

13. ReactJS-HOL

Objectives

- Explain various ways of conditional rendering
- Explain how to render multiple components
- Define list component
- Explain about keys in React applications
- Explain how to extract components with keys
- Explain React Map, map() function

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

- Implement conditional rendering in React applications

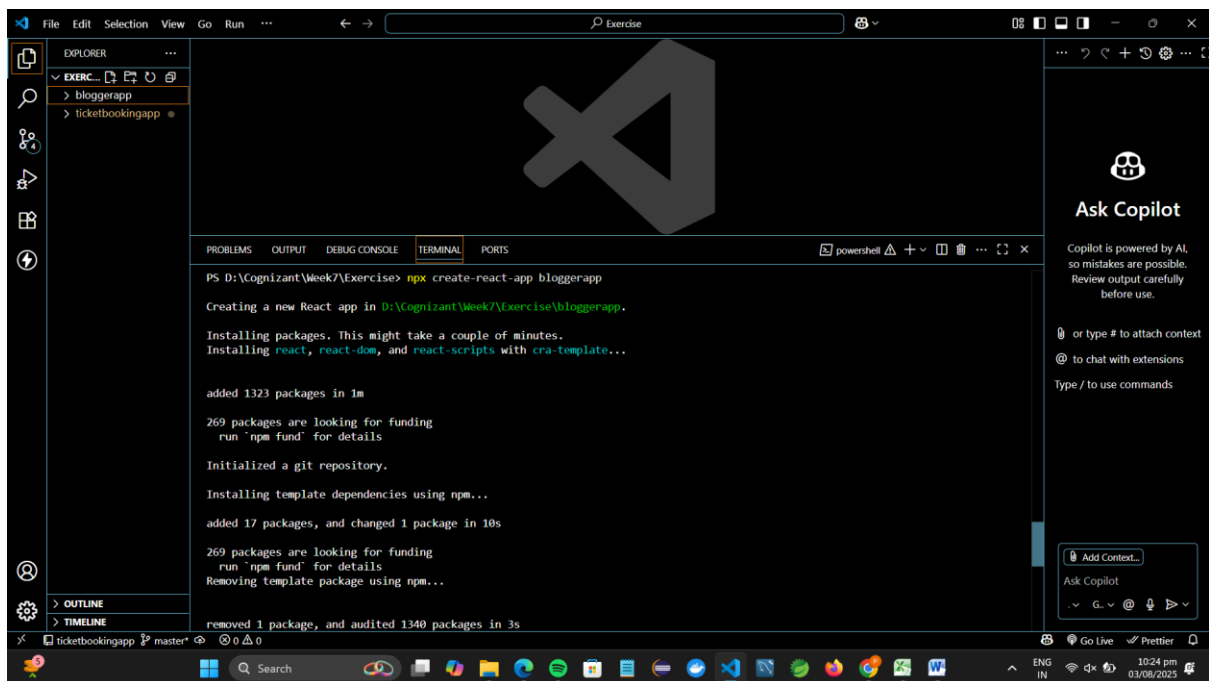
Create a React App named “bloggerapp” in with 3 components.

