

1. What's a closure? Where in the code is there a closure?

A closure is basically a function that returns a function, it is mainly used to limit access between functions and their respective scope.

Within the code a closure can be seen in the useMemo hooks that react uses like:

<https://github.com/dbarriga/test-project/blob/master/src/app/Components/Layout/Layout.jsx#L14-L18>

2. Which are the potential side-effects in any function? Could you point out any of these cases in your code? Are they expected? Can they be avoided?

The side effects happen when a function does something different than returning a value and reading its parameter, something as modify some non local variables, changing values of objects passed by reference, etc.

In this specific code, the one I can think of the next function:

<https://github.com/dbarriga/test-project/blob/master/api/getJokes.js#L17>

Since we do not have a proper endpoint for deleting the jokes, we have to modify the existing collection of data. It is expected as of this code, but it definitely can be avoided with a proper endpoint to do so.

Another thing to consider is, the API used, does not have a way to grab like a paginated amount of data, I mean it does not accept a from and to as parameter to grab the items in an ordered way, that is why in this example we're grabbing the whole 250 values. The ideal approach would be to grab the initial fixed amount, and then with each click on the pagination, grab the next fixed amount with an offset.