📄 Easy MySQL Notes (Hinglish)

MySQL ek **Relational Database Management System (RDBMS)** hai jo SQL (Structured Query Language) ka use karke data ko store, manage, aur access karta hai.

Yeh mainly websites, apps, aur software applications mein use hota hai jahan large amount of data ko handle karna hota hai.

MySQL ek open-source tool hai, jiska matlab hai ki yeh free mein use kiya ja sakta hai.
Isse Oracle Company maintain karti hai.

📌 **Simple Words Mein:**
MySQL ek software hai jisme hum data save karte hain — jaise school ke students ke naam, contact number, marks, etc.

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2. Database Kya Hota Hai?

Database ek organized system hai jisme data ko store, manage aur access kiya jata hai.
Isme data tables ke form mein save hota hai, jisme rows aur columns hote hain.
Database ka use har jagah hota hai — banking, schools, companies, websites, etc.
Isse hum data ko efficiently handle aur retrieve kar sakte hain.

📌 **Example:**

- School database: Students ka naam, roll no., class
- Shop database: Products ka naam, price, quantity

◈ 3. Table Kya Hoti Hai?

Table ek structure hai jisme hum data ko row aur column ke form mein store karte hain.
Har table mein **columns** (fields) aur **rows** (records) hote hain.
Column define karta hai data ka type (jaise Name, Age), aur row ek entry ko represent karta hai.
Multiple tables ek hi database mein ho sakti hain.

ID Name Age

1 Rahul 16

2 Anjali 17

◆ 4. SQL Kya Hai?

SQL ka full form hai **Structured Query Language**.
Yeh ek language hai jiska use hum **MySQL database se baat karne** ke liye karte hain.

SQL ke through hum database mein data **insert, delete, update, search** kar sakte hain.

Yeh standard language hai jo sabhi relational databases mein use hoti hai.

📌 **Example Commands:**
SELECT, INSERT, DELETE, UPDATE

◆ 5. Important SQL Commands (Easy)

Command	Kaam	Example
CREATE	Naya table/database banata hai	CREATE TABLE students (...);
INSERT	Data add karta hai	INSERT INTO students VALUES (1, 'Rahul', 16);
SELECT	Data dikhata hai	SELECT * FROM students;
UPDATE	Data badlta hai	UPDATE students SET age=17 WHERE id=1;
DELETE	Data delete karta hai	DELETE FROM students WHERE id=1;

◆ 6. Data Types (Simple)

Type	Use	Example
INT	Number ke liye	5, 100
VARCHAR	Text ke liye	'Rahul'
DATE	Date ke liye	'2025-09-10'

◆ 7. Primary Key aur Foreign Key (Easy)

- **Primary Key**: Har row ka unique ID
  🔑 Example: Student ka Roll No
- **Foreign Key**: Dusre table se connection
  🔗 Example: Student table ka `class_id` → Class table

◆ 8. Joins (Simple Samjho)

Joins se hum 2 tables ka data jod sakte hain.

Type	Kya karta hai
INNER JOIN	Matching rows laata hai
LEFT JOIN	Left table ke sab rows laata hai
RIGHT JOIN	Right table ke sab rows laata hai

```sql
-- Database banana
CREATE DATABASE school;

-- Database use karna
USE school;

-- Table banana
CREATE TABLE students (
  id INT PRIMARY KEY,
  name VARCHAR(50),
  age INT
);

-- Data insert karna
INSERT INTO students VALUES (1, 'Rahul', 16);

-- Data dekhna
SELECT * FROM students;

-- Data update karna
UPDATE students SET age = 17 WHERE id = 1;

-- Data delete karna
DELETE FROM students WHERE id = 1;
```