

INTRODUCTION

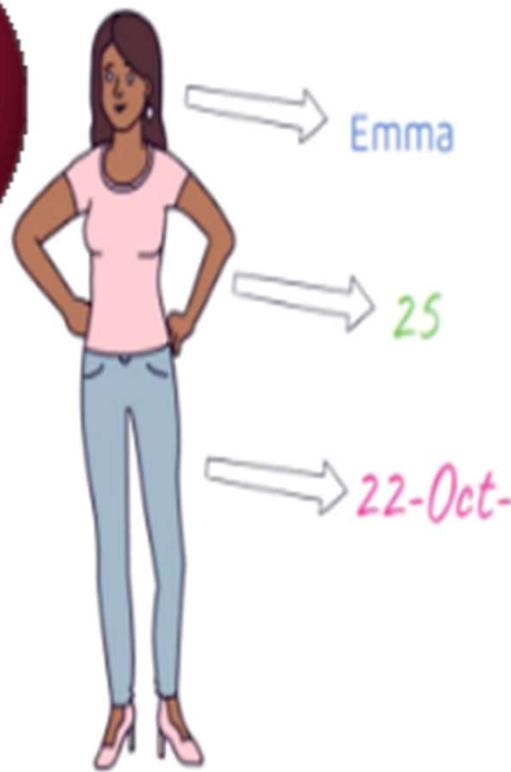
Presenting by Megha Tyagi
(Ninja)
Batch 26





- What is Data?
- What is Database?
- DBMS? How it works?
- Types of DBMS?
- Relational & Non-Relational Database
- Acid and Base Property
- What is Mysql?
- Architecture of Mysql
- History of Mysql
- Features of Mysql
- Alternatives of Mysql
- Difference b/w Mysql & Postgresql
- Mysql Terminologies
- Use cases of Mysql
- Popular websites using Mysql
- Create, Insert table and use of Operators in Mysql
- Limitations of Mysql
- Tool flow diagram
- Architecture Diagram
- Thankyou

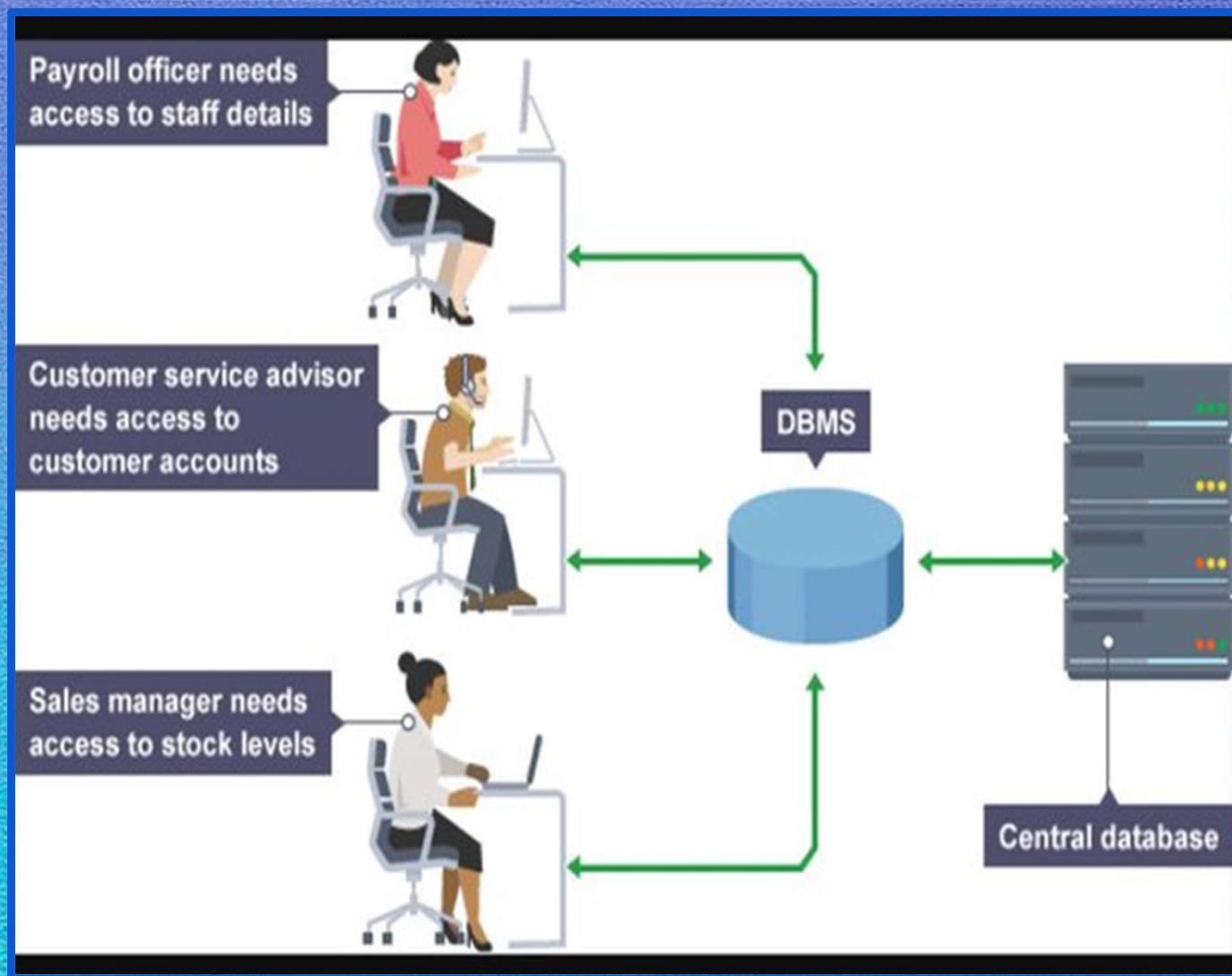
What is Data?

