WEEK 4

What is an SQL **Table**?

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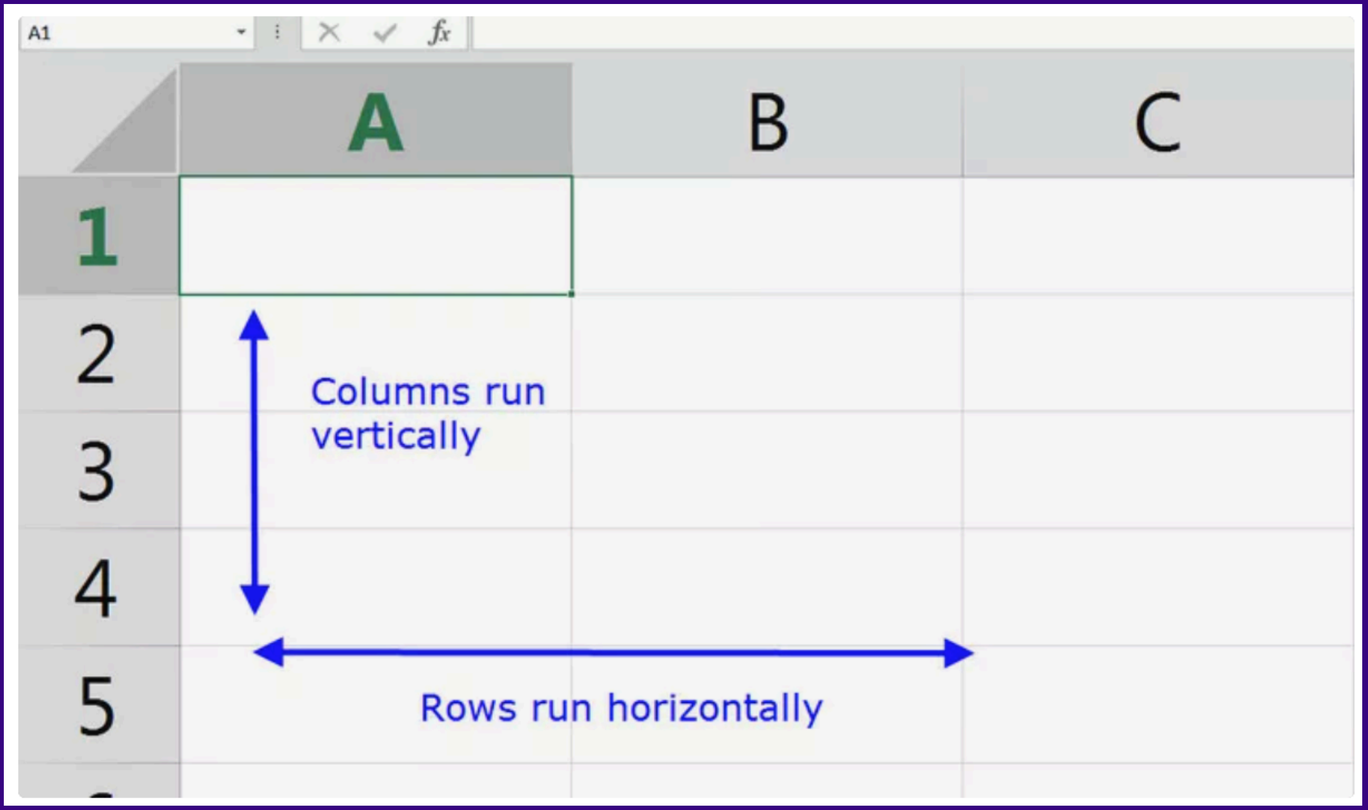
TABLE OF CONTENT

