot')
);
```

3. index.css

4. App.js

```
import { Component } from 'react';
import './App.css';
import Student from './student/Student';

class App extends Component {

 state = {
   myheader: "Welcome to Java Learning Center",
 }
 render(){
  console.log("I am App Component");
  return (
    <div className="myheader">
    <p> {this.state.myheader} </p>
    <br/>
    <Student/>
   </div>
  );
 }
}

export default App;
```

5. App.css

```
.myheader{
  text-align: center;
  font-size: 20px;
  font-family: Cambria;
}
```

6. Student.js

```
import React, { Component } from 'react';
import Course from '../course/Course';
import '../student/Student.css';

class Student extends Component{
  state={
    sid:101,
    sname:"Srinivas",
    email:"sri@jlc.com",
    phone:12345,
    city:"Blore"
  }
  render(){
    console.log("Student- render()");
    return(
      <div className="mystudent">
      <p> Sid : {this.state.sid}</p>
      <p> Snsame : { this.state.sname}</p>
      <p> Email : { this.state.email}</p>
      <p> Phone : { this.state.phone}</p>
      <p> City : { this.state.city}</p>
      <br/>
      <Course/>
      </div>
    );
  }
}
export default Student;
```

7. Student.css

```
.mystudent {
  font-size: 15px;
  color: red;
  text-align: left;
  margin-left: 200px;
  border: 2px solid blue;
  width: 50%;
  padding: 15px;
}
```

8. Course.js

```
import { Component } from 'react';
import './Course.css';

class Course extends Component {

  state = {
    courseId:"C-12",
    courseName:"React 16",
    price:15000,
    duration:"50 hours",
    trainer:"Srinivas Dande",
  }

  render(){
   console.log("I am Course Component");
   return (
    <div className="mycourse">
    <p> Cid : {this.state.courseId}</p>
    <p> Cname : { this.state.courseName}</p>
    <p> Price : { this.state.price}</p>
    <p> Duration : { this.state.duration}</p>
    <p> Trainer : { this.state.trainer}</p>
    </div>

   );
  }
}

export default Course;
```

9. Course.css

```
.mycourse {
  font-size: 15px;
  color: blue;
  text-align: left;
  border: 2px solid red;
  padding: 15px;
}
```

Lab3 : Handling Events in React

Lab3 : Working Steps:

1) Copy Lab2 sas Lab3

2) Run the App

   npm start

3) Update Course.js

4) Update Course.css

5) Update Student.js

6) Update Student.css

7) Run the App

   npm start

Lab3 : Files Required

1. index.html	Same as Lab2
2. index.js	Same as Lab2
3. index.css	Same as Lab2
4. App.js	Same as Lab2
5. App.css	Same as Lab2
6. Student.js	**Updated in Lab3**
7. Student.css	**Updated in Lab3**
8. Course.js	**Updated in Lab3**
9. Course.css	**Updated in Lab3**

1. index.html

2. index.js

3. index.css

4. App.js

5. App.css

6. Student.js

```
import { Component } from 'react';
import Course from '../course/Course';
import './Student.css';

class Student extends Component {
```

```
state = {
        sid: 105,
        sname: "Srinivas",
        email: "sri@jlc",
        phone: 12345,
        city: "Blore",
        showStudent: false,
}

showStudentInfo = () => {
console.log("Button is Clicked");
let studentFlag = this.state.showStudent;
//Do not mutate state directly.
//Use setState() to change the State
//this.state.showStudent = ! studentFlag;

this.setState({
showStudent: !studentFlag
});

}

render() {
console.log("render() - StudentComponent");

let mystudentInfo = null;

if (this.state.showStudent === true) {
mystudentInfo = (
<div>
<p> Sid : {this.state.sid}</p>
<p> Sname : {this.state.sname}</p>
<p> Email : {this.state.email}</p>
<p> Phone : {this.state.phone}</p>
<p> City : {this.state.city}</p>
<Course />
</div>
);
}
```

```
return (
<div className="mystudent">
<button className="mybutton" onClick={this.showStudentInfo}>
Student Details
</button>
{mystudentInfo}
</div>
);
}
}
export default Student;
```

7. Student.css

```css
.mystudent {
    font-size: 15px;
    color: red;
    text-align: left;
    margin-left: 150px;
    border: 2px solid blue;
    width: 50%;
    padding: 15px;
}
.mybutton {
    font-size: 25px;
    color: white;
    background-color: red;
}
```

8. Course.js

