SQL Tutorial

IntelliPaat
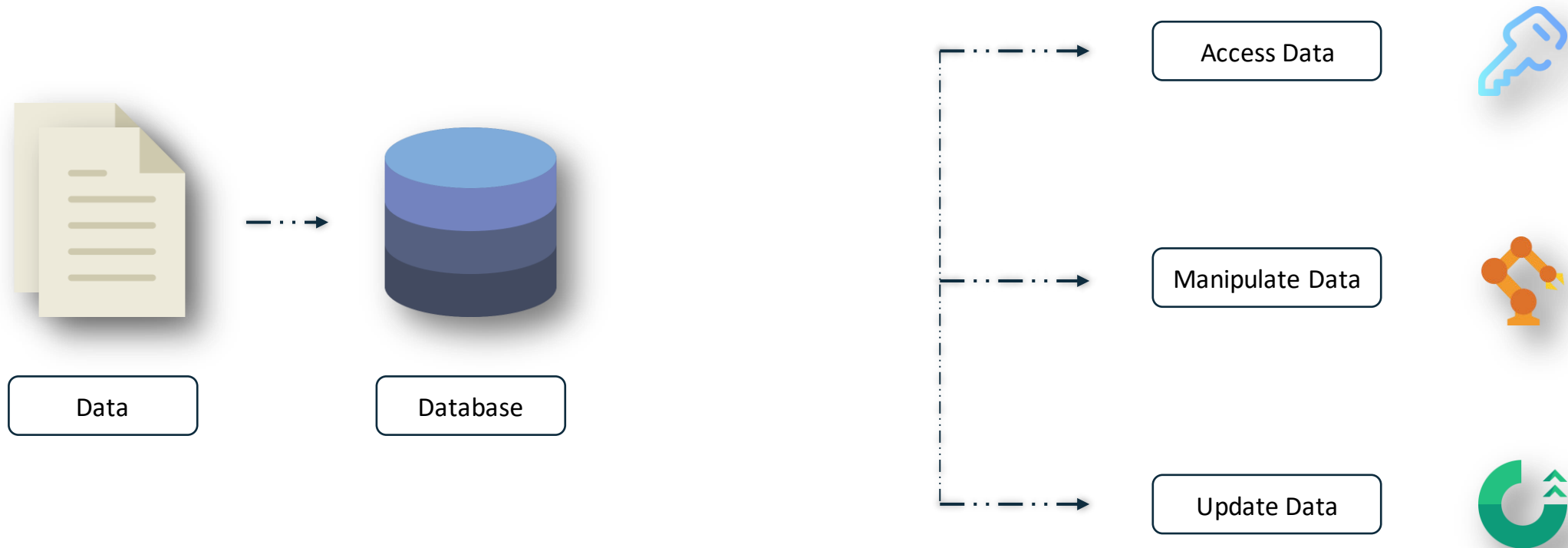
SQL

Agenda

1. What Is a Database?

2. Types of Database Architecture

3. Introduction to SQL

4. Tables in SQL

What Is a Database?

An organized collection of data stored in an electronic format

Data

Database

Access Data

Manipulate Data

Update Data

Database Management System

DBMS is a system software for creating and managing databases.

