Write React with TypeScript

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Creating React/TypeScript project:

TypeScript provides static typing for JavaScript, enhancing the development experience and catching errors early.

Use create-react-app with the TypeScript template to set up a React project with TypeScript support.

Basic Code:

```
npx create-react-app my-app --template
typescript
```

Adding return types for components:

In TypeScript, we can specify the return type of a component using JSX.Element

This helps TypeScript understand the component's return value as JSX, enabling type checking within the component.

```
const MyComponent: React.FC = ():
JSX.Element => {
  // Component code here
};
```

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Adding types to props:

TypeScript allows us to define types for props using interfaces.

Create an interface to describe the expected props and use it when declaring the component.

```
interface MyComponentProps {
  name: string;
  age: number;
}
const MyComponent:
React.FC<MyComponentProps> = ({ name, age
}) => {
  // Component code here
};
```

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Adding types to events and event handlers:

Specify the event type in TypeScript to ensure proper typing for event handlers.

Use React.MouseEvent for mouse events or React.ChangeEvent for input change events.

```
interface ButtonProps {
  onClick: (event:
React.MouseEvent<HTMLButtonElement>) =>
void;
}
const Button: React.FC<ButtonProps> = ({
onClick }) => {
  // Component code here
};
```

Adding types to hooks:

Provide type annotations when using hooks to ensure correct usage and type safety.

For example, use `useState<number>(0)` to indicate the initial state as a number.

```
const [count, setCount] = useState<number>
(0);
```

Adding types to default props:

In TypeScript, you can define default props for components using the `defaultProps` property.

Specify the default values in the component's interface or directly in the component declaration

```
interface MyComponentProps {
  name?: string;
  age?: number;
}
MyComponent.defaultProps = {
  name: 'John Doe',
  age: 25,
};
```

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