

## 9. ReactJS-HOL

### Objectives

- List the features of ES6
- Explain JavaScript let
- Identify the differences between var and let
- Explain JavaScript const
- Explain ES6 class fundamentals
- Explain ES6 class inheritance
- Define ES6 arrow functions
- Identify set(), map()

In this hands-on lab, you will learn how to:

- Use map() method of ES6
- Apply arrow functions of ES6
- Implement Destructuring features of ES6

### Prerequisites

The following is required to complete this hands-on lab:

- Node.js
- NPM
- Visual Studio Code

### Notes

Estimated time to complete this lab: **60 minutes.**

Create a React Application named “cricketapp” with the following components:

1. ListofPlayers
  - Declare an array with 11 players and store details of their names and scores using the map feature of ES6

```

return(
  players.map((item)=>
  {
    return(
      <div>
        <li>Mr. {item.name}<span> {item.score} </span></li>
      </div>
    )
  })
)

```

- Filter the players with scores below 70 using arrow functions of ES6.

```

return(
  players.map((item)=>
  {
    if(item.score<=70)
    {
      players70.push(item);
    }
  }
  ),
)

```

## 2. IndianPlayers

- Display the Odd Team Player and Even Team players using the Destructuring features of ES6

```

export function OddPlayers([first,, third,, fifth]) {
  return(
    <div>
      <li> First : {first} </li>
      <li> Third : {third} </li>
      <li> Fifth : {fifth}</li>
    </div>
  )
}

```

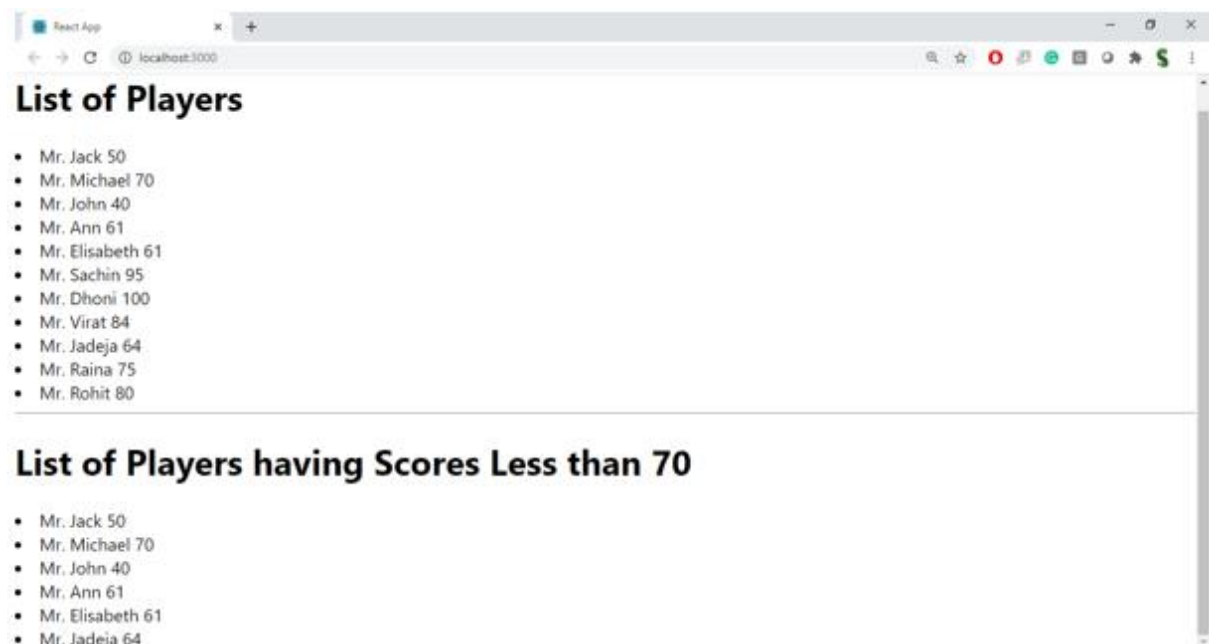
- Declare two arrays T20players and RanjiTrophy players and merge the two arrays and display them using the Merge feature of ES6

```
const T20Players=['First Player','Second Player','Third Player'];
const RanjiTrophyPlayers=['Fourth Player','Fifth Player','Sixth Player'];
export const IndianPlayers=[...T20Players, ...RanjiTrophyPlayers]
```

