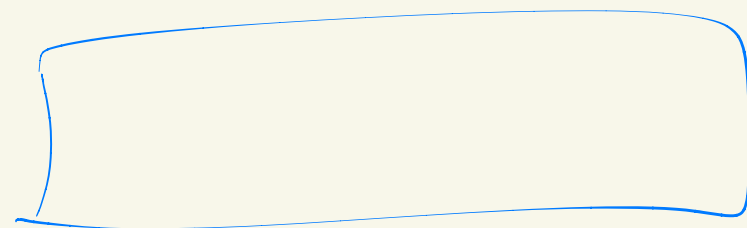


a refresh used to  
happen

⇒ tab1

tab2

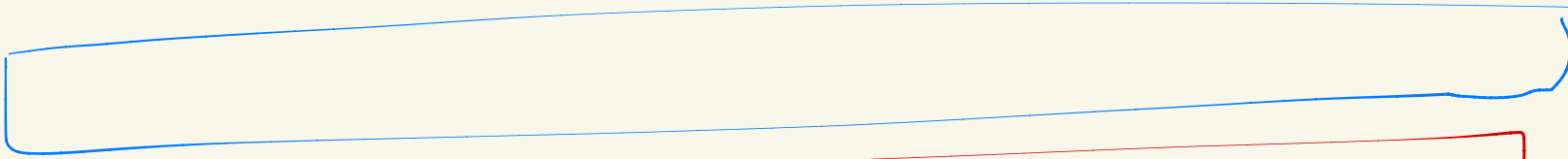
tab3



" / "

⇒

< Header 1 >



Children



< >

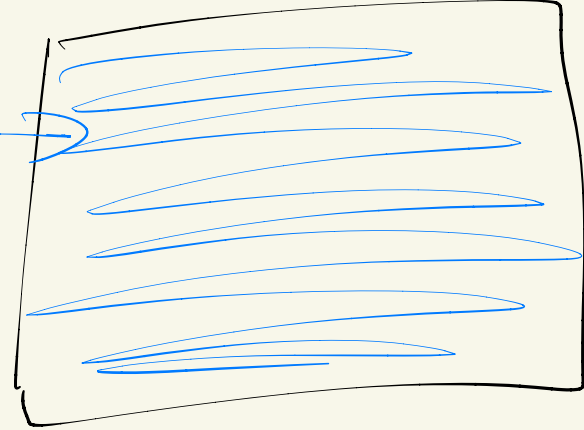
< Nav bar / >

< Outlet / >

<

>

Nav bar



useMemo, useCallback, React.memo

---

```
import { useState } from "react";

const App2 = () => {
  const expensive = () => {
    let sum = 0;
    for (let i = 0; i < 1000000000; i++) {
      sum++;
    }
    return sum;
  };
  const sumVal = expensive();
  const [count, setCount] = useState(0);
  return (
    <div>
      {sumVal}
      <br/>
      {count}
      <button onClick={() => setCount(count + 1)}>increase</button>
    </div>
  );
};

export default App2;
```

⇐ use Memo (fn Defi, [ ]);

use Effect + () ⇒ {

} , [ ] )

useMemo caches the return value  
of fn



