NSQ1 S25 Exam

# Exam Information

The exam is 20 minutes for each student including set up, examination, grading and feedback.

You will draw one question with two parts. The first part focuses on the syllabus, the second part focuses on your course assignments.

# Exam Questions

## Question 1 – MongoDB Modelling

1. Explain the options for modelling data in MongoDB. Include modelling patterns.
2. Compare database modelling in SQL, document-based, and graph databases using your course assignments.

## Question 2 – MongoDB JSON Schema

1. Explain the elements of the JSON Schema in MongoDB and exemplify its used.
2. Compare realizing database models in SQL, document-based, and graph databases using your course assignments. Include mapping to a logical model where appropriate.

## Question 3 – Cypher patterns

1. Explain the different forms of patterns in Cypher and exemplify how they are used to query, create, update and delete data.
2. Compare data modification operations in assignment 2 and 3.

## Question 4 – MongoDB aggregation pipeline

1. Show how to use the MongoDB aggregation pipeline to query the data.
2. Compare selected queries from your 3 assignments.

## Question 5 – Operational aspects

1. Explain GraphQL schemas and show how GraphQL can be used.
2. Compare the GraphQL schemas of assignment 2 and 3. Demonstrate your MongoDB Cloud deployment. Include triggers.

## Question 6 – Cypher querying

1. Explain the clauses of the Cypher language and show how it is used for querying.
2. Compare selected queries from your 3 assignments.

## Question 7 – MongoDB CRUD operations / neo4j Modifying

1. Explain the MongoDB CRUD operations to insert, query, update and delete documents.
2. Compare data modification operations in assignment 2 and 3.