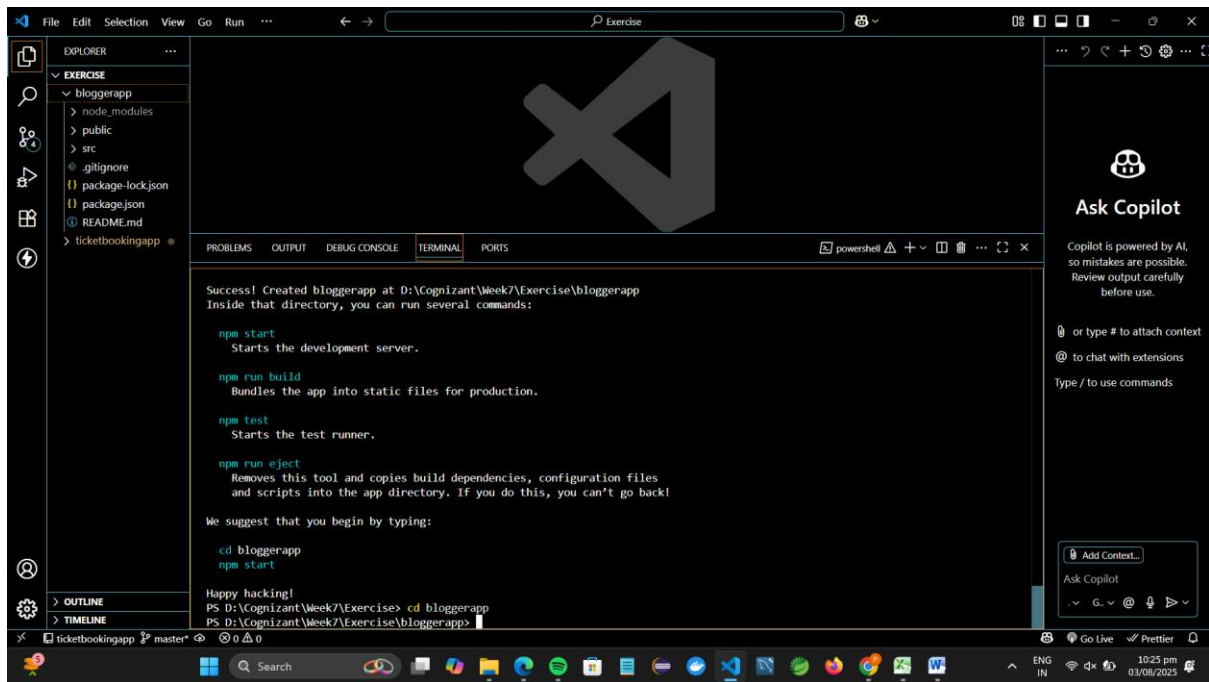
1. Book Details
2. Blog Details
3. Course Details

Implement this with as many ways possible of Conditional Rendering.

Step 1: Create the React App

```
npx create-react-app bloggerapp  
cd bloggerapp
```