```javascript
import { Component } from 'react';
import './Course.css';

class Course extends Component {
 state = {
   courseId: "C-12",
   courseName: "React 16",
   price: 16000,
   duration: "50 hours",
   trainer: "srinivas Dande",
   showCourse: false,
  }
```

```
  showCourseInfo = () => {
   console.log("Button is Clicked");
   let courseFlag = this.state.showCourse;
   //Do not mutate state directly.
   //Use setState() to change the State
   //this.state.showCourse = ! courseFlag;

   this.setState({
    showCourse: !courseFlag
   });
 }

 render() {
  console.log("render() - CourseComponent");

  let mycourseInfo = null;
  if (this.state.showCourse === true) {
   mycourseInfo = (
    <div>
     <p> Cid : {this.state.courseId}</p>
     <p> Cname : {this.state.courseName}</p>
     <p> Price : {this.state.price}</p>
     <p> Duration : {this.state.duration}</p>
     <p> Trainer : {this.state.trainer}</p>
    </div>
   );
  }
  return (
   <div className="mycourse">
    <button className="mybutton" onClick={this.showCourseInfo}>
     Course Details
    </button>
     {mycourseInfo}
   </div>
  );
 }
}

export default Course;
```

9. Course.css

```css
.mycourse {
    font-size: 15px;
    color: blue;
    text-align: left;
    border: 2px solid red;
    padding: 15px;
}
.mybutton {
    font-size: 25px;
    color: white;
    background-color: red;
}
```

Lab4 : Passing Data from One Component to another Component

Lab4 : Working Steps:

1) Copy Lab3 sas Lab4

2) Run the App

   npm start

3) Update Course.js

4) Update Student.js

5) Update Student.css

6) Run the App

   npm start

Lab4 : Files Required

1.	index.html	Same as Lab3
2.	index.js	Same as Lab3
3.	index.css	Same as Lab3
4.	App.js	Same as Lab3
5.	App.css	Same as Lab3
6.	Student.js	**Updated in Lab4**
7.	Student.css	**Updated in Lab4**
8.	Course.js	**Updated in Lab4**
9.	Course.css	Same as Lab3

1. **index.html**
2. **index.js**
3. **index.css**

4. **App.js**
5. **App.css**

6. Student.js

```
import { Component } from 'react';
import Course from '../course/Course';
import './Student.css';

class Student extends Component {
 state = {
   sid: 101,
   sname: "Srinivas",
   email: "sri@jlc",
   phone: 12345,
   city: "Blore",
   course: {
     courseId: "C-12",
     courseName: "React JS",
     price: 16000,
     duration: "50 hours",
     trainer: "Srinivas Dande"
   }
 }
 render() {
  console.log("render() - StudentComponent");
  return (
   <div className="mystudent">
    <p> Sid : {this.state.sid}</p>
    <p> Sname : {this.state.sname}</p>
    <p> Email : {this.state.email}</p>
    <p> Phone : {this.state.phone}</p>
    <p> City : {this.state.city}</p>
    <Course mycid={this.state.course.courseId}
      mycname={this.state.course.courseName}
      myprice={this.state.course.price}
      myduration={this.state.course.duration}
      mytrainer={this.state.course.trainer}  />
   </div>
  );
 }
}
export default Student;
```

7. Student.css

```css
.mystudent {
    font-size: 15px;
    color: red;
    text-align: left;
    margin-left: 150px;
    border: 2px solid blue;
    width: 50%;
    padding: 15px;
}
```

8. Course.js

```jsx
import { Component } from 'react';
import './Course.css';

class Course extends Component {
  state = {
    showCourse: false,
  }

  showCourseInfo = () => {
    let courseFlag = this.state.showCourse;
    this.setState({
      showCourse: !courseFlag
    });
  }

  render() {
    console.log("render() - CourseComponent");
    let mycourseInfo = null;
    if (this.state.showCourse === true) {
      mycourseInfo = (
        <div>
          <p> Cid : {this.props.mycid}</p>
          <p> Cname : {this.props.mycname}</p>
          <p> Price : {this.props.myprice}</p>
          <p> Duration : {this.props.myduration}</p>
          <p> Trainer : {this.props.mytrainer}</p>
        </div>
      );
    }
```