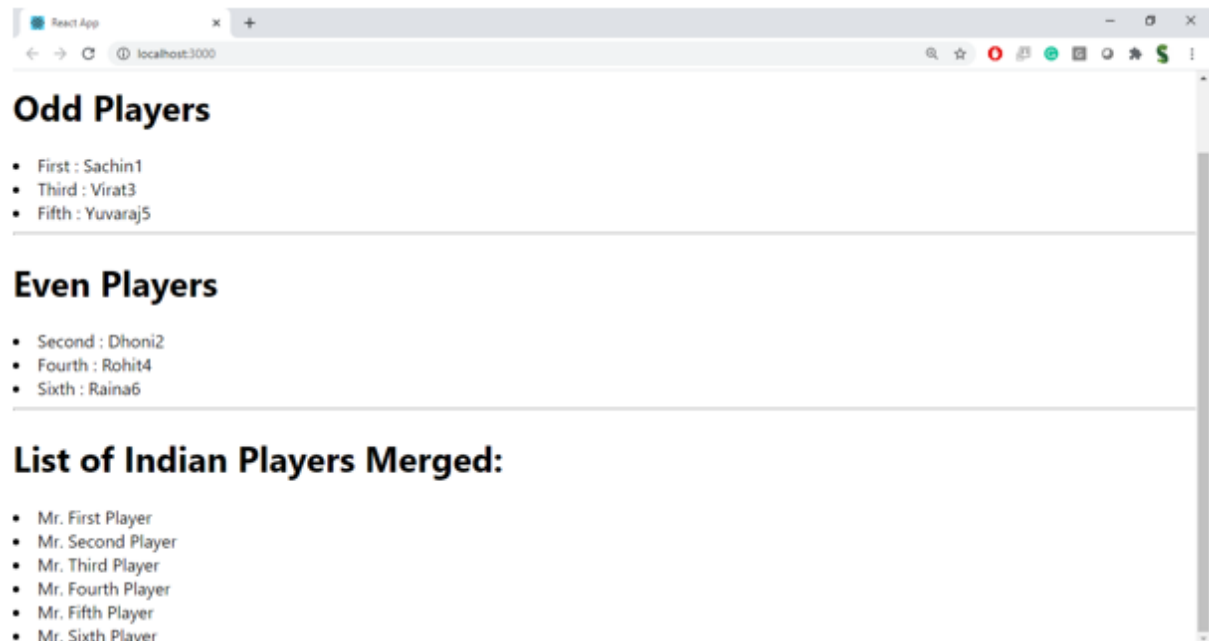
Display these two components in the same home page using a simple if else in the flag variable.

### Output:

When Flag=true



When Flag=false



Hint:

```
var flag=true;
if(flag===true)
{
  return(
    <div>
      <h1> List of Players</h1>
      <ListofPlayers players={players}/>
      <hr/>
      <h1> List of Players having Scores Less than 70 </h1>
      <Scorebelow70 players={players}/>
    </div>
  )
}
else{
  return(
    <div>
      <div>
        <h1> Indian Team </h1>
        <h1> Odd Players </h1>
        {OddPlayers(IndianTeam)}
        <hr/>
        <h1> Even Players</h1>
        {EvenPlayers(IndianTeam)}
      </div>
      <hr/>
      <div>
        <h1> List of Indian Players Merged:</h1>
        <ListofIndianPlayers IndianPlayers={IndianPlayers}/>
      </div>
    </div>
  )
}
```

