

What is a Database? What is MySQL?

Imagine a School...

Think of a **school**. It has:

- Students
- Teachers
- Classes
- Subjects
- Marks

All this **information** needs to be **saved** somewhere. Like a **notebook** or **register**.

But what if there are **1000 students**? What if we want to:

- Find all students in Class 5?
- Know marks of a student?
- Add a new student?
- Remove a student who left?

We can't do this quickly with paper.

What is a Database?

A **database** is like a **super smart digital notebook** on a computer.

It stores **data** in a well-organized way so we can:

- ✓ Save it
- ✓ Search it

- ✓ Change it
 - ✓ Delete it
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What is MySQL?

MySQL (say it like "**My Ess Que Ell**") is a **tool** or **software** that helps us:

- **Create** databases
 - **Store** data
 - **Ask questions** to data (called **queries**)
 - **Get answers** super fast
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How Data Looks in a Database

Think of a **table** in your school classroom.

In MySQL, we also store data in **tables** like this:

ID	Name	Class	Marks
1	Meena	5	85
2	Raj	6	90
3	Kavita	5	78

Each table has:

- **Rows** (like each student)
 - **Columns** (like name, class, marks)
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What is SQL?

SQL means **Structured Query Language**.

It's a **language** we use to **talk** to the database.

We use SQL to:

- Add data (INSERT)
- Read data (SELECT)
- Change data (UPDATE)
- Remove data (DELETE)

It's like giving **instructions** to a smart notebook!

Example in Real Life

Imagine you have a **box of toys**.

Each toy has:

- Name (Car)
- Type (Vehicle)
- Color (Red)

If you want to find **all red toys**, you search by **color**.

That's how a **database works** – it finds exactly what you need, fast.

How to Install MySQL and Start Using It

Step 1: Install MySQL the Easy Way (with phpMyAdmin)

We will use a **toolkit** called **XAMPP** – it's like a schoolbag that gives you:

- MySQL (for databases)
 - phpMyAdmin (for using MySQL like a website)
 - Apache (ignore this for now)
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XAMPP Setup (For Windows/Mac):

1. Go to: 🖱️ <https://www.apachefriends.org/index.html>
2. Click **Download** for your OS (Windows/Linux/Mac)
3. Install it (click next-next-next – like installing a game)
4. Open **XAMPP Control Panel**
5. Click **Start** next to:
 - ☒ Apache
 - ☒ MySQL

You're now running your **MySQL Server**!

Step 2: Open phpMyAdmin (Your Friendly Interface)

1. Open your browser (Chrome or Firefox)
2. Type: <http://localhost/phpmyadmin>
3. You'll see a web panel that looks like this:

A list of databases on the left and some options on the right

Think of this like the **main gate of your database school** 🏡

Step 3: Create Your First Database

Let's say we want to store **student info**.

1. In phpMyAdmin, click **New**
 2. Give it a name: `school_database`
 3. Click **Create**
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Step 4: Create a Table Inside the Database

Now let's create a table called **students**.

1. Click on `school_database` from the left panel
2. Under **Create Table**, type:
 - Table Name: `students`
 - Number of Columns: `4` → Click Go

Now define the **columns**:

Name	Type	Length	Notes
id	INT	5	Primary key, Auto Increment
name	VARCHAR	100	Student name
class	VARCHAR	10	Class like 4A, 5B
marks	INT	3	Out of 100

Click **Save**

 Table Created!

Step 5: Add Data (Like Adding Students)

Click on **Insert** tab in the `students` table

Now add rows like:

id	name	class	marks
1	Meena	5A	85
2	Raj	6B	90
3	Kavita	5A	78

Click **Go**

✅ You've just added your first data to a database 🎉

Step 6: View Your Data

Click on the **Browse** tab

You'll see:

id	name	class	marks
1	Meena	5A	85
2	Raj	6B	90
3	Kavita	5A	78

👏 This is **real database** work – and you did it!