**React HOL-9**

**List the features of ES6**

 let and const for variable declarations

 Arrow functions (=>)

 Classes and inheritance

 Template literals (`Hello ${name}`)

 Default parameters

 Destructuring (arrays & objects)

 Spread and rest operators (...)

 Promises

 Set and Map data structures

 Modules (import / export)

**Explain JavaScript let**

* let is used to declare **block-scoped** variables.
* It can be **updated** but not re-declared in the same scope.

Example :

let x = 10;

x = 20; // valid

**Identify the differences between var and let**

|  |  |  |
| --- | --- | --- |
| **Feature** | **var** | **let** |
| Scope | Function-scoped | Block-scoped |
| Hoisting | Yes (initialized as undefined) | Yes (but not usable before declaration) |
| Redeclaration | Allowed | Not allowed in same scope |

**Explain JavaScript const**

* const is used to declare **constants** (cannot be reassigned).
* It is **block-scoped**, like let.

Example :

const pi = 3.14;

// pi = 4; => not allowed

**Explain ES6 class fundamentals**

* class keyword lets you define objects using a **blueprint**.
* It uses a constructor() to initialize values.
* Methods are defined inside the class.

Example :

class Person {

constructor(name) {

this.name = name;

}

greet() {

return `Hello, ${this.name}`;

}

}

**Explain ES6 class inheritance**

* Classes can **inherit** from other classes using the extends keyword.
* super() is used to call the parent class constructor.

Example :

class Student extends Person {

constructor(name, id) {

super(name);

this.id = id;

}

}

**Explain ES6 arrow functions**

* Arrow functions are a **shorter way to write functions**.
* They do **not have their own this** context.

Example :

const add = (a, b) => a + b;

**Identify set(), map()**

 **Set()**: Collection of **unique values**

const mySet = new Set([1, 2, 2, 3]); // {1, 2, 3}

 **Map()**: Collection of **key-value pairs**

const myMap = new Map();

myMap.set('name', 'John');

**ListOfPlayers.js**

import React from 'react';

const players = [

{ name: "Virat", score: 88 },

{ name: "Rohit", score: 76 },

{ name: "Rahul", score: 65 },

{ name: "Jadeja", score: 56 },

{ name: "Ashwin", score: 72 },

{ name: "Shami", score: 48 },

{ name: "Bumrah", score: 82 },

{ name: "Gill", score: 94 },

{ name: "Surya", score: 36 },

{ name: "Ishan", score: 69 },

{ name: "Pant", score: 90 },

];

const ListOfPlayers = () => {

const lowScorers = players.filter(player => player.score < 70);

return (

<div>

<h2>List of Players</h2>

<ul>

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

<li key={index}>{player.name} {player.score}</li>

))}

</ul>

<h2>List of Players having Scores Less than 70</h2>

<ul>

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

<li key={index}>{player.name} {player.score}</li>

))}

</ul>

</div>

);

};

export default ListOfPlayers;

**IndianPlayers.js**

import React from 'react';

const T20Players = ["Virat", "Rohit", "Surya", "Ishan"];

const RanjiTrophyPlayers = ["Jadeja", "Gill", "Pant", "Shami"];

const mergedPlayers = [...T20Players, ...RanjiTrophyPlayers];

const IndianPlayers = () => {

const oddPlayers = [mergedPlayers[0], mergedPlayers[2], mergedPlayers[4]];

const evenPlayers = [mergedPlayers[1], mergedPlayers[3], mergedPlayers[5]];

return (

<div>

<h2>Odd Players</h2>

<ul>

<li>First : {oddPlayers[0]}</li>

<li>Third : {oddPlayers[1]}</li>

<li>Fifth : {oddPlayers[2]}</li>

</ul>

<h2>Even Players</h2>

<ul>

<li>Second : {evenPlayers[0]}</li>

<li>Fourth : {evenPlayers[1]}</li>

<li>Sixth : {evenPlayers[2]}</li>

</ul>

<h2>List of Indian Players Merged:</h2>

<ul>

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

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

))}

</ul>

</div>

);

};

export default IndianPlayers;

**App.js**

import React, { useState } from 'react';

import ListOfPlayers from './components/ListOfPlayers';

import IndianPlayers from './components/IndianPlayers';

function App() {

const [flag, setFlag] = useState(true);

return (

<div className="App">

<h1>React App</h1>

<button onClick={() => setFlag(!flag)}>

Toggle View

</button>

{flag ? <ListOfPlayers /> : <IndianPlayers />}

</div>

);

}

export default App;

**Output**

**A screenshot of a computer

AI-generated content may be incorrect.**

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AI-generated content may be incorrect.**