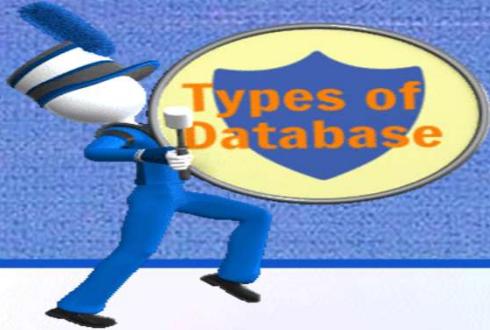


Database



DBMS? How it Works?





Relational databases

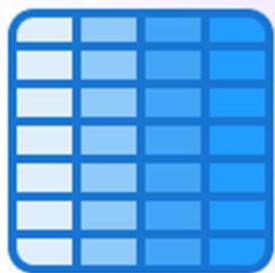


Table-based

Non-relational databases



Key-Value



Graph



Wide-column



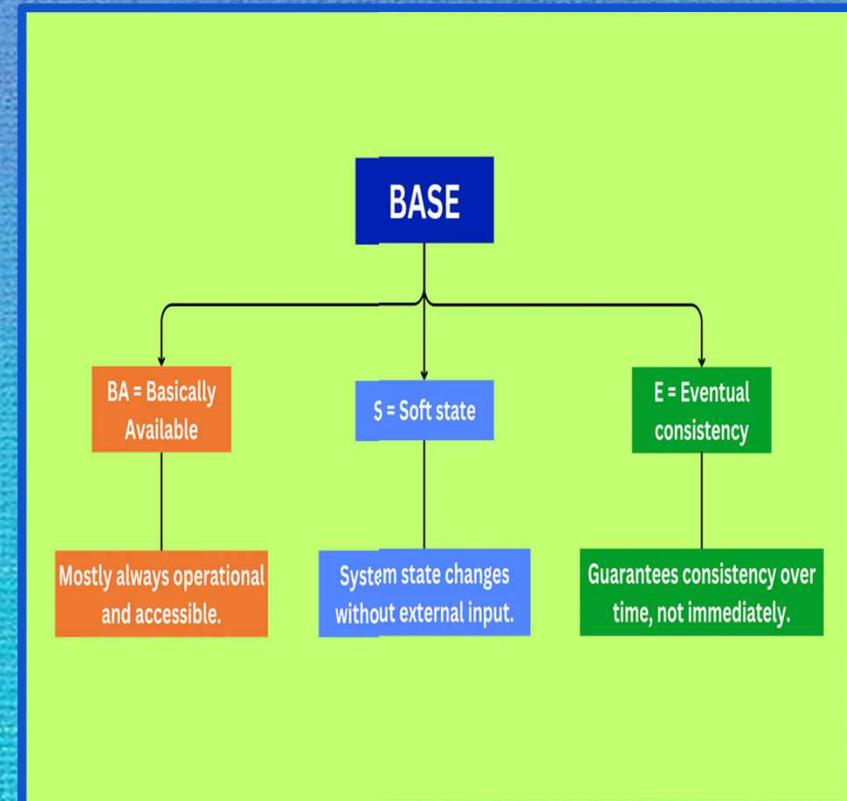
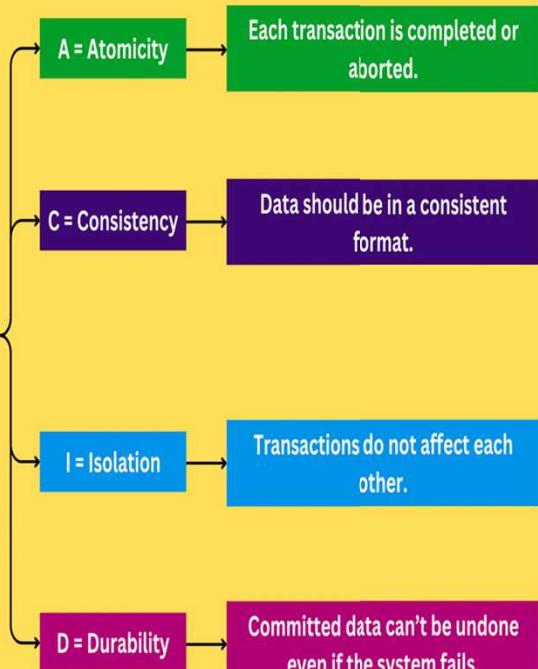
Document