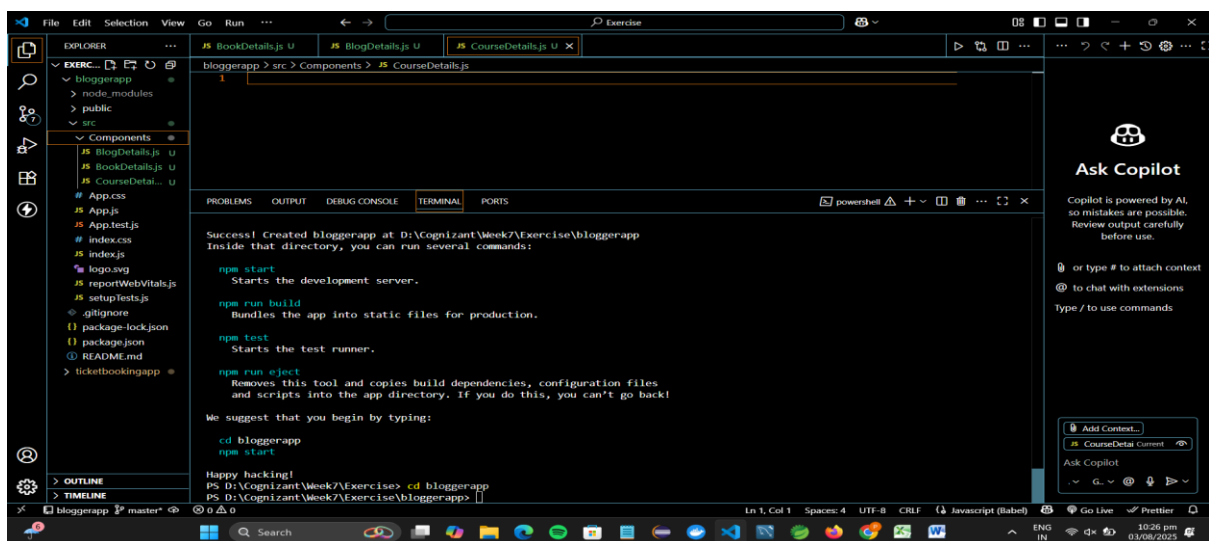
Step 2: Create Components Folder

Inside `src`, create a folder:

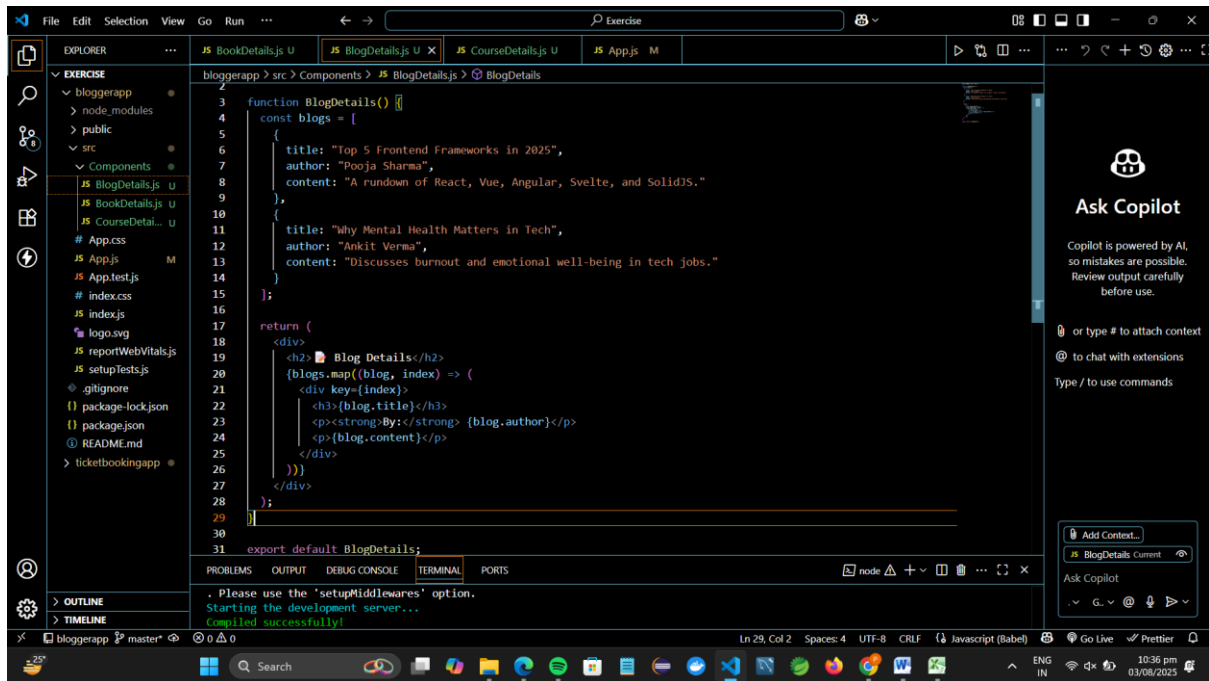
`Components`

Create **3 components** inside it:

- `BookDetails.js`
- `BlogDetails.js`
- `CourseDetails.js`



BlogDetails.js:



The screenshot shows a VS Code editor window with the file explorer on the left. The active file is `BlogDetails.js` located at `bloggerapp > src > Components > BlogDetails`. The code defines a `BlogDetails` function that returns a React component. The component uses `blogs.map` to render a list of blog entries. Each entry is a `div` containing a `h2` tag for the title, a `h3` tag for the author, and a `p` tag for the content. The `blogs` array contains two entries: one about frontend frameworks and another about mental health in tech.

