Day 21 - React Components

~React : Used to create Dynamic Webisites (instagram, etc) — Live Websites

1. re-render: when react actually updates the DOM.
   Anytime when the actual DOM manipulation happens.

2. Anytime the parent re-renders, all children re-renders.
   Clicking on one button, re-renders everything.

3. Memo:

> 💡 Putting the entire Header function in the memo, to break the re-rendering between the parent and the children.

> 💡 memo only works with dynamic variables.

```
///example

const Header = React.memo(function Header ({title}) {
    return <div> {title} </div>
});


//here {title} is dynamic.
```

4. Keys:
   Uniquely identifies components.

```
return (
        <Todo
          key={todo.id}
          title={todo.title}
          description={todo.description}
        />
      );
```

5. The practise code:

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

let counter = 4;

function App() {
  const [todos, setTodos] = useState([
    {
      id: 1,
      title: "Go to the gym",
      description: "You need to go to the gym",
    },
    {
      id: 2,
      title: "Go to market",
      description: "You need to go with Mummy",
    },
    {
      id: 3,
      title: "Read that book",
      description: "Read the Cave by Alok Kejriwal!",
    },
  ]);
```

```jsx
    function addTodo() {
      setTodos([
        ...todos,
        {
          id: counter++,
          title: Math.random().toString(),
          description: Math.random().toString(),
        },
      ]);
    }

    return (
      <div>
        <button onClick={addTodo}>Add a todo</button>
        {todos.map(function (todo) {
          return (
            <Todo
              key={todo.id}
              title={todo.title}
              description={todo.description}
            />
          );
        })}
      </div>
    );
}

function Todo({ title, description }) {
  return (
    <div>
      <h1>{title}</h1>
      <h4>{description}</h4>
    </div>
  );
}
```

```
export default App;
```

6. Question : Why do we write function names with capital letters?
   Ans:

💡 In React, it's a convention to start component names with a capital letter. This
   is because when JSX is compiled, components starting with a lowercase
   letter are treated as HTML tags.