Database

DBMS

Types of Database Architecture

File Server
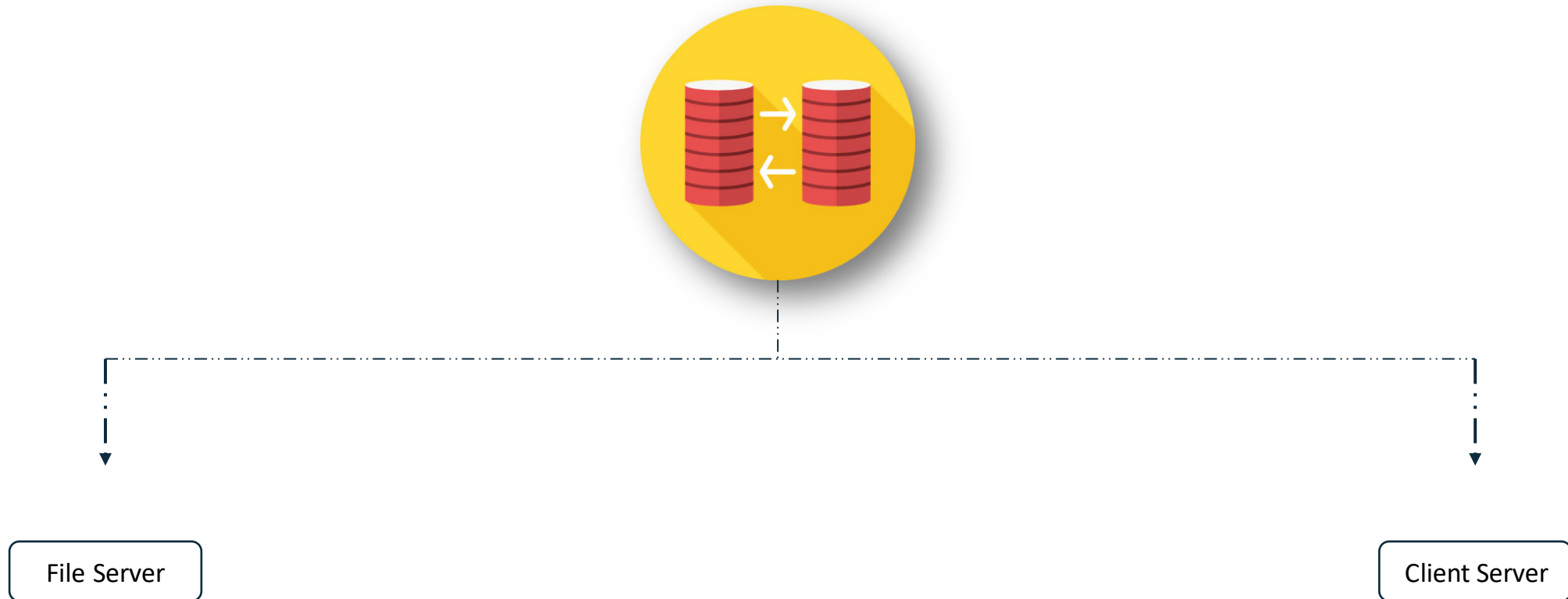
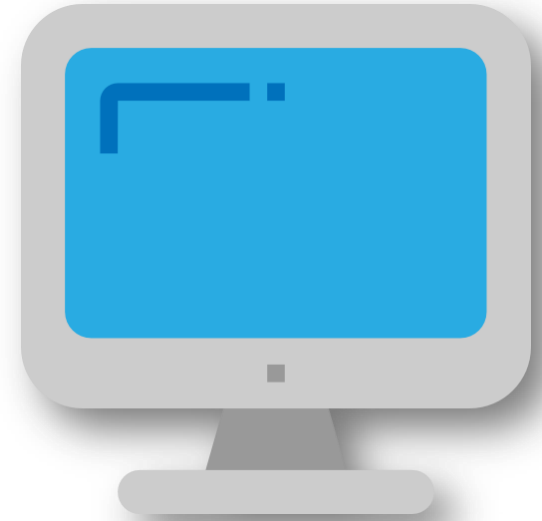**Client Server**