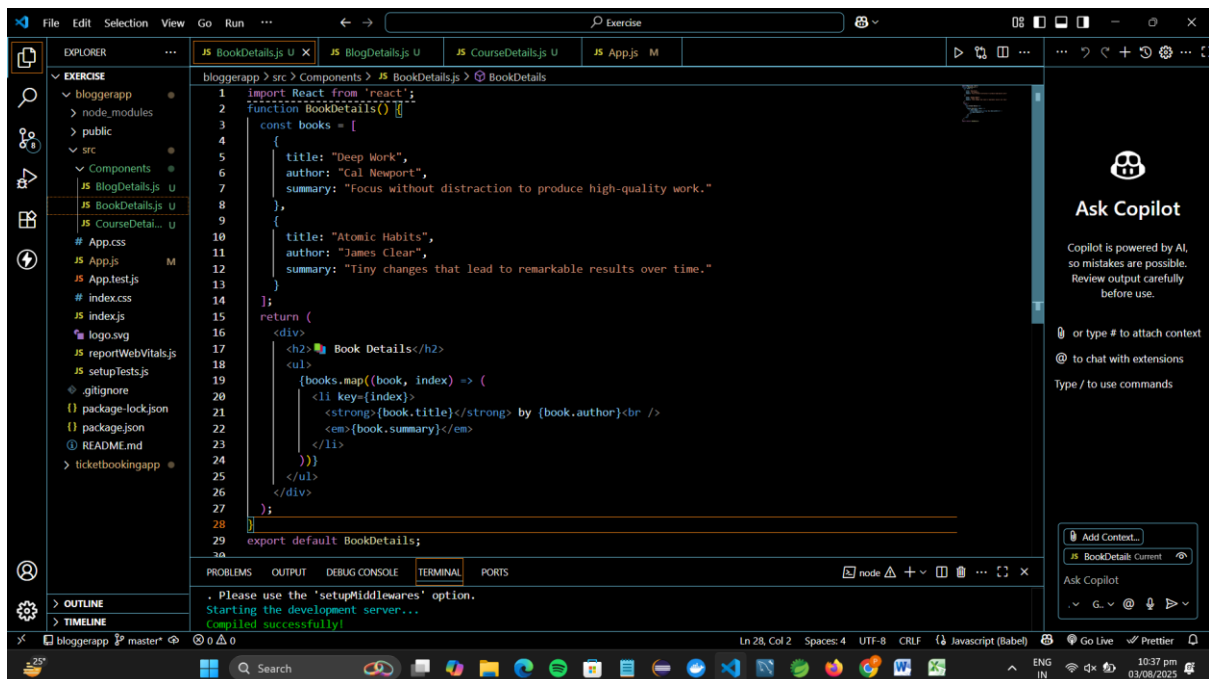
```
function BlogDetails() {
  const blogs = [
    {
      title: "Top 5 Frontend Frameworks in 2025",
      author: "Pooja Sharma",
      content: "A rundown of React, Vue, Angular, Svelte, and SolidJS."
    },
    {
      title: "Why Mental Health Matters in Tech",
      author: "Ankit Verma",
      content: "Discusses burnout and emotional well-being in tech jobs."
    }
  ];

  return (
    <div>
      <h2> Blog Details</h2>
      {blogs.map((blog, index) => (
        <div key={index}>
          <h3>{blog.title}</h3>
          <p><strong>By:</strong> {blog.author}</p>
          <p>{blog.content}</p>
        </div>
      ))}
    </div>
  );
}

export default BlogDetails;
```

The terminal at the bottom shows the command `npm run dev` and the output `Starting the development server... Compiled successfully!`. The right sidebar contains the "Ask Copilot" panel.