```
    return (
      <div className="mycourse">
       <button className="mybutton" onClick={this.showCourseInfo}>
        Course Details
      </button>
       {mycourseInfo}
      </div>
    );
   }
  }


  export default Course;
```

9. Course.css

Lab5 : Passing Data from One Component to another Component
Lab5 : Working Steps:

1) Copy Lab4 sas Lab5

2) Run the App

   npm start

3) Update App.js

4) Update Student.js

5) Update Course.js

6) Run the App

   npm start

Lab5 : Files Required

1. index.html	Same as Lab4
2. index.js	Same as Lab4
3. index.css	Same as Lab4
4. App.js	**Updated in Lab5**
5. App.css	Same as Lab4
6. Student.js	**Updated in Lab5**
7. Student.css	Updated in Lab4
8. Course.js	**Updated in Lab5**
9. Course.css	Same as Lab3

1. **index.html**
2. **index.js**
3. **index.css**
4. **App.js**

```javascript
import { Component } from 'react';
import './App.css';
import Student from './student/Student';

class App extends Component {

  state = {
    myheader: "Welcome to Java Learning Center",
    student: {
      sid: 105,
      sname: "Srinivas",
      email: "sri@jlc",
      phone: 55555,
      city: "Blore",
      course: {
        courseId: "C-12",
        courseName: "React 16",
        price: 15000,
        duration: "50 hours",
        trainer: "Srinivas Dande"
      }
    },
  }

  render() { //you are overriding
    console.log("I am App Component");
    return (
      <div className="myheader">
        <p> {this.state.myheader} </p>
        <br />
        <Student mystudent={this.state.student} />
      </div>
    );
  }

}

export default App;
```

5. **App.css**

6. Student.js

```
import { Component } from 'react';
import Course from '../course/Course';
import './Student.css';

class Student extends Component {
 render() {
   console.log("render() - StudentComponent");

   return (
     <div className="mystudent">
       <p> Sid : {this.props.mystudent.sid}</p>
       <p> Sname : {this.props.mystudent.sname}</p>
       <p> Email : {this.props.mystudent.email}</p>
       <p> Phone : {this.props.mystudent.phone}</p>
       <p> City : {this.props.mystudent.city}</p>

       <Course mycourse={this.props.mystudent.course} />
     </div>
   );
 }
}

export default Student;
```

7. Student.css
8. Course.js

```
import { Component } from 'react';
import './Course.css';

class Course extends Component {
 state = {
   showCourse: false,
 }

 showCourseInfo = () => {
  let courseFlag = this.state.showCourse;
  this.setState({
   showCourse: !courseFlag
  });
 }
```

```
render() {
  console.log("render() - CourseComponent");

  let mycourseInfo = null;
  if (this.state.showCourse === true) {
    mycourseInfo = (
      <div>
        <p> Course Id : {this.props.mycourse.courseId}</p>
        <p> Course Name : {this.props.mycourse.courseName}</p>
        <p> Price : {this.props.mycourse.price}</p>
        <p> Duration : {this.props.mycourse.duration}</p>
        <p> Trainer : {this.props.mycourse.trainer}</p>

      </div>
    );
  }

  return (
    <div className="mycourse">
      <button className="mybutton" onClick={this.showCourseInfo}>
        Course Info
     </button>
      {mycourseInfo}
    </div>
  );
}

}

export default Course;
```

9. Course.css

Lab6 : Handling Events in React

- React Component State can have the following types of Properties
  1)Simple Type of Properties
  2)Object Type Properties
  3)Array of Simple Types
  4)Array of Object Types

Lab6 : Working Steps:

8) Copy Lab1 sas Lab6

9) Run the App

    npm start

10) Update index.html

11) Update index.js

12) Update index.css

13) Update App.js

14) Update App.css

15) Run the App

    npm start

Lab6 : Files Required

10. index.html	11. index.js
12. index.css	13. App.js
14. App.css	

10. index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
 <title>Best React Training</title>
</head>
<body>
 <noscript>You need to enable JavaScript to run this app.</noscript>
 <div id="myroot">
 </div>
</body>
</html>
```

11. index.js

```
import React from 'react';
import ReactDOM from 'react-dom';
import './index.css';
import App from './App';

ReactDOM.render(
 <React.StrictMode>
  <App />
 </React.StrictMode>,
 document.getElementById('myroot')
);
```

