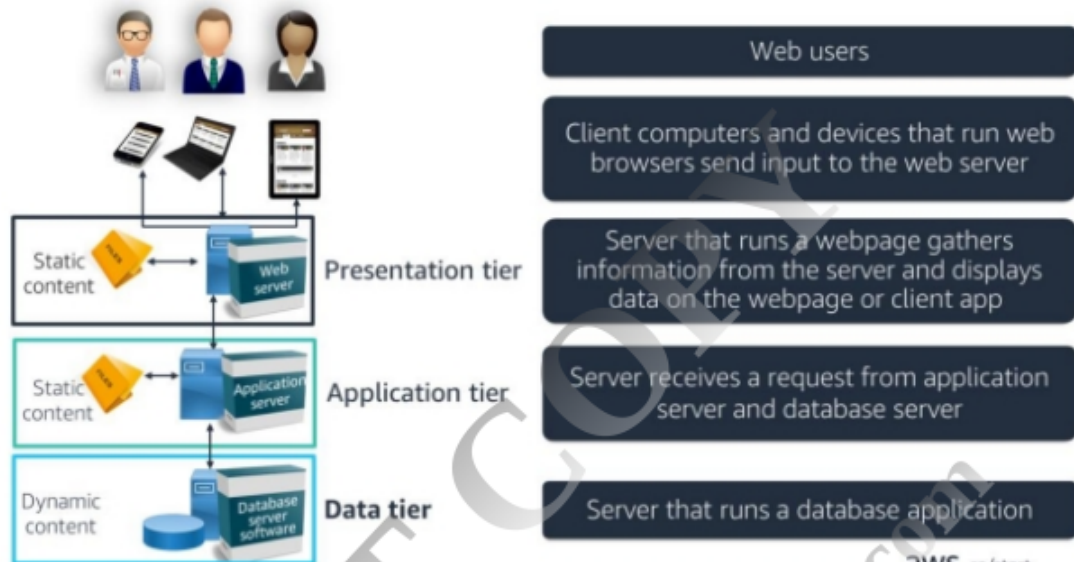



Direct interaction requires the user to know how to issue a SQL command in a specific DBMS.

## Three-tier application with web application



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In a three-tier application, users engage in indirect interaction when they use a database. Communication between the user and the database involves a frontend interface or a presentation tier (or layer).



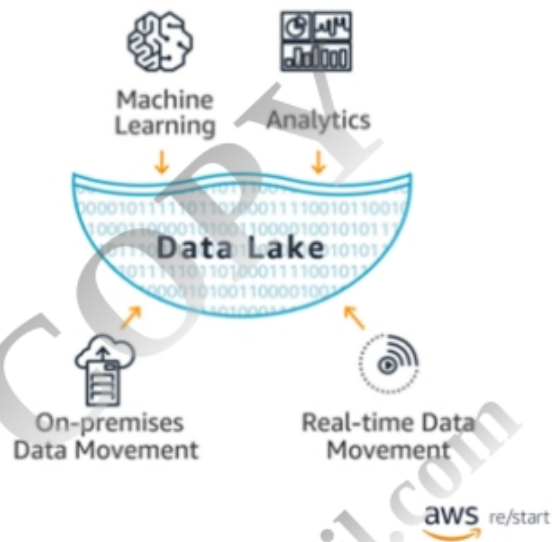
Emerging data storage technologies

DO NOT COPY  
bufetekaye.22@gmail.com

## Data lake

### A cloud memory bank

- You can run different types of analytics—including dashboards, visualizations, big data processing, real-time analytics, and machine learning—to guide better decisions.



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A data lake is a centralized repository that stores, manages, and distributes all kinds of data that an organization creates, stores, and operates. Types of data can include data from user database applications, files, or documents. You can store your data as-is, without needing to structure the data first.

## Checkpoint questions



A \_\_\_\_\_ database is often referred to as a SQL database.



What is the purpose of a database management system (DBMS)?

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Answers:

1. A relational database
2. Database management system (DBMS) is software that provides database functionality.

## Key takeaways



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- A **relational database**, which is often referred to as a **SQL database**, enables data to be spread across multiple tables.
- A **nonrelational database**, which is often referred to as a **NoSQL database**, does not use a table structure to store data.
- A **database management system (DBMS)** is software that provides database functionality.
- Four examples of **data interaction** include direct interaction, client-server, embedded in application code, and three-tier application with web application.
- A **data lake** is like a cloud memory bank.

aws re/start

Some key takeaways from this lesson include:

- A **relational database**, which is often referred to as a **SQL database**, enables data to be spread across multiple tables.
- A **nonrelational database**, which is often referred to as a **NoSQL database**, does not use a table structure to store data.
- A **database management system (DBMS)** is software that provides database functionality.
- Four examples of **data interaction** include direct interaction, client-server, embedded in application code, and three-tier application with web application.
- A **data lake** is like a cloud memory bank.