BookDetails.js:



The screenshot shows a VS Code editor window with the file explorer on the left. The active file is `BookDetails.js` located at `bloggerapp > src > Components > BookDetails`. The code defines a `BookDetails` function that returns a React component. The component uses `books.map` to render a list of book entries. Each entry is a `div` containing a `h2` tag for the title, a `ul` tag for the author, and a `p` tag for the summary. The `books` array contains two entries: one about "Deep Work" and another about "Atomic Habits".

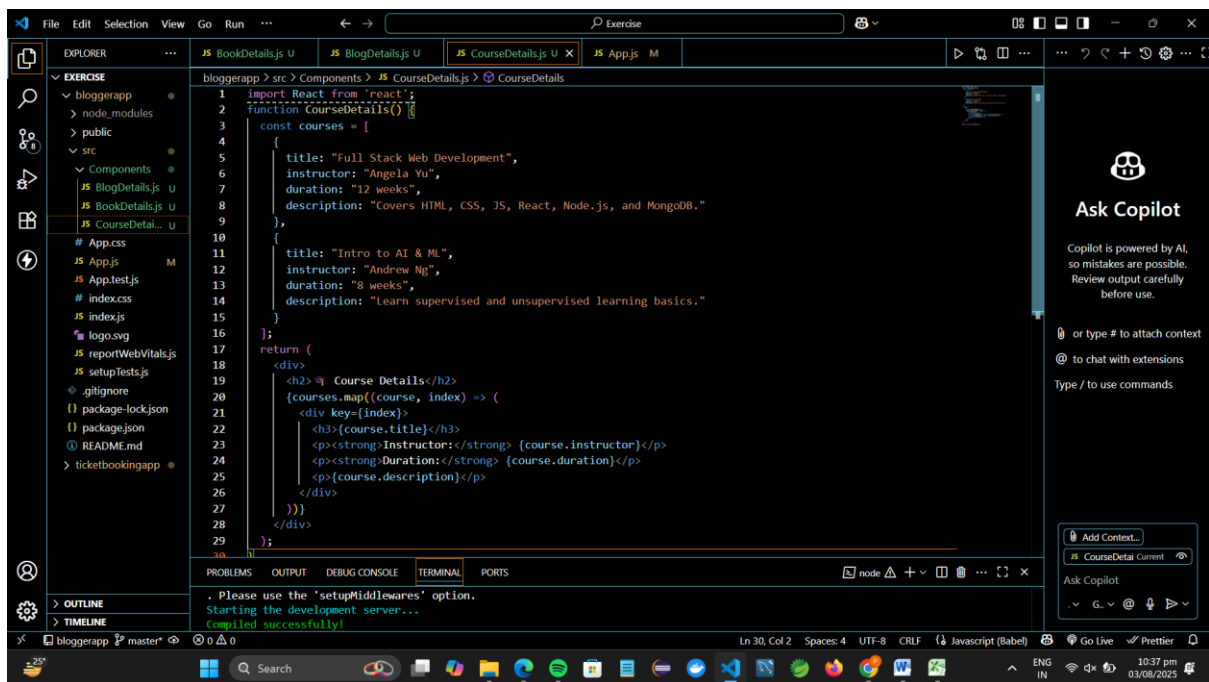
```
function BookDetails() {
  const books = [
    {
      title: "Deep Work",
      author: "Cal Newport",
      summary: "Focus without distraction to produce high-quality work."
    },
    {
      title: "Atomic Habits",
      author: "James Clear",
      summary: "Tiny changes that lead to remarkable results over time."
    }
  ];

  return (
    <div>
      <h2> Book Details</h2>
      <ul>
        {books.map((book, index) => (
          <li key={index}>
            <strong>{book.title}</strong> by {book.author}<br />
            <em>{book.summary}</em>
          </li>
        ))}
      </ul>
    </div>
  );
}

export default BookDetails;
```

The terminal at the bottom shows the command `npm run dev` and the output `Starting the development server... Compiled successfully!`. The right sidebar contains the "Ask Copilot" panel.