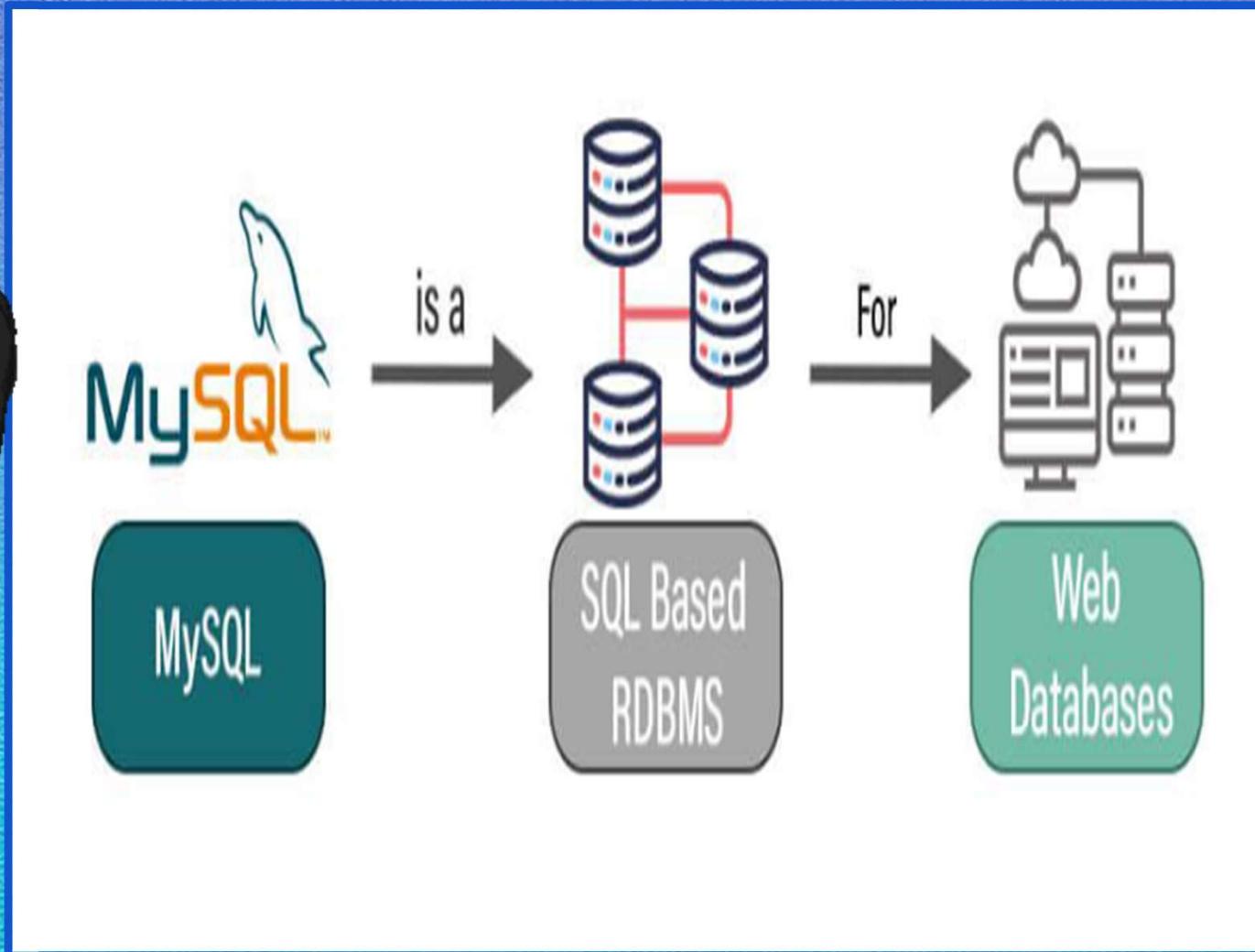
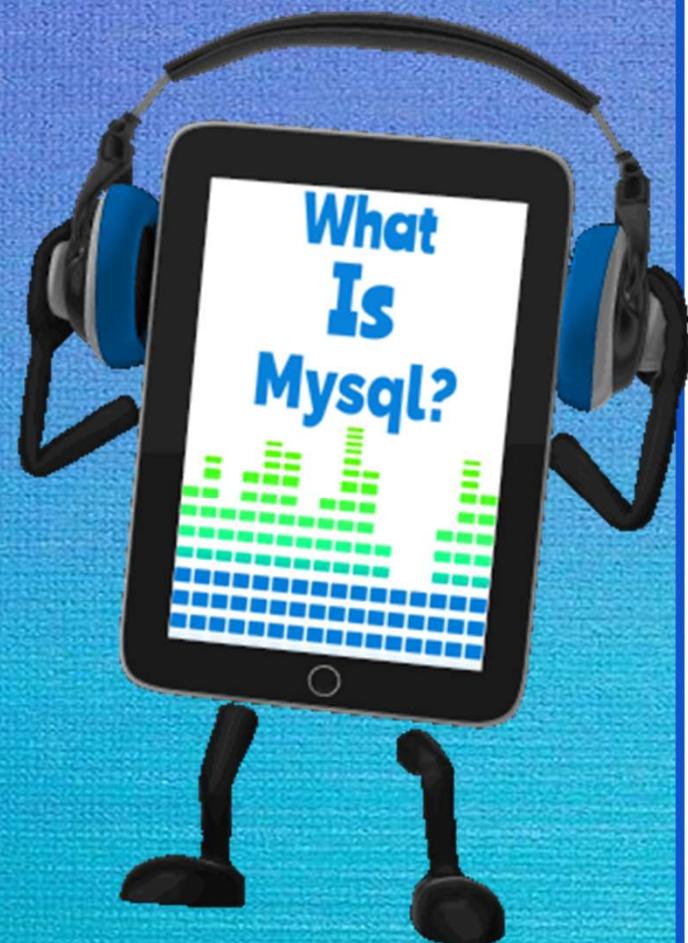
Relational v/s Non Relational Databases



Relational Database	Non-Relational Database
These databases have fixed or static or predefined schema.	They have dynamic schema.
These have table based databases.	They have document dbase, key value stores, graph stores, wide column stores.
These databases are best suited for complex queries.	These databases are not so good for complex queries.
follows ACID property	follows BASE property

ACID vs BASE Properties in Databases?



