1. Explain the distinction between a framework and a library and also identify whether React is considered a framework or a library and explain why

The technical difference between them is the concept of inversion of control

-when you use a library, *you control the application flow* (e.g. when and where to contact the library)

-when you use a framework, *it controls the application flow itself*

The degree of freedom a library or framework gives the developer will dictate how “opinionated” it is.

React is referred to as “unopinionated” because there are lots of options to do something and we have to choose our tools (packages) carefully and create a proper design system for a specific project. It does not provide the complete “eco-system” to develop an application not even provide a design system.

It lacks a lot of built-in features and heavily depends on third-party packages, like for routing you need to use react-router, to deal with forms you need to select one package among Redux-Forms, Formiq, or Final-Form, etc., for making API calls you need to decide whether to use AXIOS or fetch API and thus, it makes React confusing and time-consuming.

Also, there is no “right” way to do something in React, not even style guides are present, which means every project can look totally different.

So, it is our responsibility to develop an opinion about how to build a project in React and especially what other libraries we gonna use with it as mentioned above.

some other differences:

Framework	Library
contains large amounts of code, which reduces performance and increases load time	needs less code, performance and load time are improved
hard to incorporate into an existing one	can simply be added and linked to an already existing project
consists of compilers, libraries, APIs and etc.	a set of pre-written code, modules, object, functions and etc.
reduce the complexity of the software development process	provide reusable software functionality