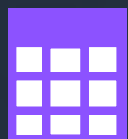


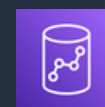


# Cloud Databases and their types



## Relational

Traditional applications, enterprise resource planning (ERP), customer relationship management (CRM), ecommerce



Amazon Redshift



Amazon RDS

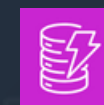


Amazon Aurora



## Key-Value

High-traffic web applications, ecommerce systems, gaming applications

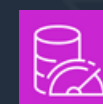


Amazon DynamoDB



## In-memory

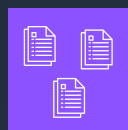
Caching, session management, gaming leaderboards, geospatial applications



Amazon MemoryDB

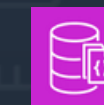


Amazon ElastiCache



## Document

Content management, catalogs, user profiles



Amazon DocumentDB

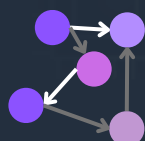


## Wide column

High-scale industrial apps for equipment maintenance, fleet management, and route optimization

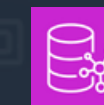


Amazon Keyspaces



## Graph

Fraud detection, social networking, recommendation engines

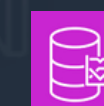


Amazon Neptune



## Time series

Internet of Things (IoT) applications, DevOps, industrial telemetry



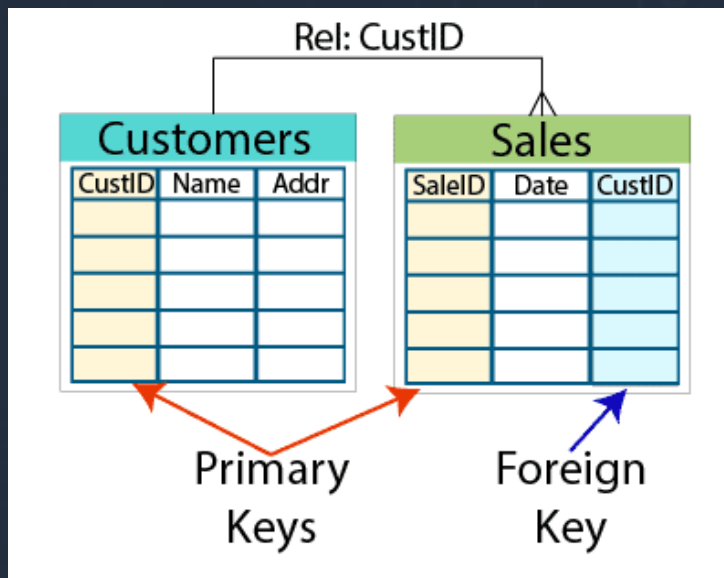
Amazon Timestream

Learn how to get started →



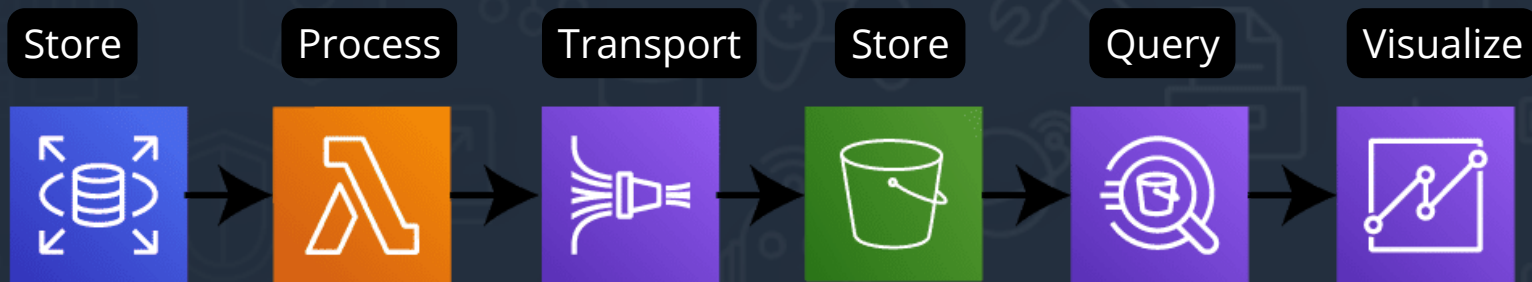
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# Relational databases



Relational databases store data with predefined schemas and relationships between them. These databases are designed to support ACID transactions, and maintain referential integrity and strong data consistency.