## 1.Create the React App:

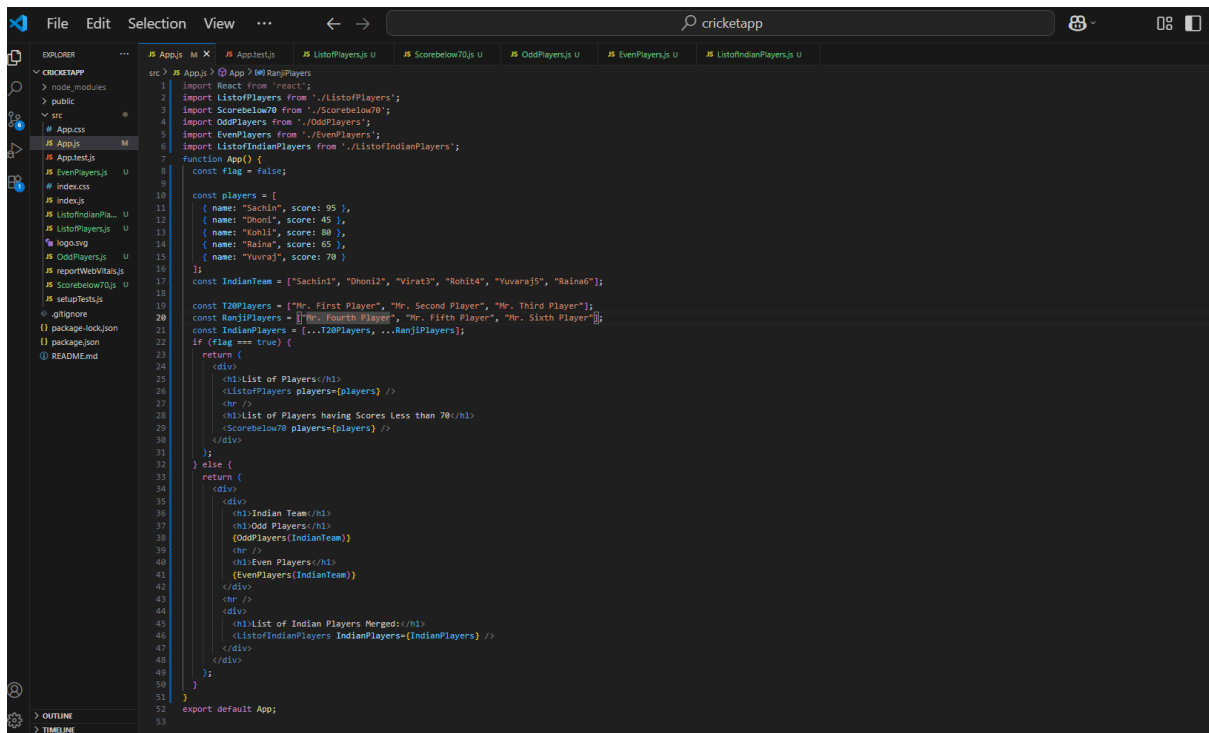
npx create-react-app cricketapp

cd cricketapp

npm start

Code

## 2.App.js



```
1 import React from 'react';
2 import ListofPlayers from './ListofPlayers';
3 import Scorebelow70 from './Scorebelow70';
4 import OddPlayers from './OddPlayers';
5 import EvenPlayers from './EvenPlayers';
6 import ListofIndianPlayers from './ListofIndianPlayers';
7 function App() {
8   const flag = false;
9
10  const players = [
11    { name: "Sachin", score: 95 },
12    { name: "Dhoni", score: 45 },
13    { name: "Kohli", score: 80 },
14    { name: "Raina", score: 65 },
15    { name: "Vuvra", score: 70 }
16  ];
17  const IndianTeam = ["Sachin", "Dhoni", "Viret", "Rohit", "Vuvra", "Raina"];
18
19  const T20Players = ["Mr. First Player", "Mr. Second Player", "Mr. Third Player"];
20  const RanjiPlayers = ["Mr. Fourth Player", "Mr. Fifth Player", "Mr. Sixth Player"];
21  const IndianPlayers = [...T20Players, ...RanjiPlayers];
22  if (flag === true) {
23    return (
24      <div>
25        <h1>List of Players</h1>
26        <ListofPlayers players={players} />
27        <hr />
28        <h1>List of Players having Scores Less than 70</h1>
29        <Scorebelow70 players={players} />
30      </div>
31    );
32  } else {
33    return (
34      <div>
35        <h1>Indian Team</h1>
36        <h1>Odd Players</h1>
37        <OddPlayers(IndianTeam) />
38        <hr />
39        <h1>Even Players</h1>
40        <EvenPlayers(IndianTeam) />
41        <hr />
42        <div>
43          <h1>List of Indian Players Merged</h1>
44          <ListofIndianPlayers IndianPlayers={IndianPlayers} />
45        </div>
46      </div>
47    );
48  }
49 }
50 export default App;
```

This App.js file is the main component that conditionally renders player-related components based on a flag variable.

