## Period-4 Geo-location on the backend (GeoJson, MongoDB and and geoqueries)

Note: This description is too big for a single exam-question. It will be divided up into separate questions for the exam

MongoDB indexes and Geo-features

Explain about indexes in MongoDB, how to create them, and demonstrate how you have used them.

Indexes bliver f.eks brugt til at gøre queries hurtigere, I stedet for at skulle kigge igennem hvert enkelt document.

"Index er en sorteret liste af keys"

Reads bliver hurtige, men writes bliver langsommere, da vores index skal updateres.

Se makeFriends og makeGeo.

Explain, using your own code examples, how you have used some of MongoDB's "special" indexes like TTL and 2dsphere and perhaps also the Unique Index.

Se make testGeos.

Geo-location and Geojson

Explain and demonstrate basic Geo-JSON, involving as a minimum, Points and Polygons

P4/day1/geo

Explain and demonstrate ways to create Geo-JSON test data

https://github.com/Pelle-pr/fullstack-typesript-startcode/blob/main/test/positionFacadeTest.ts

P4/day1/geo

Explain the typical order of longitude and latitude used by Server-Side APIs and Client-Side APIs

På server siden burger vi typisk Longitude (x), Latitude (y)

På client Latitude, longitude (TYPISK)

Explain and demonstrate a GraphQL API that implements geo-features, using a relevant geo-library and plain JavaScript

Lidt usikker på hvad der menes?

Explain and demonstrate a GraphQL API that implements geo-features, using Mongodb's geospatial queries and indexes.

 $\underline{https://github.com/Pelle-pr/fullstack-typesript-startcode/blob/main/src/facade/positionFacade.ts}$ 

Explain and demonstrate how you have tested the geo-related features in you start code

https://github.com/Pelle-pr/fullstack-typesript-startcode/blob/main/test/positionFacadeTest.ts