A laptop screen is shown in the background, displaying a line graph with a blue line and a pie chart with a green slice. The text is overlaid on the screen.

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database.

MySQL is open-source and free software under the GNU license. It is supported by Oracle Company.

What is Database?

It is very important to understand the **database** before learning **MySQL**.

A **database** is an application that stores the organized collection of records.

It can be accessed and managed by the user very easily.

It allows us to organize data into tables, rows, columns, and indexes to find the relevant information very quickly.

Each **database** contains distinct API for performing database operations such as creating, managing, accessing, and searching the data it stores.



What is **MySQL**?

MySQL is currently the most popular database management system software used for managing the relational database. It is open-source database software, which is supported by Oracle Company. It is fast, scalable, and easy to use database management system in comparison with Microsoft SQL Server and Oracle Database. It is commonly used in conjunction with PHP scripts for creating powerful and dynamic server-side or web-based enterprise applications.

It is developed, marketed, and supported by **MySQL AB, a Swedish company**, and written in C programming language and C++ programming language. The official pronunciation of MySQL is not the My Sequel; it is **My Ess Que Ell**. *However, you can pronounce it in your way.* Many small and big companies use MySQL. MySQL supports many Operating Systems like Windows

MySQL is a Relational Database Management System (**RDBMS**) software that provides many things, which are as follows:

- It allows us to implement database operations on tables, rows, columns, and indexes.
- It defines the database relationship in the form of tables (collection of rows and columns), also known as relations.
- It provides the Referential Integrity between rows or columns of various tables.
- It allows us to update the table indexes automatically.
- It uses many SQL queries and combines useful information from multiple tables for the end-users.

How **MySQL** works?

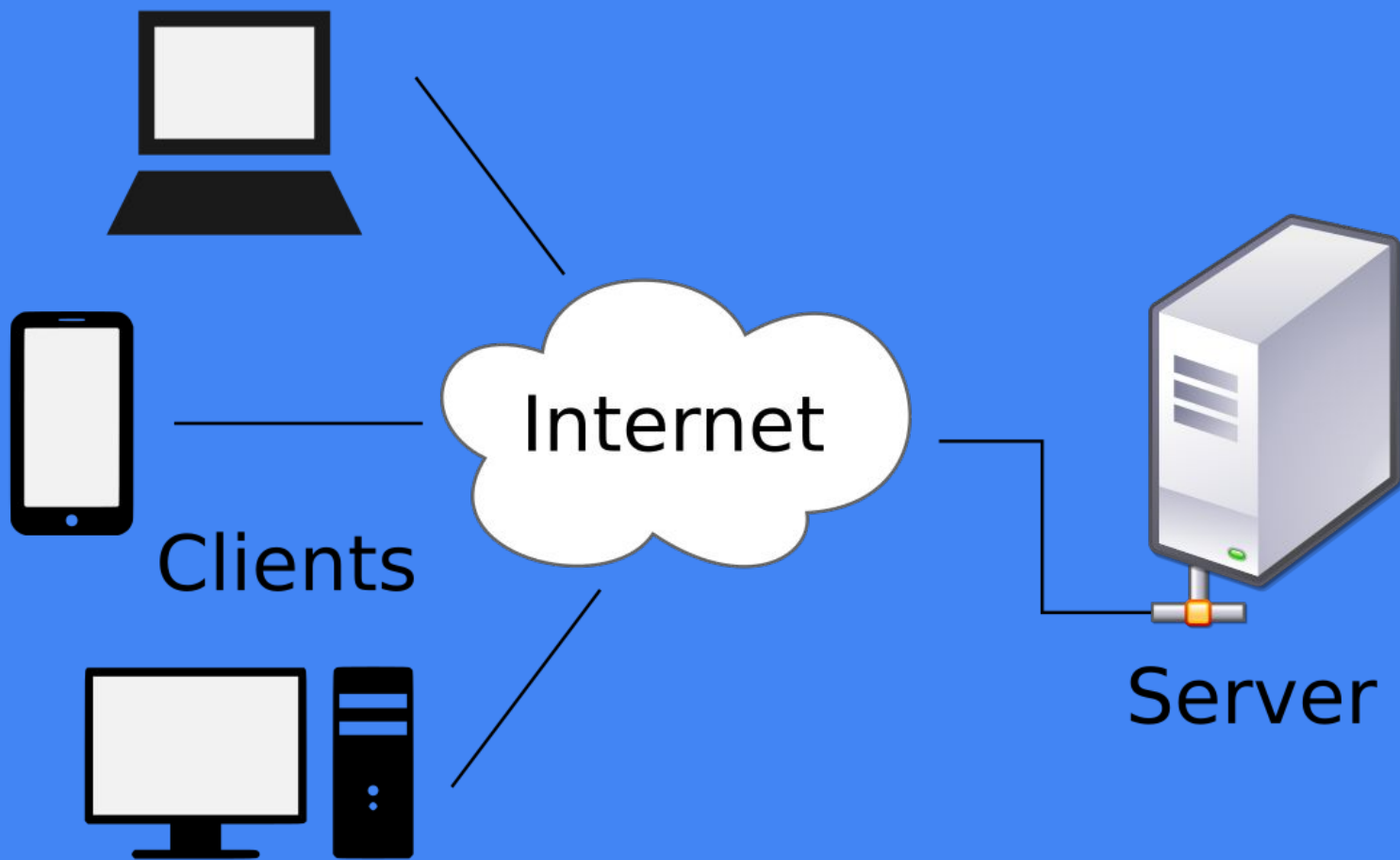


MySQL follows the working of Client-Server Architecture.

This model is designed for the end-users called clients to access the resources from a central computer known as a server using network services.

Here, the clients make requests through a graphical user interface (GUI), and the server will give the desired output as soon as the instructions are matched.

The process of **MySQL** environment is the same as the client-server model.



as a separate program and responsible for handling all the database instructions, statements, or commands. The working of MySQL database with MySQL Server are as follows:

1. MySQL creates a database that allows you to build many tables to store and manipulate data and defining the relationship between each table.
2. Clients make requests through the GUI screen or command prompt by using specific SQL expressions on MySQL.
3. Finally, the server application will respond with the requested expressions and produce the desired result on the client-side.

A client can use any MySQL GUI. But, it is making sure that your GUI should be lighter and user-friendly to make your data management activities faster and easier. Some of the most widely used MySQL GUIs are MySQL Workbench, SequelPro, DBVisualizer, and the Navicat DB Admin Tool. Some GUIs are commercial, while some are free with limited functionality, and some are only

MySQL is
becoming
so popular
because of
these
following
reasons:



- **MySQL** is a very powerful program that can handle a large set of functionality of the most expensive and powerful database packages.
- **MySQL** is customizable because it is an open-source database, and the open-source GPL license facilitates programmers to modify the SQL software according to their own specific environment.
- **MySQL** is quicker than other databases, so it can work well even with the large data set.
- **MySQL** supports many operating systems with many languages like PHP, PERL, C, C++, JAVA, etc.
- **MySQL** uses a standard form of the well-known SQL data language.
- **MySQL** is very friendly with PHP, the most popular language for web development.
- **MySQL** supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but this can be increased to 64GB.

History of MySQL

The project of MySQL was started in 1979 when MySQL's inventor **Michael Widenius** developed an in-house database tool called **UNIREG** for managing databases.

After that, UNIREG has been rewritten in several different languages and extended to handle big databases.

After some time, Michael Widenius contacted **David Hughes**, the author of mSQL, to see if Hughes would be interested in connecting mSQL to UNIREG's B+ ISAM handler to provide indexing to mSQL.

That's the way MySQL came into existence.