Microsoft Learn Student Ambassadors

How to integrate a database in a ASP .NET Core Web API

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What is a database?

A database is an organized collection of data stored and accessed electronically. It is an organized collection of structured information.

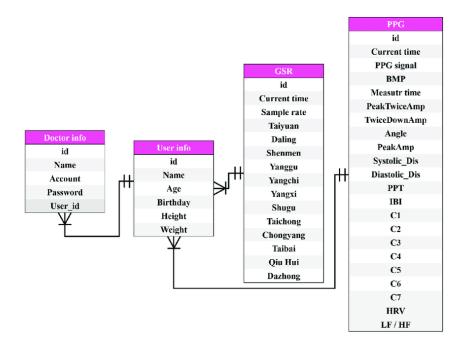
Small databases can be stored on a file system, while large databases are hosted on computer clusters or cloud storage

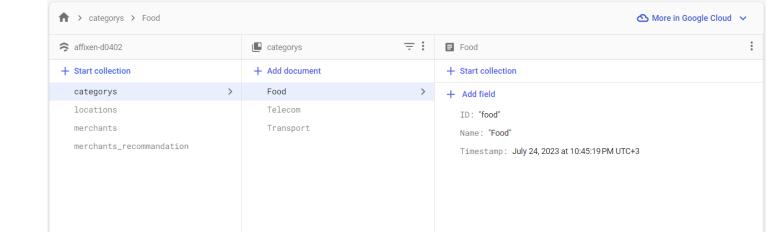


Classification

- Relational database management systems (RDBMSs): Oracle, Microsoft SQL Server,
- MySQL, PostgreSQL, IBM DB2, Hive
- XML Databases: BaseX, eXist-db
- Object-oriented DBMSs: ObjectDB, Caché
- NoSQL DBMSs:
 - Key-Value DBMSs: Riak, Redis
 - Document-oriented DBMSs: *MongoDB*, Apache CouchDB
 - Column-oriented DBMSs: Apache HBase, Cassandra
 - Graph DBMSs: Neo4J

SQL vs No-SQL





Code first vs. Database first

Code-First:

- Requires that you define everything in code.
- Provides full control over the code rather than database activity.
- Can be more flexible and easier to maintain than other approaches.
- EF takes care of creating/updating the database schema based on your code.

Database-First:

- Begins with an existing database schema as the master.
- Any changes in the schema need to be updated in the model manually.
- Can be easier to use when working with large databases.
- Can be useful when working with databases that have complex relationships between tables.

Questions?

