Defining Databases:

- Relational
- Key-Value
- In-Memory
- Document
- Graph
- Time Series
- Wide Column
- Ledger

Relational Databases:

1. Amazon Aurora:
   - A MySQL and PostgreSQL compatible database built for cloud

2. Amazon RDS:
   - Easily set up, use and scale multiple database engines

3. Amazon Redshift:
   - A cloud data warehouse

Key-Value Database:

1. Amazon DynamoDB:
   - Fast and flexible NOSQL database for any scale
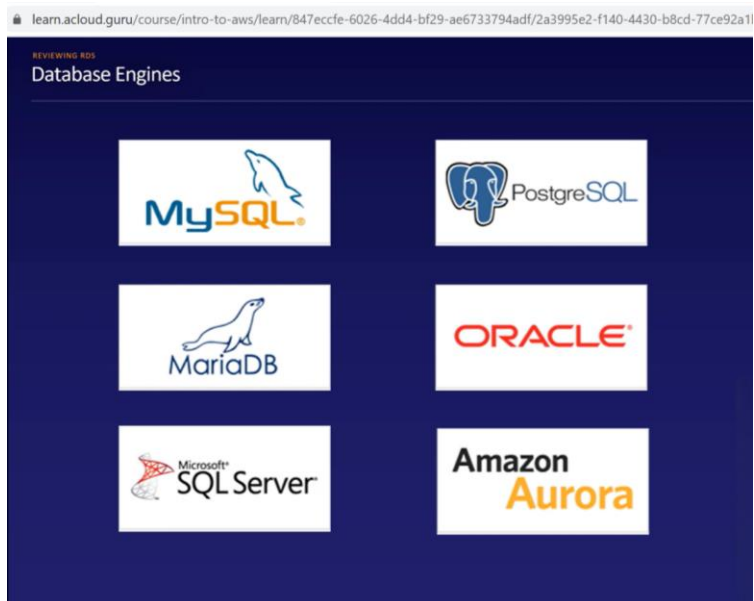
In-Memory Database:

1. Amazon ElastiCache:
   - Managed, in-memory data store service for Redis and Memcached

Document Database:

1. Amazon DocumentDB:
   - mongoDB compatible fast and scalable, highly available document database
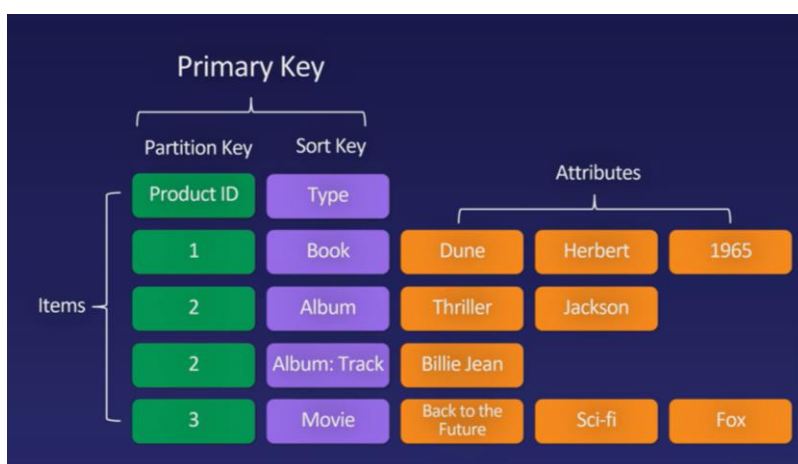
Reviewing RDS:

- easy to setup
- easy to administer
- fully managed
- scalable
- automated backups
- automatic host replacement
- cost effective
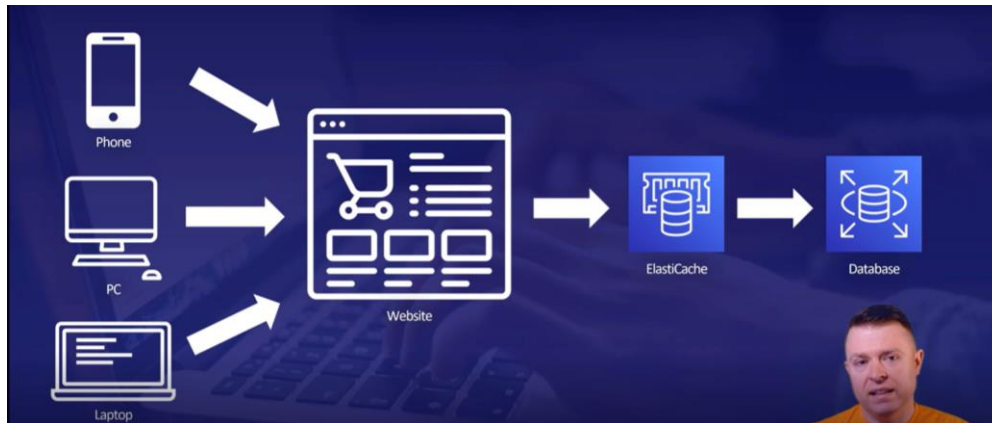
Discussing DynamoDB:

- NOSQL
- Key-value document database
- Single digit millisecond performance
- Fully managed
- Works in multiple regions
- Built in security, backup and restore
- Can handle more than 20,000,000 requests per second
- Works great with serverless
- Works get for mobile application data

Example:

Evaluating ElastiCache:

- Amazon ElastiCache is a fully managed, in-memory caching service supporting flexible, real-time use cases.
- You can use ElastiCache for caching, which accelerates application and database performance, or as a primary data store for use cases that don't require durability like session stores, gaming leaderboards, streaming, and analytics.

Two Engines:

- No hardware or patching is required.
- Gives extreme performance

1. Redis
2. Memcached