Tabular Data Storage



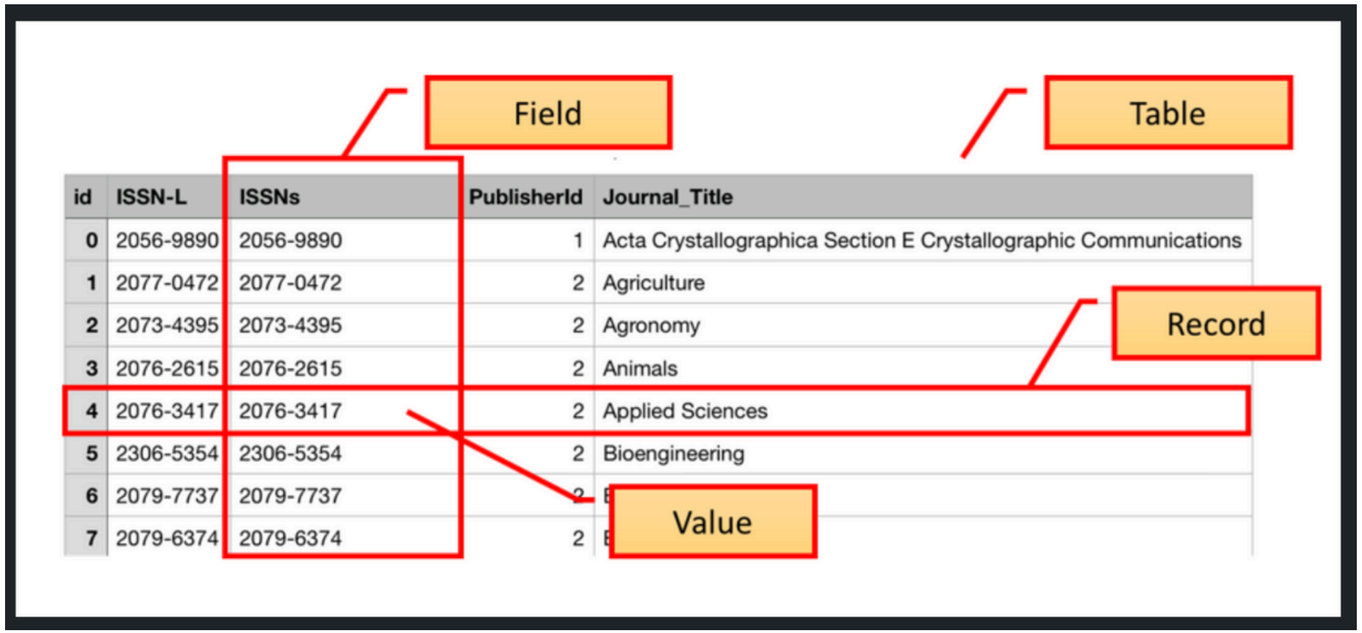
Data is organized in a table format consisting of rows (records) and columns (fields).

Row: Represents an individual entry in the table.

Column: Represents an attribute or characteristic, similar to variables in programming.

Value: A single element of data, like a cell in a spreadsheet.

Key Components of a Table



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0	2056-9890	2056-9890	1	Acta Crystallographica Section E Crystallographic Communications
1	2077-0472	2077-0472	2	Agriculture
2	2073-4395	2073-4395	2	Agronomy
3	2076-2615	2076-2615	2	Animals
4	2076-3417	2076-3417	2	Applied Sciences
5	2306-5354	2306-5354	2	Bioengineering
6	2079-7737	2079-7737	2	
7	2079-6374	2079-6374	2	

Row (Record):

- Represents an individual data entry.
- Example: A single person’s name and details in a contact list.

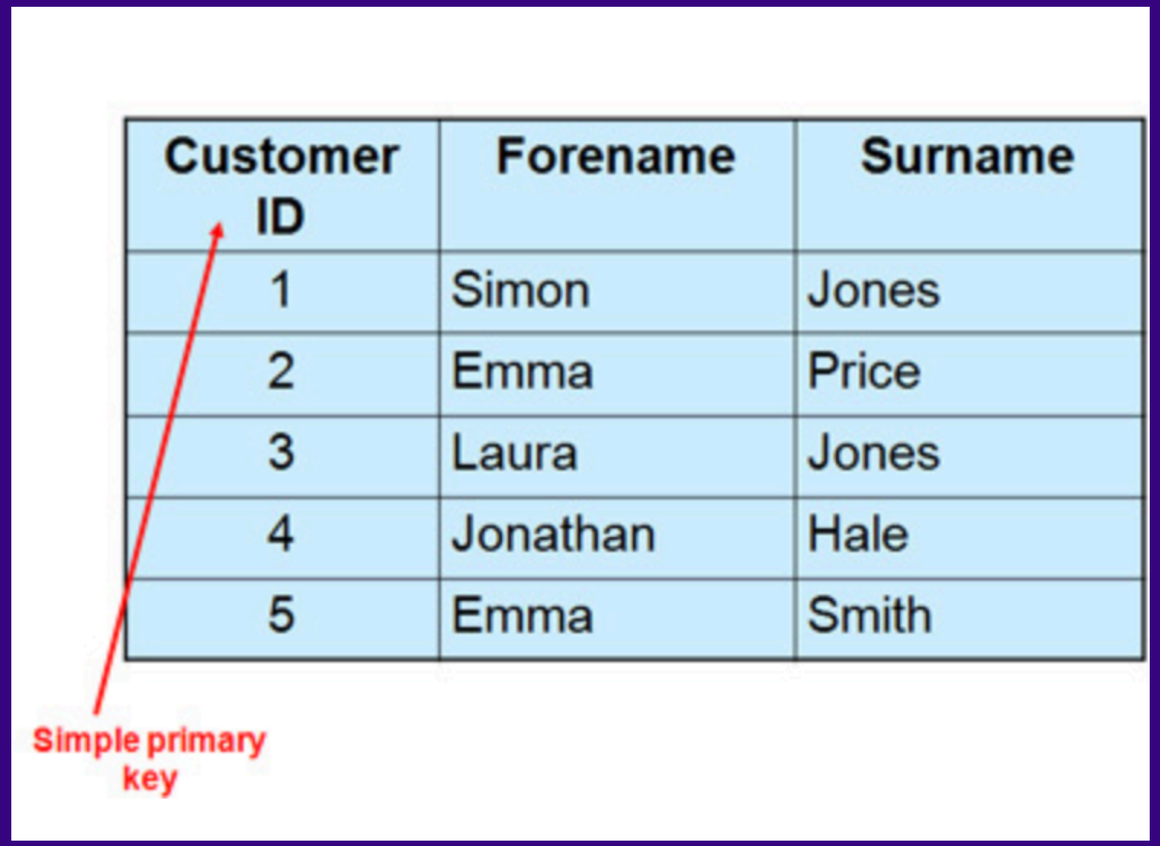
Column (Field):

