

SEN-209: Designing and Implementing Databases
Lab 1: Spot the Database

Name: Thanawin Pattanaphol

ID: 01324096

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Five different systems, applications, or services that are likely powered by a database.

Name	Type of data stored	Database Type	Reasoning
YouTube	User profiles, video or media files, titles, descriptions and more.	Relational / SQL Database	YouTube most likely uses MySQL (or at least, a variant of MySQL) as there are various data relationships that YouTube employ; relational databases are very efficient at handling such usage of data.
Signal	Text messages, images, videos, metadata and others.	Relational / SQL	Signal, as an end-to-end encrypted messaging application, likely employs the use of relational databases as data should be structured into tables with rows and columns.
Gmail	Texts, images, videos, file attachments, metadata	NoSQL	Likely uses NoSQL databases to store email data as the need of high scalability and massive database storage must be met for a popular email service like Gmail.
Nextcloud	Media files, text files, documents, metadata	Relational / SQL	Likely uses a relational / SQL-based database, as Nextcloud does not require quick scalability but requires data relations between different applications (such as Photos, Files, Notes, and others), SQL based databases are suitable for said application.
Instagram	User profiles, photos, videos, texts, metadata	Relational / SQL	Likely uses relational / SQL database as some SQL-based DBMS are able to handle a large-scale complex queries and concurrent usage while also taking advantage of SQL's data relationality.