# What this book covers

[Chapter 1](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/e231b4a3-52b9-4de8-8ec4-143e9504fd41.xhtml), Introduction to NoSQL Databases, introduces the topic of NoSQL and distributed  databases. The design principles and trade-offs involved in NoSQL database design are described. These design principles provide context around why individual databases covered in the following chapters are designed in a particular way and what constraints they are trying to optimize for.

[Chapter 2](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/88044e6a-46a9-44f0-ad9c-d8f9a1a60584.xhtml), MongoDB, covers installation and basic CRUD operations. High-level concepts such as indexing allow you to speed up database operations, sharding, and replication. Also, it covers data models, which help us with application database design.

[Chapter 3](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/aa023b5d-65c8-459c-aca0-046e17f36767.xhtml), Neo4j, introduces the Neo4j graph database. It discusses Neo4j's architecture, use cases, administration, and application development.

[Chapter 4](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/640fe872-6e7d-4ac7-9129-5ea96182cab6.xhtml), Redis, discusses the Redis data store. Redis’ unique architecture and behavior will be discussed, as well as installation, application development, and server-side scripting with Lua.

[Chapter 5](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/20d33d2c-c32d-427a-b5d2-235c79341d81.xhtml), Cassandra, introduces the Cassandra database. Cassandra’s highly-available, eventually consistent design will be discussed along with the appropriate use cases. Known anti-patterns will also be presented, as well as production-level configuration, administration, and application development.

[Chapter 6](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/b7c57962-56bc-40cc-9ab2-57484d6d4039.xhtml), HBase, introduces HBase, that is, the Hadoop Database. Inspired by Google's Bigtable, HBase is a widely deployed key-value store today. This chapter covers HBase's architectural internals, data model, and API.

[Chapter 7](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/62684038-c54f-45de-a14f-e483b16e608c.xhtml), DynamoDB, covers how to set up a local and AWS DynamoDB service and perform CRUD operations. It also covers how to deal with partition keys, sort keys, and secondary indexes. It covers various advantages and disadvantages of DynamoDB over other databases, which makes it easy for developers to choose a database for an application.

[Chapter 8](https://learning.oreilly.com/library/view/seven-nosql-databases/9781787288867/b436f1fc-f8ea-4010-94ce-c355750f555d.xhtml), InfluxDB, describes InfluxDB and its key concepts and terms. It also covers InfluxDB installation and configuration. It explores the query language and APIs. It helps you set up Telegraf and Kapacitor as an InfluxDB ecosystem's key components to collect and process data. At the end of the chapter, you will also find information about InfluxDB operations.