12. index.css

13. App.js

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

class App extends Component {

 state = {
   sid:105,
   sname:"hello",
   email:"hello@jlc",
   dob:Date(),
   isActive:false,
   mycourse:{
     courseId:"C-123",
     courseName:"React 17",
     price:25000,
     trainer:"Srinivas Dande",
     isOnline:true
   },
   mycourseNames:[
    "Angular","React","MongoDB","NodeJS","ExpressJS"
    ],
  mycourseList:[
   {courseId:"C-101",courseName:"React",price:15000,trainer:"Srinivas"},
   {courseId:"C-102",courseName:"Angular",price:15000,trainer:"Srinivas"},
   {courseId:"C-103",courseName:"NodeJS",price:15000,trainer:"Srinivas"},
   {courseId:"C-104",courseName:"MongoDB",price:15000,trainer:"Srinivas"},
   {courseId:"C-105",courseName:"ExpressJS",price:15000,trainer:"Srinivas"},

  ]
 };
```

```
showMoreInfo = (mycid) => {
 console.log("Course Id : ",mycid);
}

render(){ //you are overriding
 console.log("I am App Component");

 let mycourseNamesDisplay = this.state.mycourseNames.map(
  (courseName,myindex) => (
   <li key={myindex}> {courseName} </li>
  )
 );

 let mycourseListDisplay = this.state.mycourseList.map(
  (mycourse) => (
   <tr key={mycourse.courseId}>
    <td> {mycourse.courseId}</td>
    <td> {mycourse.courseName}</td>
    <td> {mycourse.price}</td>
    <td> {mycourse.trainer}</td>
<td>
 <button onClick={this.showMoreInfo.bind(this,mycourse.courseId)}
className="mybutton">
      More Info
     </button>
    </td>
   </tr>
  )
 );

 return (
  <div>
  <div className="myheader">
  <p> Welcome to Java Learning Center</p>
  </div>

  <div className="mydata">
   <h3> <u> 1.Simple Type of Properties </u> </h3>
   <p> Sid : {this.state.sid}</p>
   <p> Sname : {this.state.sname}</p>
   <p> Email : {this.state.email}</p>
   <p> Dob : {this.state.dob}</p>
   <p> Active : {this.state.isActive? "Yes" : "No"}</p>
  </div>
```

```
<div className="mydata">
<h3> <u> 2.Object Type Properties </u> </h3>
  <p> Course Id : {this.state.mycourse.courseId}</p>
  <p> Course Name : {this.state.mycourse.courseName}</p>
  <p> Price : {this.state.mycourse.price}</p>
  <p> Trainer : {this.state.mycourse.trainer}</p>
  <p> Online : {this.state.mycourse.isOnline ? "Yes" : "No"}</p>
</div>

<div className="mydata">
<h3> <u> 3.Array of Simple Types </u> </h3>
<ul>
{mycourseNamesDisplay}
</ul>
</div>

<div className="mydata">
<h3> <u> 4.Array of Object Types </u> </h3>
<table>
 <thead>
 <tr>
  <th>Course Id</th>
  <th>Course Name</th>
  <th>Price</th>
  <th>Trainer</th>
  <th></th>
 </tr>
 </thead>
 <tbody>
 {mycourseListDisplay}
 </tbody>
</table>

</div>

<br/><br/><br/><br/><br/><br/><br/><br/>
</div>
);
}

}

export default App;
```

14. App.css

```css
.myheader{
 text-align: center;
 font-size: 20px;
 font-family: Cambria;
 color:red;
}

.mydata{
 font-size: 20px;
 font-family: Cambria;
 margin-left: 100px;
 margin-right: 100px;
}

ul{
 list-style: circle;
}
table{
 width:100%;
 border:1px solid cadetblue;
 border-collapse: collapse;

