

Advanced Web Development: Using Props and Styling Components with CSS

Title: Introduction to Props and Styling in React

Tools Required: VS Code, Terminal, Browser

Learning Outcomes

By the end of this activity, you will be able to:

- Understand what props are in React.
- Pass and receive data using props in components.
- Use external CSS to style components.
- Build a simple and styled React application using functional components only.

Instructions

Step 1: Create a New React App

1. Open VS Code.
2. Open the terminal and run the following:

```
npx create-react-app react-props-lab  
cd react-props-lab  
npm start
```

Step 2: Modify App.js

1. Open the src/App.js file.
2. Replace the content with the following:

```
import React from 'react';  
import './App.css';  
import WelcomeMessage from './WelcomeMessage';  
import ProfileCard from './ProfileCard';  
  
function App() {  
  return (  
    <div className="app-container">  
      <h1>Props and Styling Demo</h1>  
      <WelcomeMessage name="John" />  
      <ProfileCard  
        name="Jane Doe"  
        bio="Frontend Developer who loves React."  
        imageUrl="https://via.placeholder.com/150"  
      />  
    </div>  
  );  
}  
  
export default App;
```

Step 3: Create WelcomeMessage.js

1. Inside the src folder, create a new file named WelcomeMessage.js.
2. Add the following code:

```
import React from 'react';

function WelcomeMessage(props) {
  return <h2>Welcome, {props.name}!</h2>;
}

export default WelcomeMessage;
```

Step 4: Create ProfileCard.js

1. Inside the src folder, create a new file named ProfileCard.js.
2. Add the following code:

```
import React from 'react';
import './ProfileCard.css';

function ProfileCard(props) {
  return (
    <div className="profile-card">
      <img src={props.imageUrl} alt={props.name} />
      <h3>{props.name}</h3>
      <p>{props.bio}</p>
    </div>
  );
}

export default ProfileCard;
```

Step 5: Create and Link External CSS

1. In the src folder, create a new file named ProfileCard.css.
2. Add the following styles:

```
.profile-card {
  border: 1px solid #ccc;
  border-radius: 10px;
  padding: 16px;
  width: 250px;
  text-align: center;
  box-shadow: 2px 2px 10px rgba(0, 0, 0, 0.1);
  margin: 10px auto;
}

.profile-card img {
  border-radius: 50%;
  width: 100px;
  height: 100px;
}
```

3. Open App.css and update it with:

```
.app-container {  
  text-align: center;  
  margin-top: 40px;  
}  
  
h1 {  
  color: #2c3e50;  
}
```

Step 6: Run and Test the Project

1. Make sure your terminal is still running.
2. Open your browser and go to <http://localhost:3000/>.
3. Check if the welcome message and profile card are showing with styles.

Step 7: Submission

1. Record your screen showing your output and how the app works.
2. Mention the file structure in your video (e.g., App.js, WelcomeMessage.js, ProfileCard.js, CSS files).
3. Submit the video via your instructor's preferred platform.

For Improvements

- Add more ProfileCard components with different names and bios.
- Add a background color to your app using CSS.
- Try using a different image URL.
- Style the welcome message with a different font and color.

Grading Rubric (100 Points)

Criteria	Points
Successfully creates and runs the React app	10
Correct use of props in WelcomeMessage component	15
Correct use of props in ProfileCard component	10
Proper creation and import of external CSS file	10
Functional component structure is used in all components	10
App displays styled UI (image, name, bio) with correct layout	15
App includes at least 2 components created by the student	10
Implementation of Improvements	20
Total	100

Prepared by:

JOHN CLEMENT S. ESCOBANEZ, MIT