

# MongoDB Database Project

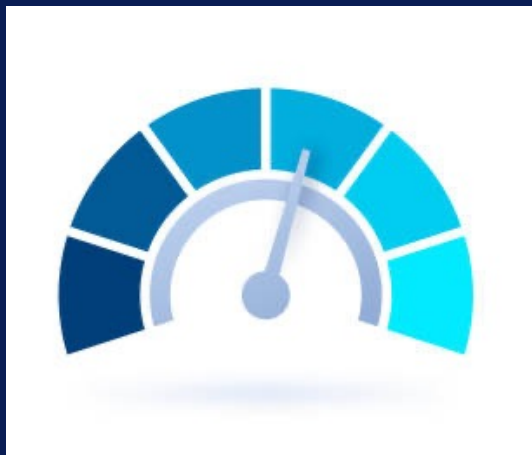
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## Session Aims

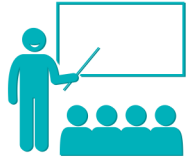
- *Understand some key design steps of MongoDB databases*
- *In this project we will use the example of an e-commerce database*
- *Create appropriate MongoDB collections and respective documents*
- *Practice schema design in MongoDB*
- *Being able to build data relationships across the database*





# Project: E-commerce database design





# Project outline

## *Problem & Objective:*

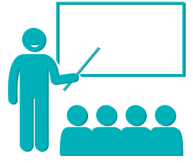
*A retail company selling Furniture and Office supplies hired you to build a non-relational database using MongoDB to store their online e-commerce data.*

*From now the commerce has been filling data entry information on an Excel spreadsheet. Your role is to migrate the data and build a database using MongoDB and build document relationships.*

## *Steps:*

- *Explore the superstore.csv dataset and define in the next step the data to be collected*
- *Define which entities will make a database collection and their respective data (key:value pairs)*
  - *For the company's products (name of the product, cost, etc.)*
  - *For their customers (names, billing and shipping addresses, etc.)*
- *How many database collections did you define?*
- *Create your database and collections on MongoDB*
- *Make appropriate relationships within your collections*
- *Add indexes of your choice to increase the performance of your database*
- *Implement some authorisation/security measures (optional)*

### **Schema design steps**

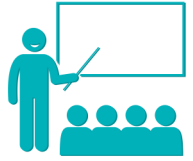


# Project- Explore your dataset- Step1

- *As you previously did in the SQL sessions, use code colouring in Excel to determine the entities of the dataset (there are different ways to build a database, your choices might be different from someone else and it is fine)*
- *Use a notepad/whiteboard to categorise your data*
- *Define how many collections you might need and named them accordingly*
- *Online tools to design a ERD diagram:*

<https://www.canva.com/online-whiteboard/>

<https://lucid.app/>

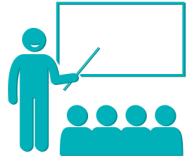


# Project- Build your database-

## Step2

- *Open MongoDB and build your database with an appropriate name*
- *Create you collections and each documents going in based on the entities and attributes you defined*
- *Use previous slides and notes you have for this task*
- *To import JSON data, use the following tool to convert the columns of interest into JSON:*

<https://www.convertcsv.com/>



# Project-Define relationships- step 3

- *In this task you will define relationships between entities contained in your database and use embedding or referencing to build your relationships.*
- *Based on your collections and documents information, try to determine which data could be used for a :*
  - *One to One relationship*
  - *One to Many*
  - *Many to Many*

**Work as a group for this task!**