Error Handling

This documentation explains how you can handle development, server-side, and client-side errors.

Handling Errors in Development

When there is a runtime error during the development phase of your Next.js application, you will encounter an **overlay**. It is a modal that covers the webpage. It is only visible when the development server runs using `next dev`, `npm run dev`, or `yarn dev` and not in production. Fixing the error will automatically dismiss the overlay.

Here is an example of an overlay:

Figure 1: Example of an overlay when in development mode

Handling Server Errors

Next.js provides a static 500 page by default to handle server-side errors that occur in your application. You can also customize this page by creating a `pages/500.js` file.

Having a 500 page in your application does not show specific errors to the app user.

You can also use 404 page to handle specific runtime error like `file not found`.

Handling Client Errors

React Error Boundaries is a graceful way to handle a JavaScript error on the client so that the other parts of the application continue working. In addition to preventing the page from crashing, it allows you to provide a custom fallback component and even log error information.

To use Error Boundaries for your Next.js application, you must create a class component `ErrorBoundary` and wrap the `Component` prop in the `pages/_app.js` file. This component will be responsible to:

- Render a fallback UI after an error is thrown
- Provide a way to reset the Application's state
- Log error information

You can create an `ErrorBoundary` class component by extending `React.Component`. For example:

```
class ErrorBoundary extends React.Component {
  constructor(props) {
    super(props)

    // Define a state variable to track whether is an error or not
    this.state = { hasError: false }
  }
  static getDerivedStateFromError(error) {
    // Update state so the next render will show the fallback UI

    return { hasError: true }
  }
  componentDidCatch(error, errorInfo) {
    // You can use your own error logging service here
    console.log({ error, errorInfo })
  }
  render() {
    // Check if the error is thrown
    if (this.state.hasError) {
      // You can render any custom fallback UI
      return (
        <div>
          <h2>Oops, there is an error!</h2>
          <button
            type="button"
            onClick={() => this.setState({ hasError: false })}
          >
            Try again?
          </button>
        </div>
      )
    }

    // Return children components in case of no error

    return this.props.children
```

```
  }
}

export default ErrorBoundary
```

The `ErrorBoundary` component keeps track of an `hasError` state. The value of this state variable is a boolean. When the value of `hasError` is `true`, then the `ErrorBoundary` component will render a fallback UI. Otherwise, it will render the children components.

After creating an `ErrorBoundary` component, import it in the `pages/_app.js` file to wrap the `Component` prop in your Next.js application.

```
// Import the ErrorBoundary component
import ErrorBoundary from '../components/ErrorBoundary'

function MyApp({ Component, pageProps }) {
  return (
    // Wrap the Component prop with ErrorBoundary component
    <ErrorBoundary FallbackComponent={ErrorFallback}>
      <Component {...pageProps} />
    </ErrorBoundary>
  )
}

export default MyApp
```

You can learn more about Error Boundaries in React's documentation.

Reporting Errors

To monitor client errors, use a service like Sentry, Bugsnag or Datadog.