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Refs. Portal. React Patterns. Routing

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Refs

Refs

- React is declarative and abstracts DOM manipulations
- Refs are used to get reference on the underlying DOM element
  - Access DOM element properties (e.g. height, position, ...)
- Official docs
- Returns object with current key set to DOM object or null
- useRef hook - const ref = useRef(null)
- createRef method - this.ref = createRef(null)
- Refs are also used to store data which should not trigger re-renders

Refs example - refs.md

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02

React Portal

React Portal

- Official docs
- Render children outside of DOM hierarchy
  - Used with modals, dialogs, notifications, toasts
- Commonly used with Singleton pattern - e.g. Toast notifications
- Also used for expanding menus of elements whose containers have hidden overflows
- ReactDOM specific
- createPortal(child, container)
- Event propagation and Context work as if it is still in the hierarchy

Portal example - portal.md

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03

Controlled components

Controlled components

- Components which are controlled by the parent via props
  - They receive value and onChange handler
- Often used in forms to allow the parent to always know current input values
  - Forms basics - value is stored in state via onChange
- Example: Tabs component
  - Controlled: receive current value and onChange/onClick as props
  - Uncontrolled: internally stores state and handles changed, only receives list of Tab instances and TabPanel instances as children (handled via context probably)
- Other React patterns: High order components and Render prop
  - Mostly made obsolete by custom hooks 📈

04

Routing

Routing

- URL addresses specific resource on the Internet (page, response, ...)
- Makes user navigation easier (refresh, browser back)
- Process of navigating to the specific resource on the web

Routing

SEO (Search Engine Optimization)

- Process of making a website more visible in search results
- Search engines crawl web, index content from pages, points to relevant pages in search results
- Ranking algorithm is secret, known only by search engine companies.

Routing

SEO (Search Engine Optimization)

- More traffic -> More 💰

Server side routing

- Route transition is handled on the server
  - When the URL changes, a new HTML document is retrieved from the server
- Browser has to communicate with the server
- Good:
  - Minimal data for each page
  - Search engine friendly
- Bad:
  - Slower interaction between pages
  - Full refresh of a page -> Context is lost
- Does not necessarily imply server-side rendering

Client side routing

- Route transition is handled on the client
  - When URL changes, new HTML is not needed, current one is changed
- Good:
  - Faster page transitions
  - Preserves context
  - Page transitions can be animated
- Bad:
  - Larger first load
  - Possible extra data
  - Not so friendly to search engines - they have to render the page like a true browser
- First load can be server-side rendered, but it isn’t default in React

Thank you for your attention!

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