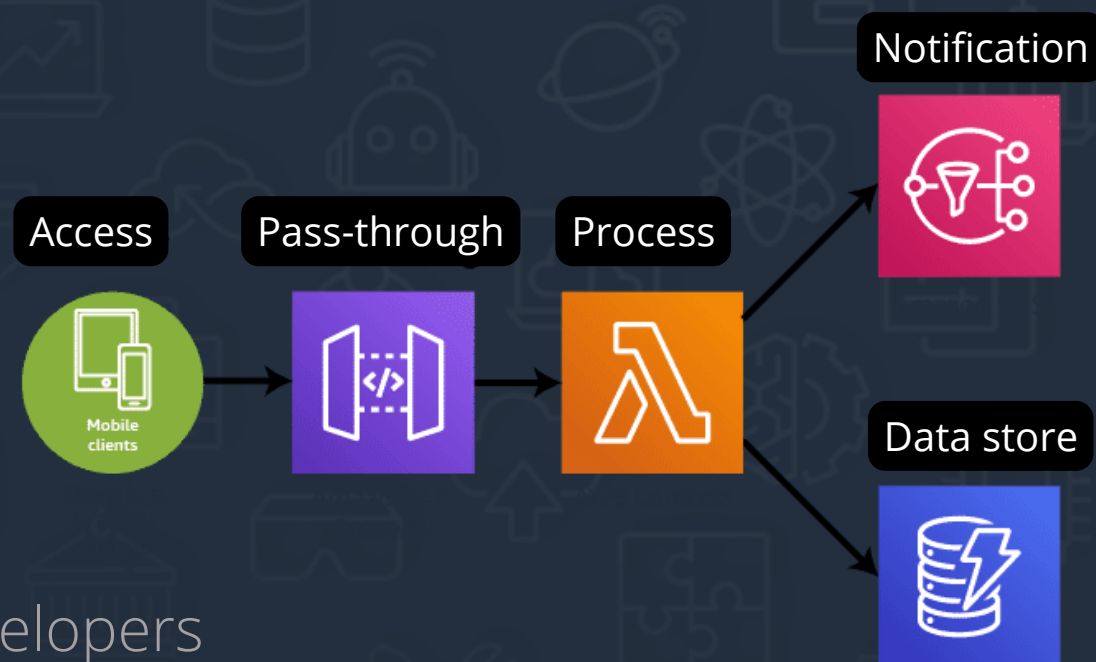
## Use case example: Real-time analytics architecture



# Non-relational databases

Characteristic	Relational	Non-relational
Representation	Multiple tables, each containing columns and rows	Collection of data in a single table with keys and values
Data design	Normalized relational or dimensional data warehouse	Denormalized document, wide column, or key-value
Optimization	Optimized for storage	Optimized for compute
Query style	Language: SQL	Language: manyUses object querying
Scalability	Vertically	Horizontally
Implementation	OLTP business systems or OLAP	OLTP web/mobile apps

## Use case example: Mobile application backend architecture



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# Learn more with courses and step-by-step tutorials:

- ☀️ AWS Purpose Built Databases workshop: [workshop.aws](https://workshop.aws)
- ☀️ AWS Database Offerings course: [skillbuilder.aws](https://skillbuilder.aws)
- ☀️ AWS short tutorials: [aws.amazon.com/getting-started](https://aws.amazon.com/getting-started)
- ☀️ AWS Data Analytics Cloud Quest: [skillbuilder.aws](https://skillbuilder.aws)



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