File Server Architecture

Files

Local System

File Server Architecture

Original File

Copy

Changes in the Original File

Do Not Reflect in the Copy

File Server Architecture

Server/Local File System
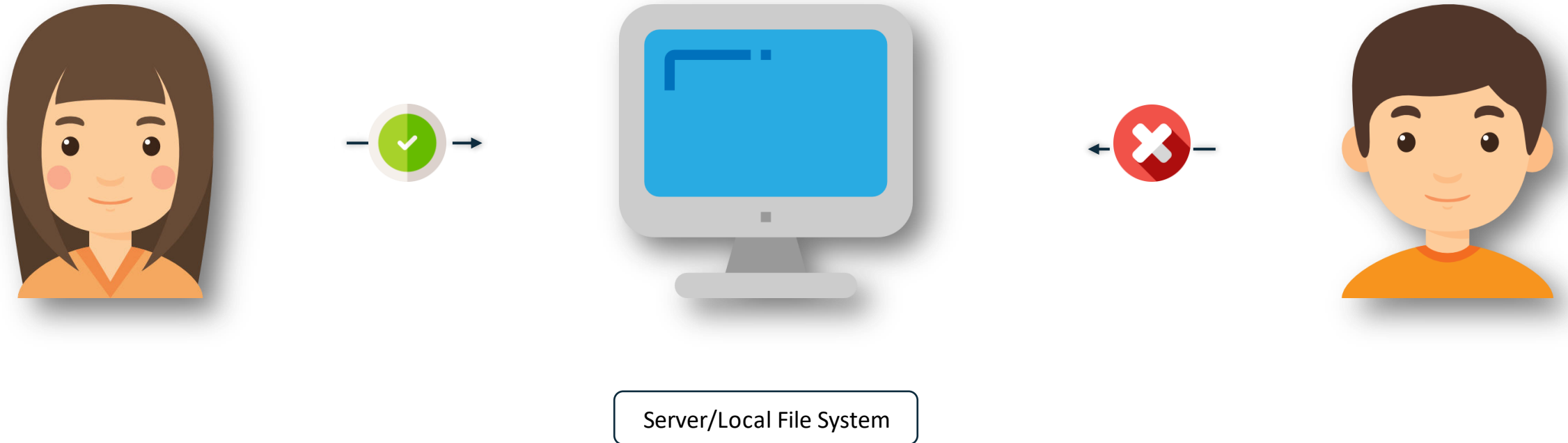
Client Server Architecture

OLE DB Components

OLE DB Components

OLE DB Components

Network server

Database server

Database

Legend

—— Solution calling local DB components

---- OLE DB components passing query requests to database server

-- -- Database server returning records to local OLE DB components and then back to solution
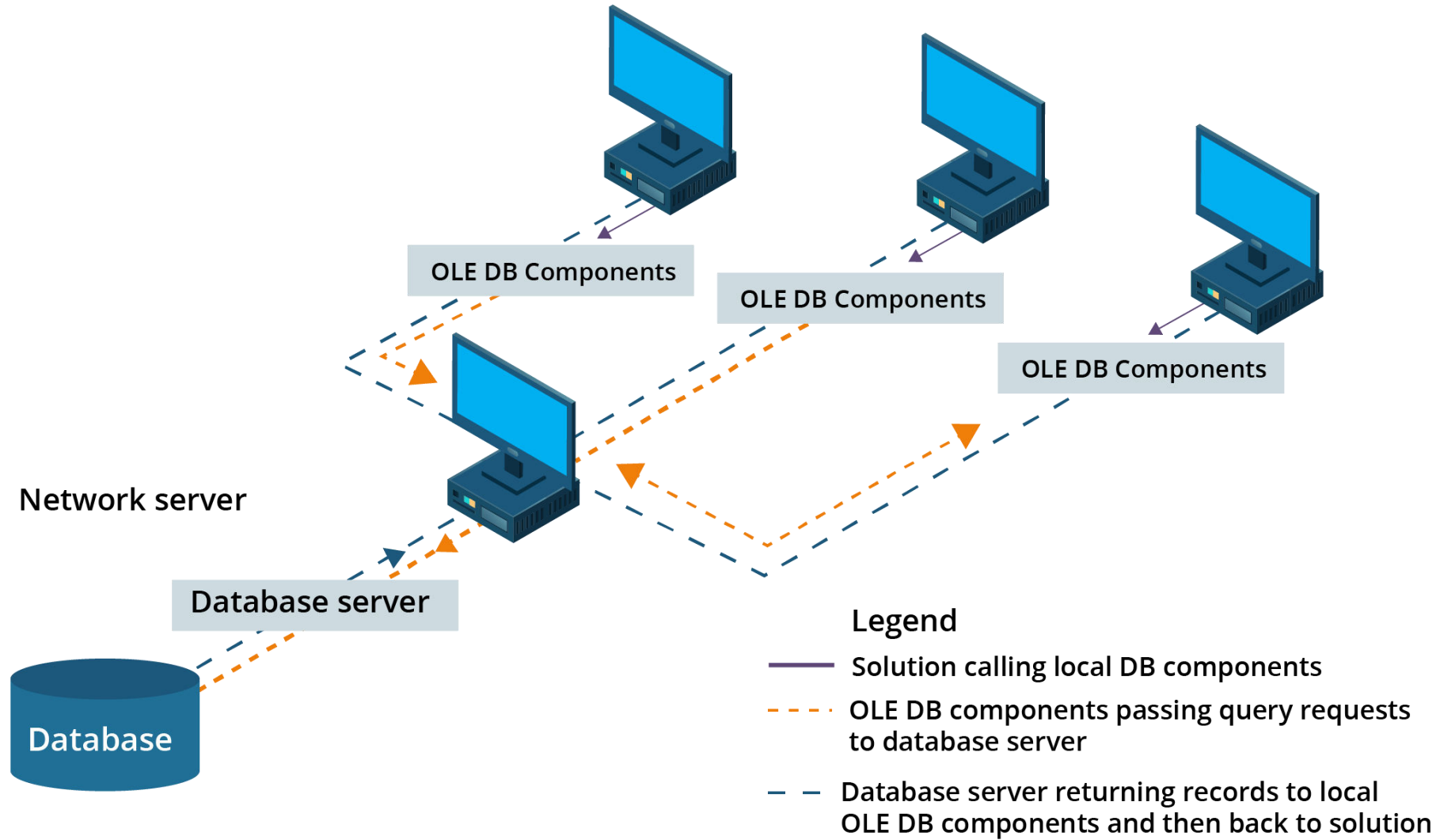
Introduction to SQL