It demonstrates ES6 features like destructuring, arrow functions, map(), filter(), and spread syntax in a React application.

```
import React from 'react';
```

```
import ListofPlayers from './ListofPlayers';
```

```
import Scorebelow70 from './Scorebelow70';
```

```
import OddPlayers from './OddPlayers';
```

```
import EvenPlayers from './EvenPlayers';
```

```
import ListofIndianPlayers from './ListofIndianPlayers';
```

```
function App() {
```

```
  const flag = false;
```

```
  const players = [
```

```
    { name: "Sachin", score: 95 },
```

```

    { name: "Dhoni", score: 45 },
    { name: "Kohli", score: 80 },
    { name: "Raina", score: 65 },
    { name: "Yuvraj", score: 70 }
  ];
  const IndianTeam = ["Sachin1", "Dhoni2", "Virat3", "Rohit4", "Yuvaraj5", "Raina6"];
  const T20Players = ["Mr. First Player", "Mr. Second Player", "Mr. Third Player"];
  const RanjiPlayers = ["Mr. Fourth Player", "Mr. Fifth Player", "Mr. Sixth Player"];
  const IndianPlayers = [...T20Players, ...RanjiPlayers];
  if (flag === true) {
    return (
      <div>
        <h1>List of Players</h1>
        <ListofPlayers players={players} />
        <hr />
        <h1>List of Players having Scores Less than 70</h1>
        <Scorebelow70 players={players} />
      </div>
    );
  } else {
    return (
      <div>
        <div>
          <h1>Indian Team</h1>
          <h1>Odd Players</h1>
          {OddPlayers(IndianTeam)}
        <hr />
        <h1>Even Players</h1>
        {EvenPlayers(IndianTeam)}
      </div>
      <hr />
    );
  }
}

```

```

    <div>

    <h1>List of Indian Players Merged:</h1>

    <ListofIndianPlayers IndianPlayers={IndianPlayers} />

    </div>

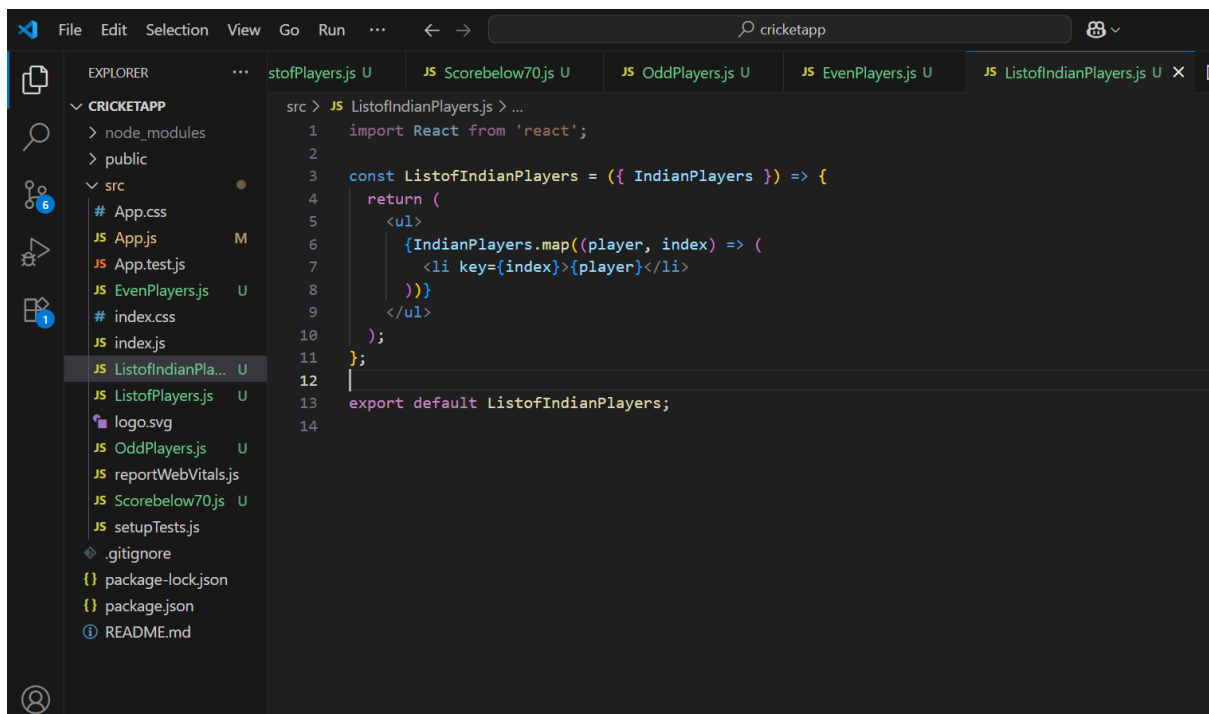
  </div>

);
}
}

export default App;