CourseDetails.js:



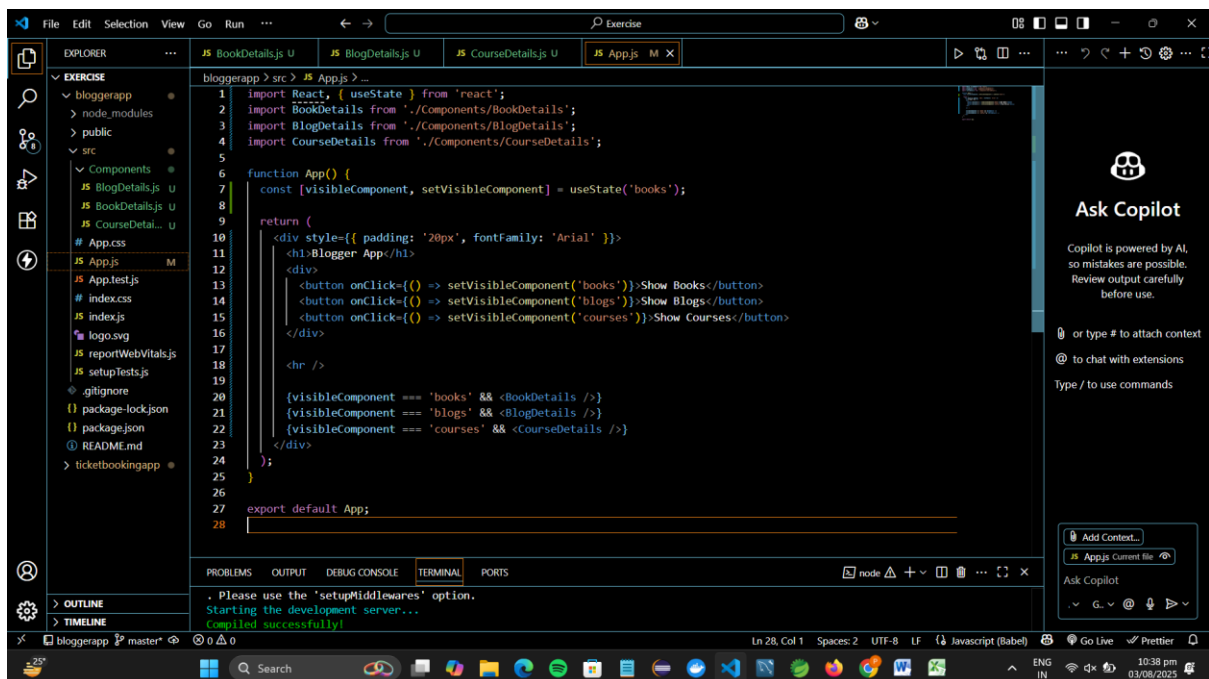
The screenshot shows the VS Code editor with the file `CourseDetails.js` open. The file is located in the `src > Components` directory. The code defines a `CourseDetails` component that takes an array of course objects as a prop. Each course object has `title`, `instructor`, `duration`, and `description` properties. The component renders a list of these courses, each with a unique `key` (the index). The rendered output for each course includes a heading (`<h2>`), a subheading (`<h3>`), and two paragraphs (`<p>`) showing the instructor and duration. The description is also shown. The component is exported as a default export.

```
1 import React from 'react';
2 function CourseDetails({ courses }) {
3   const courses = [
4     {
5       title: "Full Stack Web Development",
6       instructor: "Angela Yu",
7       duration: "12 weeks",
8       description: "Covers HTML, CSS, JS, React, Node.js, and MongoDB."
9     },
10    {
11      title: "Intro to AI & ML",
12      instructor: "Andrew Ng",
13      duration: "8 weeks",
14      description: "Learn supervised and unsupervised learning basics."
15    }
16  ];
17  return (
18    <div>
19      <h2> Course Details</h2>
20      {courses.map((course, index) => (
21        <div key={index}>
22          <h3>{course.title}</h3>
23          <p><strong>Instructor:</strong> {course.instructor}</p>
24          <p><strong>Duration:</strong> {course.duration}</p>
25          <p>{course.description}</p>
26        </div>
27      ))}
28    </div>
29  );
30 }
```