SQL stands for Structured Query Language which is a standard language for accessing and manipulating databases.
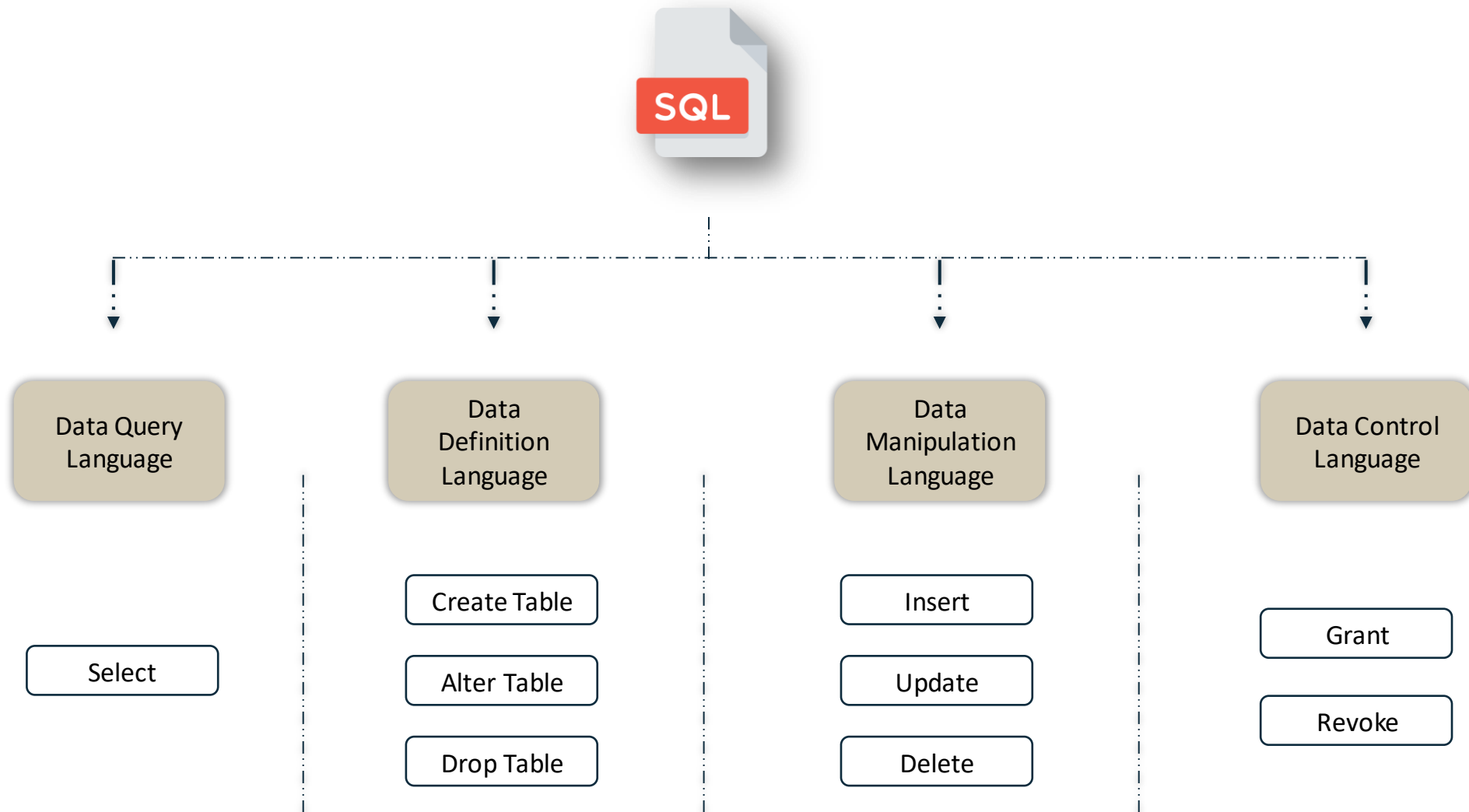
Categories of SQL Commands