}
tr,td,th{
 border:1px solid cadetblue;
 border-collapse: collapse;
 padding:15px;
}

th{
 color:white;
 background-color: teal;
}
.mybutton{
color:white;
background-color: teal;
font-size: 20px;
}
```

Lab7: Handling Array of Complex Types.

- ✓ Handling Complex data Structures
- ✓ Handling Events
- ✓ Iterating Arrays
- ✓ Conditional Display

Lab7 : Working Steps:

1) Copy Lab6 as Lab7
2) We need the following files.

   *index.html

   *index.js

   *index.css

   *App.js

   *App.css

3) Clean App.js
4) Run the App

   npm start

5) Update App.js
6) Update App.css

Lab7 : Files Required

1. index.html	2. index.js
3. index.css	4. App.js
5. App.css	

1. index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
 <title>Best React Training</title>
</head>
<body>
 <noscript>You need to enable JavaScript to run this app.</noscript>
 <div id="myroot">
 </div>
</body>
</html>
```

2. index.js

```
import React from 'react';
import ReactDOM from 'react-dom';
import './index.css';
import App from './App';

ReactDOM.render(
  <React.StrictMode>
    <App />
  </React.StrictMode>,
  document.getElementById('myroot')
);
```

3. index.css

4. App.js

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

class App extends Component {

state = {
mycoursesToDisplay:[],
mystudentsData: [
{
studentId : 5001,
stuentName : "Sri",
emailId:"Sri@jlc.com",
phones : {  office: 1111, home: 2222},
address : { city:"Blore", state:"KA" },
mycourses: [
{ cid:101,cname:"React",price:15000,trainer:"Srinivas" },
{ cid:102,cname:"Angular",price:15000,trainer:"Srinivas" },
{ cid:103,cname:"Spring",price:15000,trainer:"Srinivas" },
]
},
{
studentId : 5002,
stuentName : "Vas",
emailId:"vas@jlc.com",
phones : {  office: 1111, home: 2222},
address : { city:"Blore", state:"KA" },
mycourses: [
```

```
{ cid:201,cname:"React",price:15000,trainer:"Srinivas" },
{ cid:202,cname:"Angular",price:15000,trainer:"Srinivas" },
{ cid:203,cname:"Spring",price:15000,trainer:"Srinivas" },
]
},
{
studentId : 5003,
stuentName : "SD",
emailId:"sd@jlc.com",
phones : {  office: 1111, home: 2222},
address : { city:"Blore", state:"KA" },
mycourses: [
{ cid:301,cname:"React",price:15000,trainer:"Srinivas" },
{ cid:302,cname:"Angular",price:15000,trainer:"Srinivas" },
{ cid:303,cname:"Spring",price:15000,trainer:"Srinivas" },
]
},
]
}


showCourseInfo = (mysid) => {
console.log("SID : ",mysid); //5002

let filterdStudent =this.state.mystudentsData.filter(
(mystudent) => mystudent.studentId === mysid
);

let mycourseList = filterdStudent[0].mycourses;

let tempCoursesToDisplay = mycourseList.map(
(mycourse) => (
<tr key={mycourse.cid}>
<td> {mycourse.cid} </td>
<td> {mycourse.cname} </td>
<td> {mycourse.price} </td>
<td> {mycourse.trainer} </td>
</tr>
)
)

let  displayCourses = (
<div>
<h3> Course Details of Student : {mysid}</h3>
<table>
<thead>
<tr>
```

```
<th> CID</th>
<th> CName</th>
<th> Price</th>
<th>Trainer</th>
</tr>
</thead>
<tbody>
{tempCoursesToDisplay}
</tbody>
</table>
</div>
);

this.setState({
mycoursesToDisplay:displayCourses,
});

}

showCourseData = (mystudent) => {
console.log("SID : ",mystudent.studentId); //5002

let mycourseList = mystudent.mycourses;

let tempCoursesToDisplay = mycourseList.map(
(mycourse) => (
<tr key={mycourse.cid}>
<td> {mycourse.cid} </td>
<td> {mycourse.cname} </td>
<td> {mycourse.price} </td>
<td> {mycourse.trainer} </td>
</tr>
)
)

let  displayCourses = (
<div>
<h3> Course Details of Student : {mystudent.studentId}</h3>
<table>
<thead>
<tr>
<th> CID</th>
<th> CName</th>
<th> Price</th>
<th>Trainer</th>
</tr>
```

```
</thead>
<tbody>
{tempCoursesToDisplay}
</tbody>
</table>
</div>
);

this.setState({
mycoursesToDisplay:displayCourses,
});

