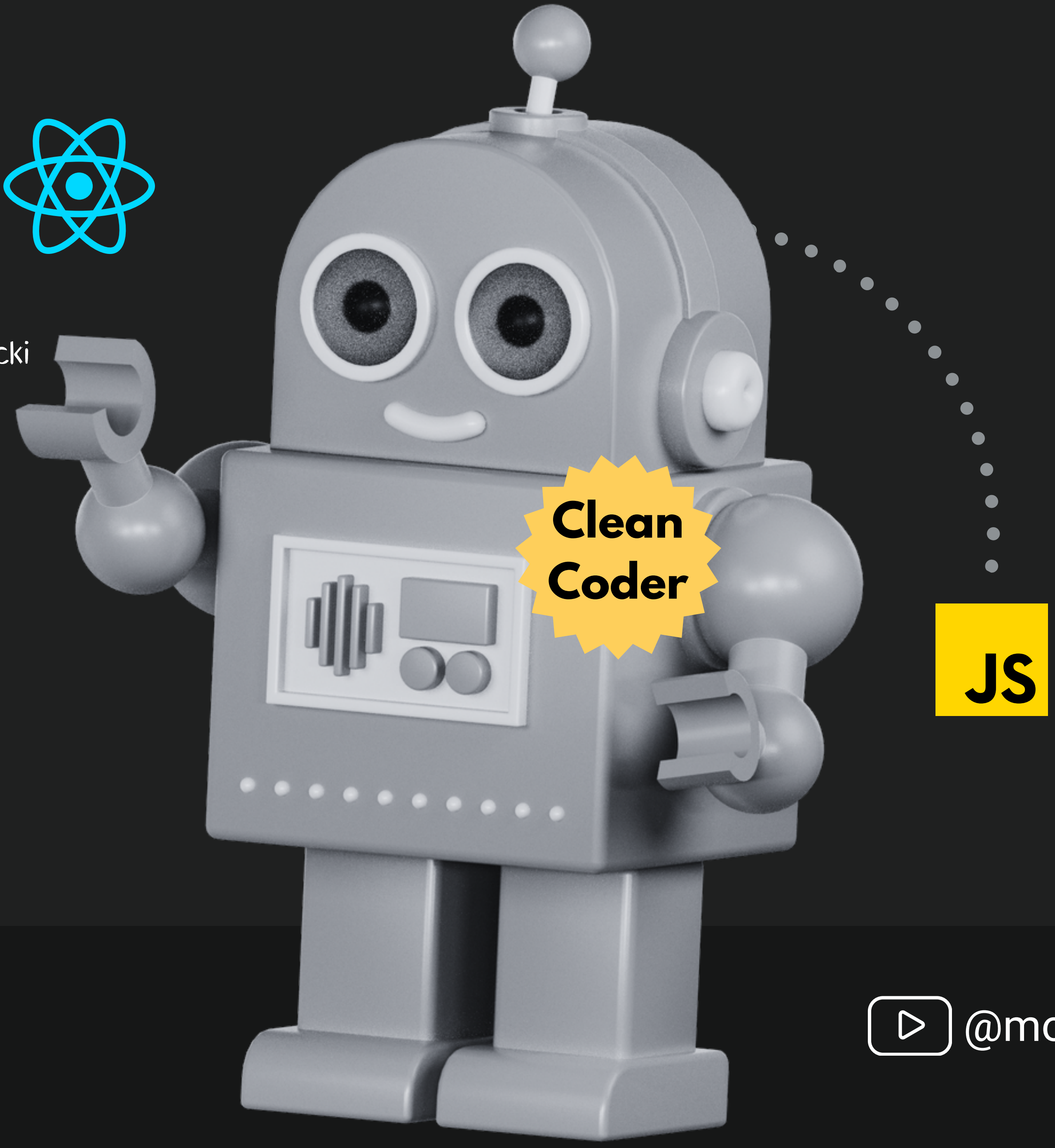
moderndev

REACT.JS

S.O.L.I.D PRINCIPLES



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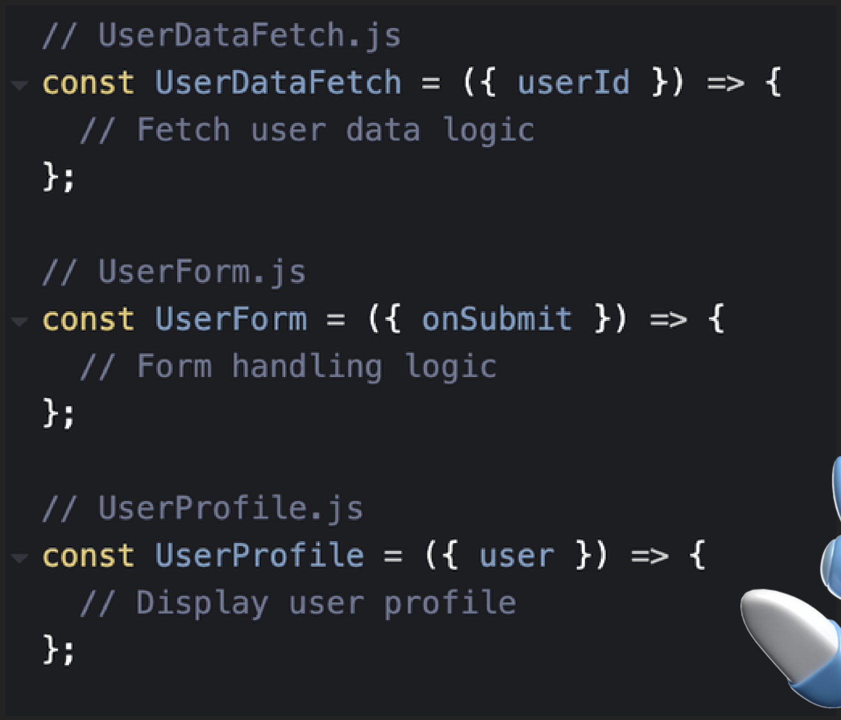
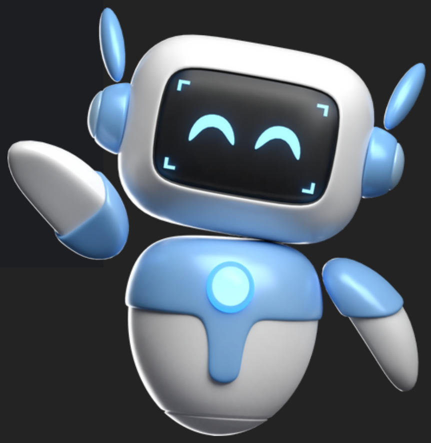
Single Responsibility Principle (SRP)

A component or module should have one, and only one, reason to change.



