

Back-end exam reading list (at least these + core knowledge of the case backend)

These materials are meant to be looked at together with the case code, and any given demo codes. Trying to see the connection of each mentioned thing with the things we did in the project. Either look at them before project work or during, and also after the work while reflecting upon the project.

1. **Orientation** to how much there is going on in client – server applications (**full-stack architecture** applications) and examples of the multitude of things the front and the back must be capable of handling. Server means here the whole backend, e.g. two computers: app server + db server:

https://github.com/valju/docs_backend_design/blob/master/Responsibilities_services_or_components_ClientCarrierServer.pdf

2. Orientation continues with the three-tier architecture: client (usually web or mobile, could be desktop or console app) – application server – database server. Here mostly look were the following aspects are tackled: **user experience, performance, security**.

https://github.com/valju/docs_backend_design/blob/master/WhatToDoInFrontBackAndDB_usability_performance_security/What%20to%20check%20where%20in%20full-stack.pdf

3. An important concrete topic to introduce or recap. The **asynchronous nature** of modern code and systems. E.g. the Nodejs backend.

https://github.com/valju/docs_backend_design/blob/master/AsynchronousOperations/AsynchronousOperations_AnExampleOfDoubleAsynchronous_ExecutedInThreeDifferentMoments.pdf

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4. Important points about test data. It's important e.g. for the programmer or a UX evaluator.

https://github.com/valju/docs_database_design/blob/master/TestData_Creation_ImportantToKnow.pdf

5. We looked at the database operation return values and error code interpretation. And also how the backend and database server “communicate”. This code is not perfect, but has some good components to take and refine. Look e.g. at single Category creation (POST), deletion (DELETE), update (PUT), single select (GET), get all (GET).

<https://github.com/valju/idea-case-backend/blob/master/src/routes/api/category.js>

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COMING LATER

6. An example of some of the steps that might happen while defining, designing and building backends. A bit similar to our case, but remember that there are no two companies, often no two projects even that would be the same. This is again tool for organizing the thoughts, and to gather some of the needed skills in a step list.

https://github.com/valju/docs_backend_design/blob/master/BackendCreationStepsExampleBitSimilarToOurCase.pdf