}

render(){
console.log("I am App Component");

let mystudentsToDisplay = this.state.mystudentsData.map(
(mystudent) => (
<tr key={mystudent.studentId}>
<td> {mystudent.studentId}</td>
<td> {mystudent.stuentName}</td>
<td> {mystudent.emailId}</td>
<td> {mystudent.phones.office}</td>
<td> {mystudent.phones.home}</td>
<td> {mystudent.address.city}</td>
<td> {mystudent.address.state}</td>
<td>
<button onClick={this.showCourseInfo.bind(this,mystudent.studentId)}
className="mybutton">
Course Info
</button>
</td>
<td>
<button onClick={this.showCourseData.bind(this,mystudent)}
className="mybutton">
Course Data
</button>
</td>
</tr>
)
);
```

```
return (
<div>
<div className="myheader">
<p> Welcome to Java Learning Center</p>
</div>

<div className="mydata">
<table>
<thead>
<tr>
<th> SID</th>
<th> SName</th>
<th> Email</th>
<th>Office Phone</th>
<th>Home Phone</th>
<th> City</th>
<th>State</th>
<th> </th>
<th> </th>
</tr>
</thead>
<tbody>
{mystudentsToDisplay}
</tbody>
</table>
</div>
<br/>  <br/>

<div className="mydata">

{this.state.mycoursesToDisplay}
</div>

<br/><br/><br/><br/><br/><br/><br/><br/>
</div>
);
}

}

export default App;
```

5. **App.css**

```css
.myheader{
  text-align: center;
  font-size: 20px;
  font-family: Cambria;
  color:red;
}
.mydata{
  font-size: 20px;
  font-family: Cambria;
  margin-left: 10px;
}
ul{
  list-style: circle;
}
table{
  width:100%;
  border:1px solid cadetblue;
  border-collapse: collapse;
}
tr,td,th{
  border:1px solid cadetblue;
  border-collapse: collapse;
  line-height: 1.5em;
}
th{
  color:white;
  background-color: teal;
}
.mybutton{
color:white;
background-color: teal;
font-size: 15px;
}
```

Lab8 : Using BootStrap with React

Lab8 : Working Steps

1) Copy Lab1 as Lab8
2) We need the following files.

   *index.html

   *index.js

   *index.css

   *App.js

   *App.css

3) Remove App.css
4) Update App.js

```
import React from 'react';
const App = () => {
 return (
   <div>
     <p> Welcome to Java Learning Center</p>
    </div>
  );
}
export default App;
```

5) Run the App

6) Enable Boorstrap in React App.
   a)Install Jquery
      npm install jquery@3.4.1

   b)Install bootstrap
      npm install bootstrap@4.3.1

   c)import the bootstrap.min.css in App.js
      import 'bootstrap/dist/css/bootstrap.min.css';

7) Update App.js

```
import React from 'react';
import 'bootstrap/dist/css/bootstrap.min.css';

const App = () => {
 return (
  <div>
   <p className="text-center"> Welcome to Java Learning Center</p>
  </div>
 );
}
export default App;
```

8) Run the App

9) Create the folder called **mycourses**

10) Create the **CourseList** component under **mycourses**

11) Create the **Course** component under **mycourses**

12) Update **App.js**

13) Update **CourseList.js**

14) Update **Course.js**

15) Run the App

Lab7 : Files Required

10. index.html	11. index.js
12. index.css	13. App.js
14. CourseList.js	15. Course.js

10.   index.html
11.   index.js
12.   index.css

```
.mybutton{
 margin: 10px;
}
```

13. App.js

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

import CourseList from './Course/CourseList';
import 'bootstrap/dist/css/bootstrap.min.css';

class App extends Component {

state = {
mycourseList :[
{ cid : 101, cname : "Angular", trainer : "Srinivas", price: 15000,  isOnline:true },
{ cid : 102, cname : "React JS", trainer : "Srinivas", price: 15000,  isOnline:false },
{ cid : 103, cname : "Java FSD", trainer : "Srinivas", price: 55000, isOnline:false },
{ cid : 104, cname : "Spring Boot", trainer : "Srinivas", price: 25000,  isOnline:true },
{ cid :105,cname : "MicroServices",trainer:"Srinivas", price:225000, isOnline:true  },
] };

 render(){
 return (
  <div>
    <p className="text-center"> Welcome to Java Learning Center</p>
    <ul className="nav justify-content-end">
 <li className="nav-item">
  <a className="nav-link active">Home</a>
 </li>
 <li className="nav-item">
 <a className="nav-link active">About</a>
  </li>
 <li className="nav-item">
 <a className="nav-link active">Courses</a>
  </li>
  <li className="nav-item">
 <a className="nav-link active">Contact</a>
  </li>
</ul>
<br/>
<div className="container-fluid">
 <CourseList mycourses={this.state.mycourseList}/>
 </div>
 <br/><br/><br/><br/> <br/><br/><br/><br/> <br/><br/><br/><br/>
  </div>
 );
}
}
export default App;
```