```

### 3.ListofIndianPlayers.js



```

import React from 'react';

const ListofIndianPlayers = ({ IndianPlayers }) => {

  return (

    <ul>

      {IndianPlayers.map((player, index) => (

        <li key={index}>{player}</li>

      )))}

    </ul>

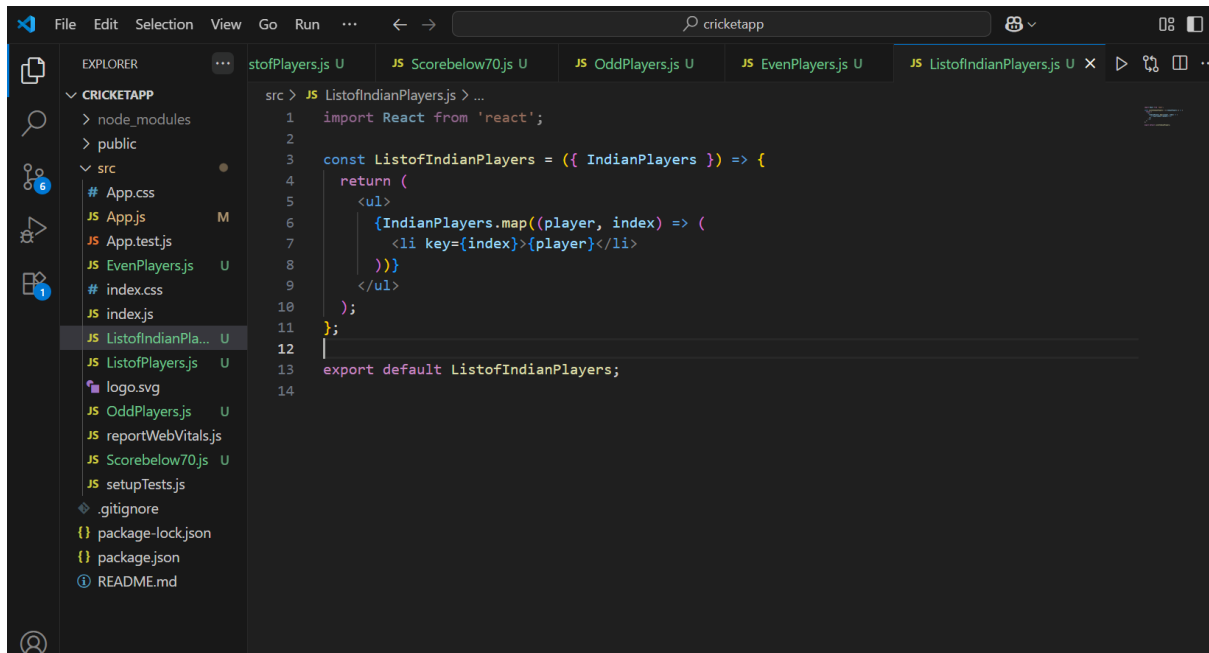
  );
}

```

```
};
```

```
export default ListofIndianPlayers;
```

#### 4.ListofPlayers.js



```
import React from 'react';
```

```
const ListofPlayers = ({ players }) => {
```

```
  return (
```

```
    <ul>
```

```
      {players.map((player, index) => (
```

```
        <li key={index}>{player.name} - Score: {player.score}</li>
```

```
      )))
```

```
    </ul>
```