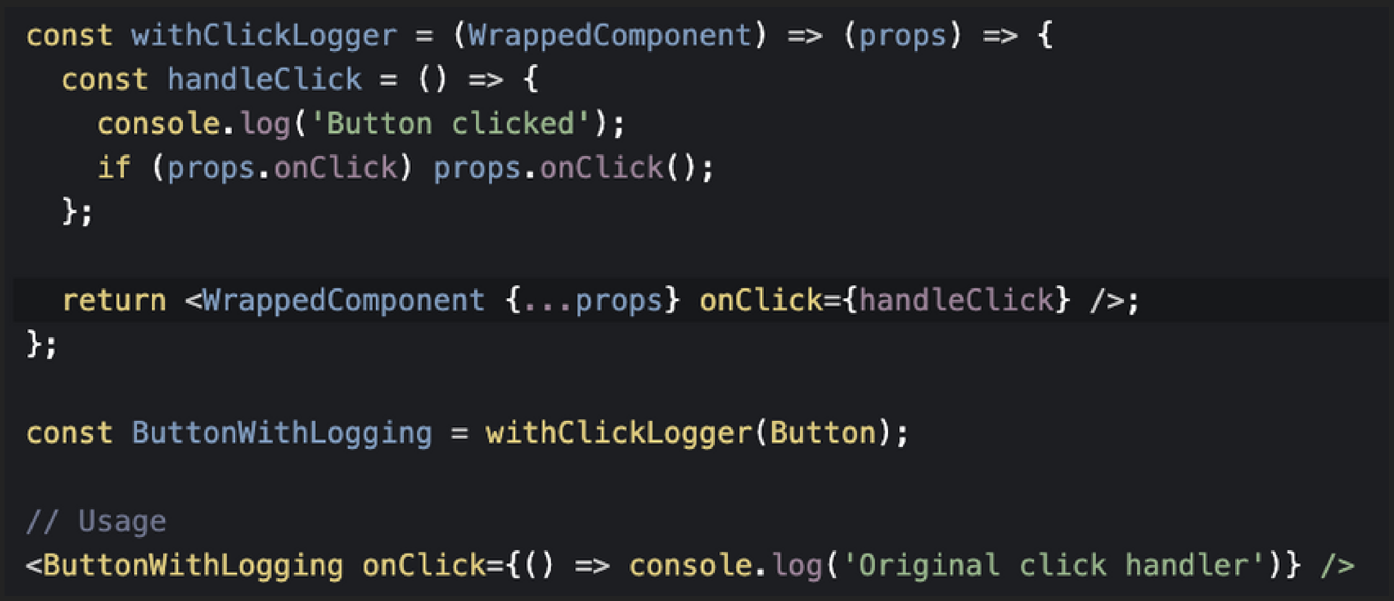
```
// UserDataFetch.js
const UserDataFetch = ({ userId }) => {
  // Fetch user data logic
};

// UserForm.js
const UserForm = ({ onSubmit }) => {
  // Form handling logic
};

// UserProfile.js
const UserProfile = ({ user }) => {
  // Display user profile
};
```



This means it should have only one job or responsibility.

Open/Closed Principle (OCP)

Software entities should be open for extension but closed for modification.

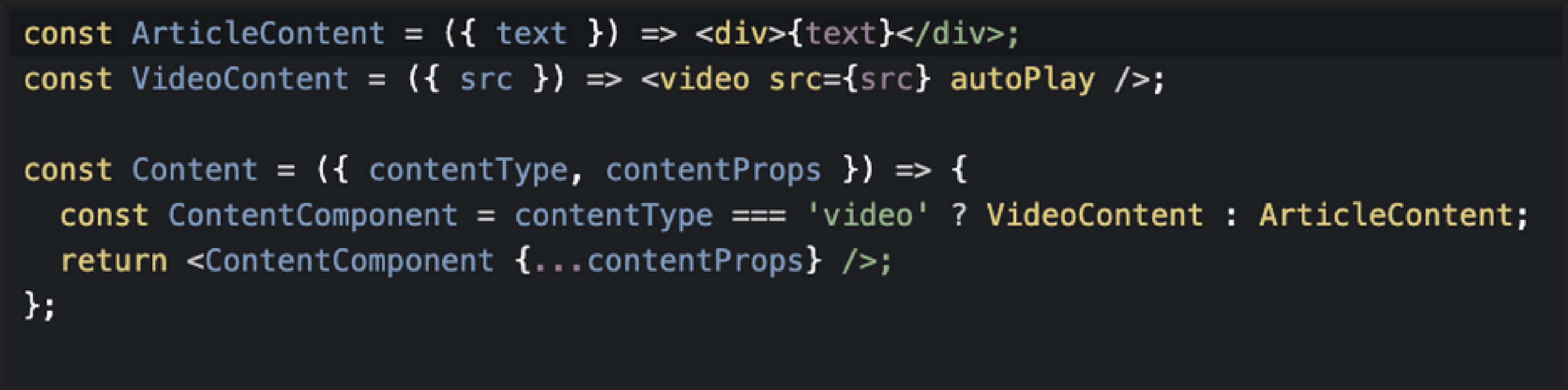


```
const withClickLogger = (WrappedComponent) => (props) => {
  const handleClick = () => {
    console.log('Button clicked');
    if (props.onClick) props.onClick();
  };

  return <WrappedComponent {...props} onClick={handleClick} />;
};

const ButtonWithLogging = withClickLogger(Button);

// Usage
<ButtonWithLogging onClick={() => console.log('Original click handler')} />
```

This means you should be able to add new functionality without changing existing code.