14. CourseList.js

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

import Course from './Course';

class CourseList extends Component {
state = {
mycourseList :[],
courseCount:0
}

showLowPriceCourses = ()=> {
console.log("Lowprice - Clicked");
let coursesToDisplay = this.props.mycourses.filter(mycourse => mycourse.price <=
15000);
console.log(coursesToDisplay);

this.setState({
mycourseList : coursesToDisplay,
courseCount: coursesToDisplay.length
});

}

showOnlineCourses = ()=> {
console.log("Online - Clicked");
let coursesToDisplay = this.props.mycourses.filter(mycourse => mycourse.isOnline
=== true);
console.log(coursesToDisplay);

this.setState({
mycourseList : coursesToDisplay,
courseCount: coursesToDisplay.length
});

}

showAllCourses = ()=> {
console.log("All - Clicked");

this.setState({
mycourseList:this.props.mycourses,
courseCount: this.props.mycourses.length
});
}
```

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


render() {
let courseListData =
this.state.mycourseList.map(mycourse => {
return <Course key={mycourse.cid}
course={mycourse}/>
})

return (
<div className="container-fluid">
<div className="container-fluid">
<button onClick={this.showAllCourses} className="btn btn-success mybutton btn-lg">
All Courses
</button>

<button onClick={this.showLowPriceCourses} className="btn btn-success mybutton
btn-lg"> Low Price Courses
</button>

<button onClick={this.showOnlineCourses} className="btn btn-success mybutton btn-
lg">
Online Courses
</button>
</div>
<br/>
<h3>  Results : {this.state.courseCount} </h3>
<br/>
{courseListData}
</div>
)
}
}

export default CourseList;
```

15.   Course.js

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


class Course extends Component {
state = {
showCourseInfo:false,
```

```
}

showCourseInfo = ()=> {
console.log("showInfo - Clicked");
let showCourseFlag = this.state.showCourseInfo;
this.setState({showCourseInfo : !showCourseFlag});
}

render() {
let cousreBody = null;
if(this.state.showCourseInfo){
cousreBody=  (
<div className="card-body">
<h5 className="card-title"> Trainer : {this.props.course.trainer}</h5>
<h5 className="card-title"> Price : {this.props.course.price}</h5>
<h5 className="card-title"> Training Type : {this.props.course.isOnline ? "Online" :
"Classroom"}</h5>
</div>
)
}
return (
<div className="container-fluid">
<div className="card">
<div className="card-header">
<h5> {this.props.course.cname} Training (Code : {this.props.course.cid})
<button onClick={this.showCourseInfo} className="btn btn-info" style={{float : 'right'}}>
More Info</button>
</h5>
</div>
{cousreBody}
</div>
</div>
)
}
}

export default Course;
```

Lab9 : Components Example
Working Steps
1)Copy lab8 as lab9.
2)Remove the following.
  * CourseList.js
  * Course.js

3)UPdate the following.
  * App.js - Just with Basic Welcome Line

4)Update project name and version in packages.json
  "name": "lab9",
   "version": "0.1.0",

5)build Now

6)Write DashBoard component (Class Component)
  *Create the DashBoard under src
  *Create DashBoard.js file under DashBoard folder

7)Update DashBoard.js

8)Write Leads component (Class Component)
  *Create the Leads under src
  *Create Leads.js file under Leads folder

9)Update Leads.js
  ** Define the state with list of Leads
  ** Display the List of Leads

10)Include Leads Component in DashBoard

11)Write Enrollments component (Class Component)
  *Create the Enrollments under src
  *Create Enrollments.js file under Enrollments folder

12)Update Enrollments.js
    ** Define the state with list of Enrollments
    ** Display the List of Enrollments

13)Include Enrollments Component in DashBoard

14)Include DashBoard Component in App

Lab9: Files Required:

1. index.html	2. index.js
3. index.css	4. App.js
5. DashBoard.js	6. Leads.js
7. Enrollments.js	

1. **index.html**
2. **index.js**
3. **index.css**

4. **App.js**
```
import React, { Component } from "react";
import "./App.css";
import "bootstrap/dist/css/bootstrap.min.css";
import DashBoard from "./DashBoard/DashBoard";

class App extends Component {
render() {
return (
<div className="container-fluid">
<h1 className="text-center"> Welcome to CourseCube !!! </h1>
<DashBoard />
</div>
);
}
}
export default App;
```

5. DashBoard.js

