

Scenario:

A startup wants a simple front-end dashboard to display static information such as welcome messages and course details. The team decides to use React for building reusable UI components.

1. How would you set up a new React project using Create React App or Vite?

To set up a new React project, follow these steps:

Step 1: Install Node.js on the system.

Step 2: Open Command Prompt or Terminal.

```
npx create-react-app dashboard
```

```
cd dashboard
```

```
npm start
```

2. What is the role of package.json in a React project?

package.json is an important file in a React project.

1. Stores project details (name, version)

2. Manages dependencies like React

3. Contains scripts to run the project

4. Helps install required libraries

Without package.json, a React project cannot run properly.

3. How do you create a functional component in React?

A functional component is created using a JavaScript function that returns JSX.

Example :

```
function Welcome() {  
  return <h1>Welcome to Dashboard</h1>;  
}  
  
export default Welcome;
```

4. How are components rendered inside the main App component?

Answer

Components are rendered inside the App component by importing and using them as HTML-like tags.

```
import Welcome from './Welcome';

function App() {
  return (
    <div>
      <Welcome />
    </div>
  );
}

export default App;
```

5. What are the benefits of breaking the UI into small reusable

Components?

Breaking UI into small components:

Improves code reusability

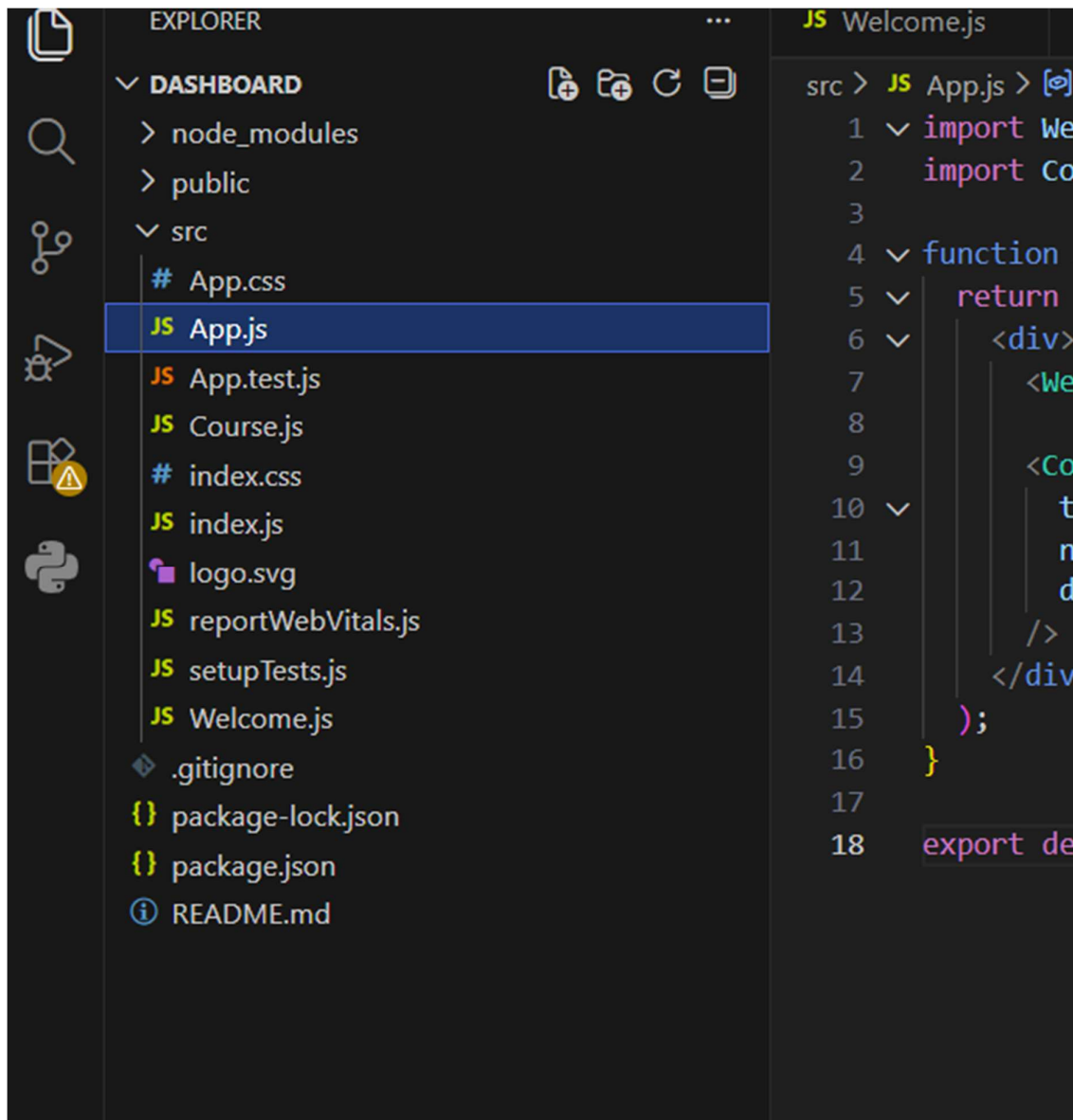
Makes code easy to understand

Simplifies maintenance

Reduces errors

Helps

Structure:



Welcome.js

```
function Welcome(props) {  
  return <h1>{props.message}</h1>;  
}
```

```
export default Welcome;
```

Course.js

```
function Course(props) {  
  return (  
    <div>
```

```
    <h2>{props.title}</h2>
    <p>Course Name: {props.name}</p>
    <p>Duration: {props.duration}</p>
  </div>
);
}
```

```
export default Course;
```

```
App.js
```

```
import Welcome from "../Welcome";
```

```
import Course from "../Course";
```

```
function App() {
```

```
  return (
```

```
    <div>
```

```
      <Welcome message="Welcome to React Dashboard" />
```

```
      <Course
```

```
        title="Course Details"
```

```
        name="React Basics"
```

```
        duration="2 hours"
```

```
      />
```

```
    </div>
```

```
  );
```

```
}
```

```
export default App;
```

```
Output:
```