SQL

Data Query Language	Data Definition Language	Data Manipulation Language	Data Control Language
Select	Create Table	Insert	Grant
	Alter Table	Update	Revoke
	Drop Table	Delete	

Tables in SQL

A table is a database object which comprises rows and columns.

e_id	e_name	e_salary	e_age	e_gender	e_dept
1	Sam	95000	45	Male	Operations
2	Bob	80000	21	Male	Support
3	Anne	125000	25	Female	Analytics
4	Julia	73000	30	Female	Analytics
5	Matt	159000	33	Male	Sales
6	Jeff	112000	27	Male	Operations

Fields and Records

e_id	e_name	e_salary	e_age	e_gender	e_dept
1	Sam	95000	45	Male	Operations
2	Bob	80000	21	Male	Support
3	Anne	125000	25	Female	Analytics
4	Julia	73000	30	Female	Analytics
5	Matt	159000	33	Male	Sales
6	Jeff	112000	27	Male	Operations

Record

e_id	e_name	e_salary	e_age	e_gender	e_dept
1	Sam	95000	45	Male	Operations
2	Bob	80000	21	Male	Support
3	Anne	125000	25	Female	Analytics
4	Julia	73000	30	Female	Analytics
5	Matt	159000	33	Male	Sales
6	Jeff	112000	27	Male	Operations

Field

Fields

A field provides specific information about the data in a table.

e_id	e_name	e_salary	e_age	e_gender	e_dept
1	Sam	95000	45	Male	Operations
2	Bob	80000	21	Male	Support
3	Anne	125000	25	Female	Analytics
4	Julia	73000	30	Female	Analytics
5	Matt	159000	33	Male	Sales
6	Jeff	112000	27	Male	Operations

Records

Each individual entry in a table is called a record.

e_id	e_name	e_salary	e_age	e_gender	e_dept
1	Sam	95000	45	Male	Operations
2	Bob	80000	21	Male	Support
3	Anne	125000	25	Female	Analytics
4	Julia	73000	30	Female	Analytics
5	Matt	159000	33	Male	Sales
6	Jeff	112000	27	Male	Operations

Quiz

Quiz

What does SQL stand for?

A   Strong Question Language

B   Structured Question Language

C   Structured Query Language

D   None of these

Solution

What does SQL stand for?

A	Strong Question Language
B	Structured Question Language
C	Structured Query Language
D	None of these

Quiz

Which of these are different categories of SQL commands?

A   Data Query Language

B   Data Definition Language

C   Data Manipulation Language

D   All of these

Solution

Which of these are different categories of SQL commands?

A	Data Query Language

B	Data Definition Language

C	Data Manipulation Language

D	All of these

Quiz

Grant & Revoke come under which category of SQL commands?

A	Data Query Language
B	Data Definition Language
C	Data Manipulation Language
D	Data Control Language

Solution

Grant & Revoke come under which category of SQL commands?

A   Data Query Language

B   Data Definition Language

C   Data Manipulation Language

D   Data Control Language

Quiz

Which of these is true about Records?

A	One individual column in a table is known as a record
B	One individual row in a table is known as a record
C	A record should have data of only one type
D	Each cell in a record can be of different data type

Solution

Which of these is true about Records?

A	One individual column in a table is known as a record
B	One individual row in a table is known as a record
C	A record should have data of only one type
D	Each cell in a record can be of different data type

Thank You