Step 3: Update App.js to Use All Components

Replace everything in `src/App.js` with:

App.js:



The screenshot shows the VS Code editor with the file `App.js` open. The file is located in the `src` directory. The code imports `React`, `useState`, `BookDetails`, `BlogDetails`, and `CourseDetails` from their respective locations. It defines an `App` component that uses `useState` to manage a `visibleComponent` state. The component renders a `div` with a padding and font family. Inside this `div`, there are three buttons: "Show Books", "Show Blogs", and "Show Courses". Each button has an `onClick` handler that calls `setVisibleComponent` with the corresponding component name. Below the buttons, there is a `hr` and a conditional rendering of the selected component based on the `visibleComponent` state. The component is exported as a default export.

```
1 import React, { useState } from 'react';
2 import BookDetails from './Components/BookDetails';
3 import BlogDetails from './Components/BlogDetails';
4 import CourseDetails from './Components/CourseDetails';
5
6 function App() {
7   const [visibleComponent, setVisibleComponent] = useState('books');
8
9   return (
10     <div style={{ padding: '20px', fontFamily: 'Arial' }}>
11       <h1>Blogger App</h1>
12       <div>
13         <button onClick={() => setVisibleComponent('books')}>Show Books</button>
14         <button onClick={() => setVisibleComponent('blogs')}>Show Blogs</button>
15         <button onClick={() => setVisibleComponent('courses')}>Show Courses</button>
16       </div>
17
18       <hr />
19
20       {visibleComponent === 'books' && <BookDetails />}
21       {visibleComponent === 'blogs' && <BlogDetails />}
22       {visibleComponent === 'courses' && <CourseDetails />}
23     </div>
24   );
25 }
26
27 export default App;
28
```

Step 4: Run the App

npm start

```
1 import React, { useState } from 'react';
2 import BookDetails from './Components/BookDetails';
3 import BlogDetails from './Components/BlogDetails';
4 import CourseDetails from './Components/CourseDetails';
5
6 function App() {
7   const [visibleComponent, setVisibleComponent] = useState('books');
8
9   return (
10    <div style={{ padding: '20px', fontFamily: 'Arial' }}>
11      <h1>Blogger App</h1>
12      <div>
13        <button onClick={() => setVisibleComponent('books')}>Show Books</button>
14        <button onClick={() => setVisibleComponent('blogs')}>Show Blogs</button>
15        <button onClick={() => setVisibleComponent('courses')}>Show Courses</button>
16      </div>
17    </div>
18  );
19}
```

