COMPONENTS

* The four types of React components are functional, class, pure, and high-order components.
* The phases of a component are:
  + Mounting
    - React initializes the functional component, preparing it for rendering on the dom
    - We have consider
      * the initialization: reacts runs the function body of the component (run its functions), setting up its behaviour
      * state initilization: runs all the usestate on the component, so it declares all the vars and initializes state vars. Vars hold data, triggering re-renders
      * side effects: it uses useEffect, ensuring that side effects (data fetching, subscription, dom manipulation) executes only once
  + Updating
    - Reponsds to changes on the state, reinvoking props for the component
    - It responds to user actions and state modifications
  + Unmounting
    - Involves cleanup operations for event listeners, subscriptions, timers, etc
  + Error handling
    - If something unexpected happens, react moves the error to the nearest error boundary (a component desgning to cahtch errors during the render phase)

STATES

* un componente no controlado no usa useState, usa useRef

USEEFFECT:

• useEffect para realizar acciones después del montaje del componente

• el useRef es un hook que se usa para referenciar elementos del DOM (eg, sacar el value de un input)

* solo existe un useEffect por código, de tener varios, solo el último se ejecutara
* puede tener un return, de no tenerlo, se puede generar una fuga de memoria (que llame al useEffect por cada vez que haga referencia al componente, el return termina esa referencia)
* it wotks like:
  + El estado del componente cambia
  + El componente se vuelve a renderizar
  + El componente es mostrado en pantalla
  + useEffect se ejecuta

HOOKS

* un custom hook es una funcion que empieza por "use"

USEREF

* para detectar un elemento en el DOM (y por ende su valor, como en un input) es util usar "useRef" (ver "general\_practice / EG5"
* un componente no controlado no usa useState, usa useRef

Props

* when we using props, it to send the props name name from the render, and catch them with the word “props” in the component, like: “<Props\_eg3 name={"Byron"} age={22}/> ….. <h1>HI {props.name}, are you {props.age} ?</h1>”
* in order to destructure props to a another component, you have to send each prop to the component (ref. \UdemyBC\05-Hook-App\03-functionalComponents\MultipleCustomHooks.js)

useLayoutEffect

* “El useLayoutEffect se ejecuta antes de mostrar los elementos en pantalla, el useEffect no, aunque sea por milisegundos, lo hace despues”
  + Took as example doing a fetch with both, using layoutEffect its not the best ‘cause will not display the data until fetched (cause its sync) and this can slow the dom loading, unlike using useEffect, this will be async, will load the dom and fetching without slowing the dom show
* Works kinda like “useEffect” BUT, the useLayoutEffect runs at the beginning (when the browser rendered the dom but not the elements), and the useEffect after (when the browser rendered the elements)
* it runs after the component has rendered but before the browser paints the screen
* it works like:
  + El estado del componente cambia
  + El componente se vuelve a renderizar
  + useLayoutEffect se ejecuta y React espera a que termine
  + El componente es mostrado en pantalla
* You should use this or useEffect when:
  + Si necesitas manipular algún elemento del DOM antes de que sea mostrado en pantalla, useLayoutEffect te servirá mucho
  + Si requieres que tus componentes se vean fluidos y no presentan una especie de “parpadeo” cada que cambia el estado, usa useLayoutEffect (con precaución)
  + Y de manera muy general, useEffect te será útil para todos los demás casos

Memo

* “Memorize this component, so, only if the parent component has changes, the children component with memo, won’t rewrite”
* This will memorize anything that returns : “const messageMemorize = useMemo(), [];” and it will remain, unless the dependencies of the memo changes
* If has “[]” at the end, it will memorize each time the element inside changes (similar to the “useEffect” where the event occur if the dependencies on the [] changes) IF NOT, it will only memorize it one time

useCallback

* Same as the memo, it memorizes no component, but a function (a callback), that could be in a component or hook, and it will be rendered/memorized if something in it changes
* If we want to use params, check for the “\UdemyBC\05-Hook-App\06-memos\CallBackHook.jsx”

Reducer

* it’s a normal function, actually, has to be a pure function:
  + it needs to resolve itself internally
  + it should (must not ?) call another functions
  + should not have async task
  + must not call the "localStorage / sessionStorage" (are considered side effects even though are sync funcs)
* it will always return an state (the hook)
* an alternative to “useState”
* IN ALL CASES , when using the hook, the hook and the dispatch must have this order:  
  - const [todos, dispatch] = useReducer(ALWAYS THE FILE/FUNCTION FOR DISPACTH, ALWAYS THE STATE TO SEND/RETURN, init);  
  - export const ToDoReducer = (ALWAYS THE STATE TO SEND/RETURN,, ALWAYS “ACTION”) => {}
* S

Routes

* the simbol on the path prop: "/\*", redirects the route if its incorrect or misspelled: "<Route path="/\*" element={<page404/>}" BUT ITS NOT THAT USED, because the URL stays on the misspelled URL, instead, we use the router hook: "Navigate"<  
  Route path="/\*" element={<Navigate to="/about"/>} />
* useNavigate() -> UdemyBC\06-Heroes-Spa\ui\components\NavBar.jsx
  + useful function to navigate (change page) with a custom button
* useParams() -> another react-router-dom hook that help us to recive the params on the link from the <route> <routes> (UdemyBC\06-Heroes-Spa\heroes\routes\HeoresRoutes.jsx -- path='/hero/:heroId and )

useContext

* Its escencially a high oreder component, what does its use “<Routes>” wich will recive an array of its children (and those are a route array) with “<Route>”