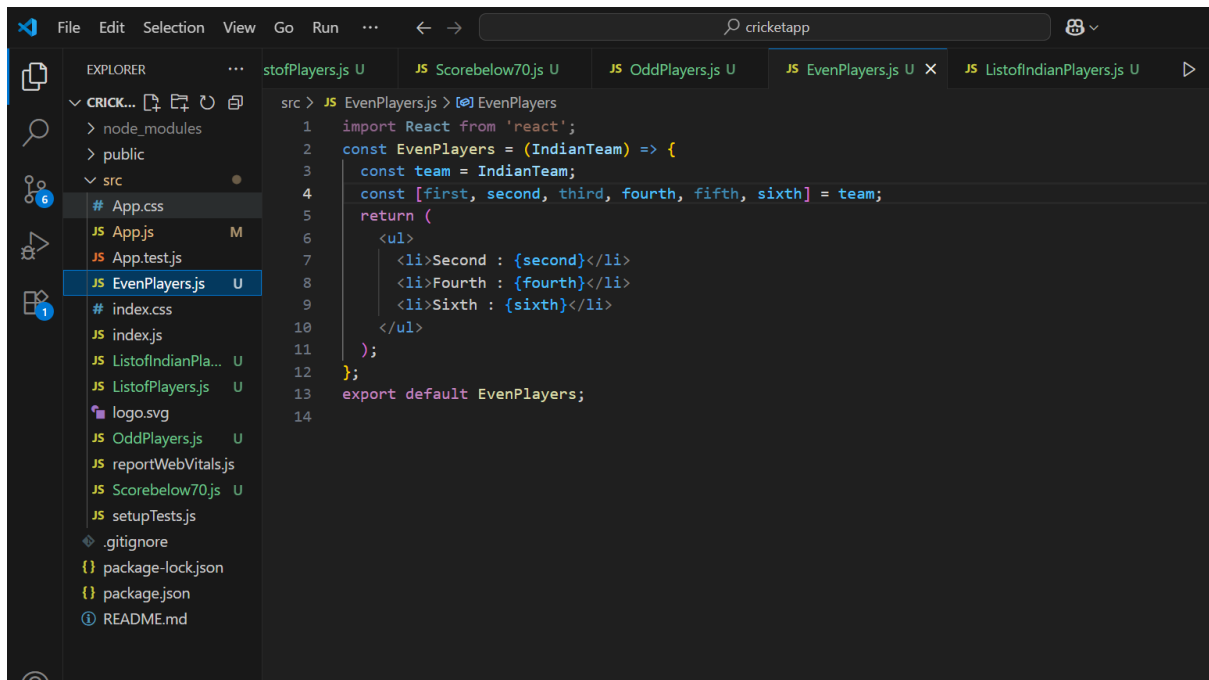
```
  );
```

```
};
```

```
export default ListofPlayers;
```

#### 5.EvenPlayers.js





```
import React from 'react';
```

```
const EvenPlayers = (IndianTeam) => {
```

```
  const team = IndianTeam;
```

```
  const [first, second, third, fourth, fifth, sixth] = team;
```

```
  return (
```

```
    <ul>
```

```
      <li>Second : {second}</li>
```

```
      <li>Fourth : {fourth}</li>
```

```
      <li>Sixth : {sixth}</li>
```

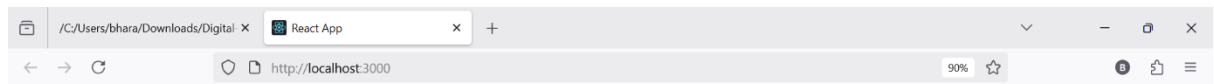
```
    </ul>
```

```
  );
```

```
};
```

```
export default EvenPlayers;
```

## OUTPUT:



### Indian Team

#### Odd Players

- First : Sachin1
- Third : Virat3
- Fifth : Yuvaraj5

#### Even Players

- Second : Dhoni2
- Fourth : Rohit4
- Sixth : Raina6

#### List of Indian Players Merged:

- Mr. First Player
- Mr. Second Player
- Mr. Third Player
- Mr. Fourth Player
- Mr. Fifth Player
- Mr. Sixth Player