Liskov Substitution Principle (LSP)

Objects in a program should be replaceable with instances of their subtypes without altering the correctness of the program.



```
const ArticleContent = ({ text }) => <div>{text}</div>;
const VideoContent = ({ src }) => <video src={src} autoPlay />;

const Content = ({ contentType, contentProps }) => {
  const ContentComponent = contentType === 'video' ? VideoContent : ArticleContent;
  return <ContentComponent {...contentProps} />;
};
```

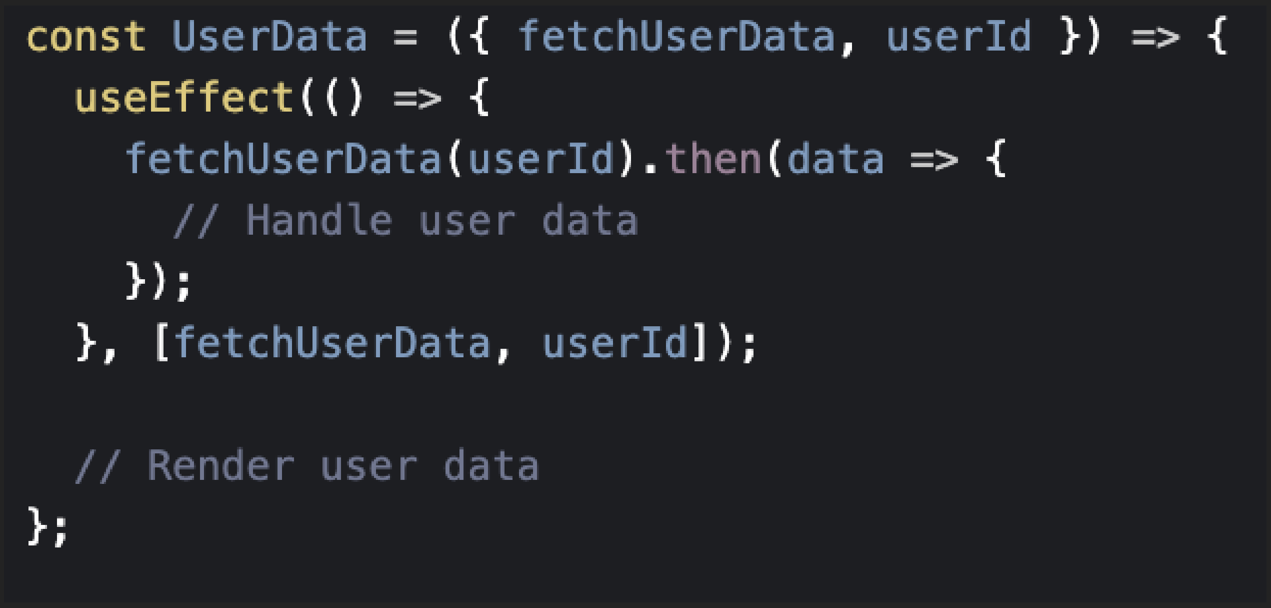
Interface Segregation Principle (ISP)

No client should be forced to depend on methods it does not use.

```
const UserProfile = ({ name, age }) => {
  // Use only name and age, ignoring other props
};

UserProfile.propTypes = {
  name: PropTypes.string.isRequired,
  age: PropTypes.number.isRequired,
};
```

Dependency Inversion Principle (DIP)

High-level modules should not depend on low-level modules. Both should depend on abstractions.



```
const UserData = ({ fetchUserData, userId }) => {
  useEffect(() => {
    fetchUserData(userId).then(data => {
      // Handle user data
    });
  }, [fetchUserData, userId]);

  // Render user data
};
```

Furthermore, abstractions should not depend on details. Details should depend on abstractions.

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