**What is Code Splitting in frontend application**

Code spliting used to split our code into various bundle, which can be loaded on demand. With code spliting it makes our website have a faster load time.

When we want to deploy our web app, we need to bundling our frontend app so it can be download by the client. Imagine if we bundle all the entire our frontend app, and let the user (client) download entire content in it even they don’t really need to check all the content inside. For example if we create an app that have many services like purchase, catalog, etc. and the user accessing our web app only want to explore the catalog parts, but since our frontend app only have one bundle that contain the entire app, the user download all of them only to access catalog.

According to the example, we know that it can make our website become slow when the user try to access it because the client need to download the entire frontend app even they don’t realy use all the content inside. This is why we need to implement a code spliting in our frontend app. With code spliting, we sparate the service into smaller bundle, so client will only download all the resources that they need (when they try to access it). So when the user access our web app at the first time, it will only download the home page, and when they get into the catalog service, its only download the catalog part, and so on.

Three general approaches to code splitting:

* Entry Points
* Prevent Duplication
* Dynamic Imports (lazy load)

**Entry Points**

**Responsive Component**

For example we have a web app with mobile first view. It means we develop the app started from the mobile view. We want to separate the mobile and the desktop view, so its detect the client side wether it is mobile or desktop, then we render the component based on what is the client side using. What if we want to add a carousel into our app? Do we need a library to handle this? For the mobile we know that we don’t really need library to make a carrousel to work because its only need to swipe left and right to see the content. Different with the desktop that need a library to make us easier to move the carousel left and right.

As we can see if we don’t implement code splitting¸ the client just download all the entire code source and the module even they don’t really use it because its only need to render a mobile component. With code splitting, the user will only download the resources that need for the mobile app to work, without need to download all entire module that needed for the web app.

**Source**

<https://github.com/Gerardy01/code-splitting>

**References**

<https://www.youtube.com/watch?v=SnV8GSitGVs&ab_channel=WebProgrammingUNPAS>

<https://www.youtube.com/watch?v=JU6sl_yyZqs&ab_channel=WebDevSimplified>