```
import React, { Component } from "react";
import Leads from "../Leads/Leads";
import Enrollments from "../Enrollments/Enrollments";

export default class DashBoard extends Component {
 render() {
  return (
    <div className="container">
     <div class="alert alert-primary" role="alert">
      <h3 class="text-center"> My DashBoard </h3>
     </div>
     <div class="row">

      <div class="col-sm-6">
       <div class="card">
        <div class="card-body">
         <h4 class="card-title">Leads Data</h4>
         <Leads />
        </div>
       </div>
      </div>
      <div class="col-sm-6">
       <div class="card">
        <div class="card-body">
         <h4 class="card-title">Enrollment Data</h4>
         <Enrollments />
        </div>
       </div>
      </div>
     </div>
    </div>
  );
 }
}
```

6. <u>Leads.js</u>

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

export default class Leads extends Component {
state = {
leadCount: 5,
leadShow: true,
leadList: [
{leadId:101,name:'Sri',email:'sri@jlc',phone:11111,course:'Angular'},
{leadId:102,name:'Vas',email:'vas@jlc',phone:22222,course:'React'},
{leadId:103,name:'Sri',email:'sri@jlc',phone:11111,course:'Angular'},
{leadId:104,name:'Vas',email:'vas@jlc',phone:22222,course:'React'},
{leadId:105,name:'Sri',email:'sri@jlc',phone:11111,course:'Angular'},
],
};
render() {
let myleadsToDisplay = null;
if (this.state.leadShow === true) {
myleadsToDisplay = this.state.leadList.map((mylead) => (
<table className="table table-striped table-light table-bordered">
<tbody>
<tr>
<td> <h6> {mylead.leadId}</h6> </td>
<td> <h6> {mylead.name}</h6> </td>
<td> <h6> {mylead.email}</h6>  </td>
<td> <h6> {mylead.phone}</h6> </td>
<td> <h6> {mylead.course}</h6> </td>
</tr>
</tbody>
</table>
));
}
return (
<div>
<h5> Total Leads : {this.state.leadCount} <br />  </h5>
{myleadsToDisplay}
</div>
);
}
}
```

7. <u>Enrollments.js</u>

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

export default class Enrollments extends Component {
state = {
enrollmentCount: 5,
enrollmentShow: true,
enrollmentList: [
{leadId:101,sid:501,sname:'Sri',course:'Angular',feepaid:10000.0,feebal:5000.0},
{leadId:102,sid:502,sname:'Vas',course:'React',feepaid:10000.0,feebal:5000.0},
{leadId:103,sid:503,sname:'Sri',course:'Angular',feepaid:10000.0,feebal:5000.0},
{leadId:104,sid:504,sname:'Vas',course:'React',feepaid:10000.0,feebal:5000.0},
{leadId:105,sid:505,sname:'Sri',course:'Angular',feepaid:10000.0,feebal:5000.0},
],
};
render() {
let myenrollsToDisplay = null;
if (this.state.enrollmentShow === true) {
myenrollsToDisplay = this.state.enrollmentList.map((myenrollment) => (
<table className="table table-striped table-light table-bordered">
<tbody>
<tr>
<td> <h6> {myenrollment.leadId}</h6> </td>
<td> <h6> {myenrollment.sid}</h6> </td>
<td> <h6> {myenrollment.course}</h6> </td>
<td> <h6> {myenrollment.feepaid}</h6> </td>
<td> <h6> {myenrollment.feebal}</h6> </td>
</tr>
</tbody>
</table>
));
}
return (
<div>
<h5>    Total Enrollments : {this.state.enrollmentCount} <br />    </h5>
{myenrollsToDisplay}
</div>
);
}
}
```