PS D:\Cognizant\Week7\Exercise\bloggerapp> npm start

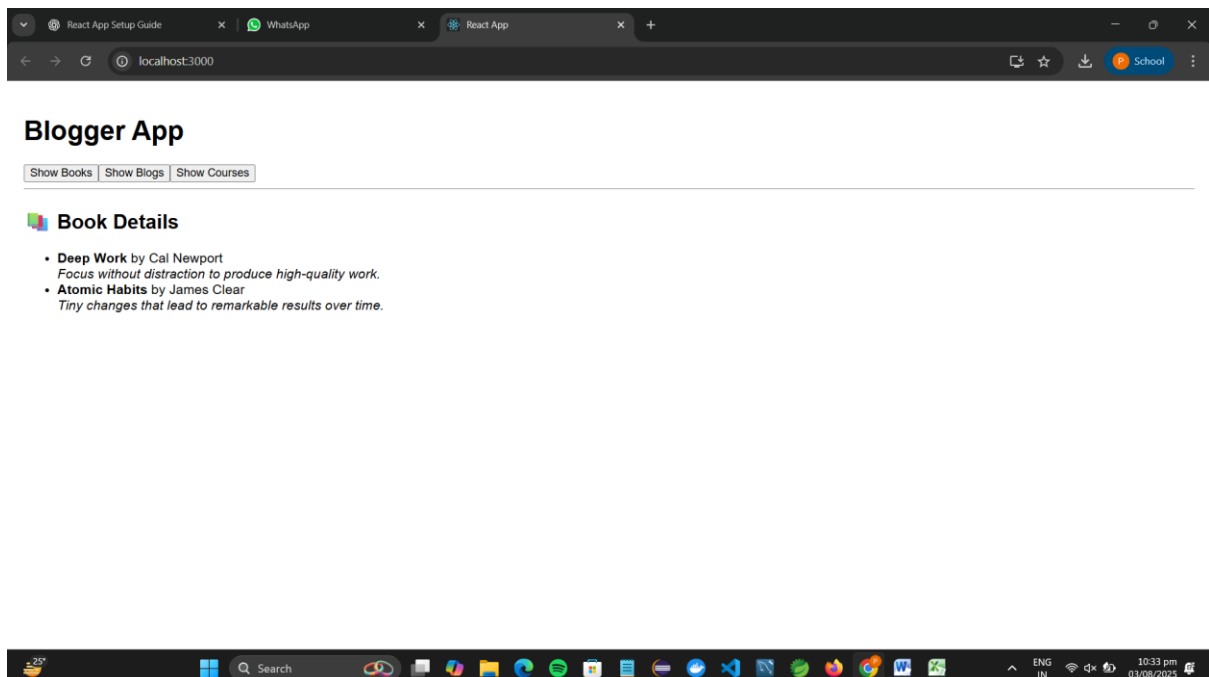
> bloggerapp@0.1.0 start
> react-scripts start

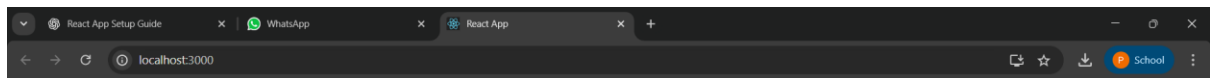
(node:10380) [DEP_WEBPACK_DEV_SERVER_ON_AFTER_SETUP_MIDDLEWARE] DeprecationWarning: 'onAfterSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
(node:10380) [DEP_WEBPACK_DEV_SERVER_ON_BEFORE_SETUP_MIDDLEWARE] DeprecationWarning: 'onBeforeSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
Starting the development server...
Compiled successfully!

You can now view **bloggerapp** in the browser.

Local: http://localhost:3000
On Your Network: http://192.168.223.120:3000

Result:





Blogger App

[Show Books](#) [Show Blogs](#) [Show Courses](#)

Blog Details

Top 5 Frontend Frameworks in 2025

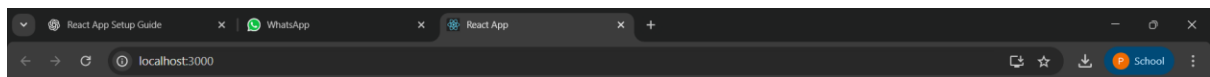
By: Pooja Sharma

A rundown of React, Vue, Angular, Svelte, and SolidJS.

Why Mental Health Matters in Tech

By: Ankit Verma

Discusses burnout and emotional well-being in tech jobs.



Blogger App

[Show Books](#) [Show Blogs](#) [Show Courses](#)

Course Details

Full Stack Web Development

Instructor: Angela Yu

Duration: 12 weeks

Covers HTML, CSS, JS, React, Node.js, and MongoDB.

Intro to AI & ML

Instructor: Andrew Ng

Duration: 8 weeks

Learn supervised and unsupervised learning basics.