- Represents specific attributes or characteristics.
- Example: Columns labeled "Name," "Email," "Phone Number."

Value (Field Data):

- A single piece of information at the intersection of a row and column.
- Example: "John Doe" in the "Name" column.

Primary Key



A unique identifier for each entry in the table.

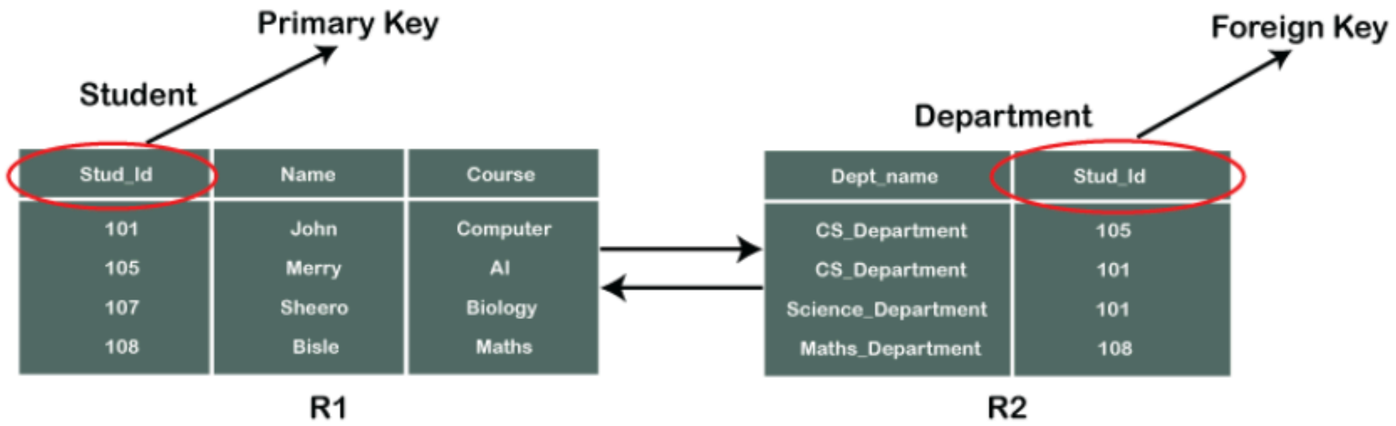
Natural Primary Key:

- Derived from existing data.
- Examples: Email addresses, user IDs, device IDs.

Purpose:

- Ensures each record is distinct.

Foreign Key



A column or set of columns that links one table to another.

Purpose:

- Establishes relationships between tables.
- References the primary key in the related table.

Examples:

- Parent Table: Customers (Primary Key: Customer ID).
- Child Table: Orders (Foreign Key: Customer ID).

Recap and Next Steps

- Summary:
  - Tables consist of rows, columns, and values.
  - Primary keys uniquely identify records.
  - Foreign keys establish links between tables.

- Next Steps:
  - Practice creating tables with primary and foreign keys.
  - Complete Week 4 Quiz