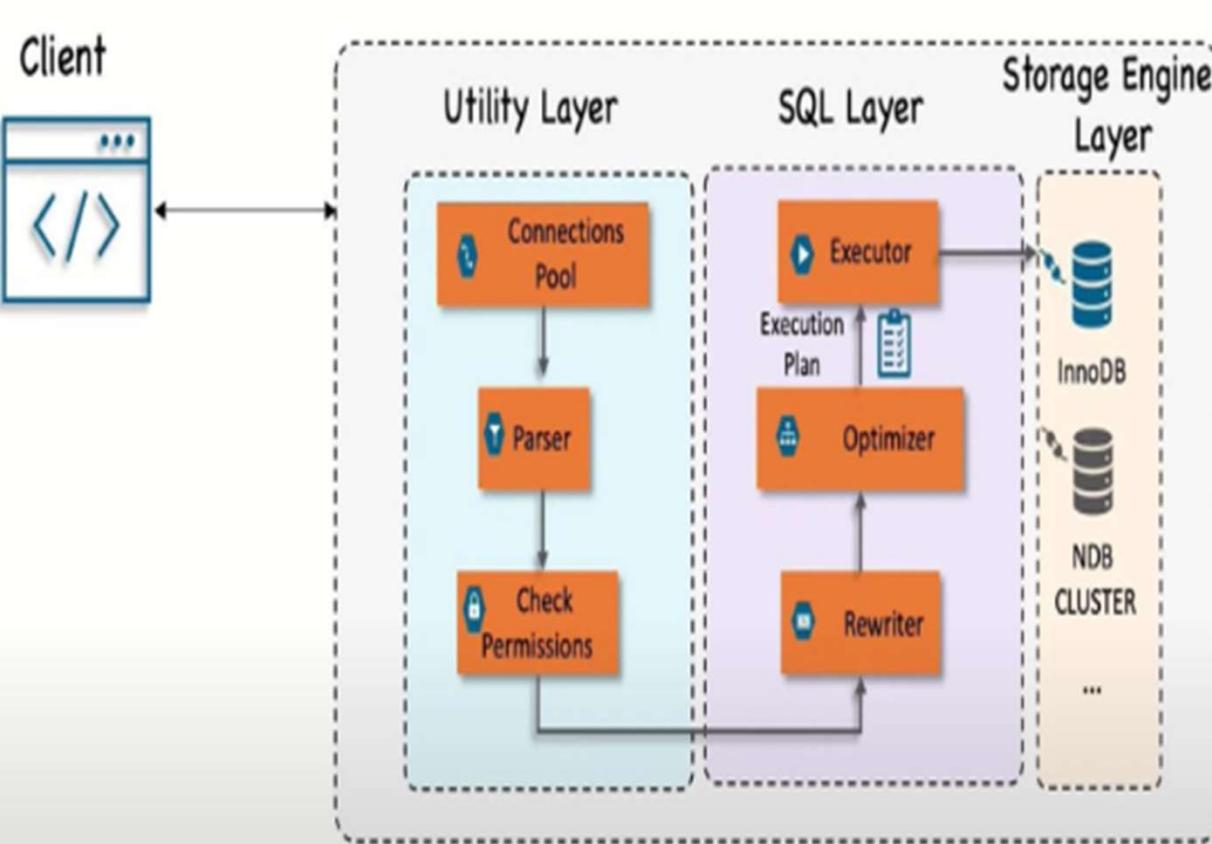


Name	<input type="text"/>	
Age	<input type="text"/>	
Gender	<input type="checkbox"/> Male	<input type="checkbox"/> Female
Submit		



Collection Of Data		
Name	Age	Gender
Megha	29	F
Abhinav	27	M
Vinay	24	M
Vikas	25	M

Database





1990s

MySQL is first launched to the public by its creators

2000s

MySQL releases version 4, which brings new enhancements

2010s

MySQL becomes more popular within the developer community

Present

MySQL continues to be updated with new features

Mysql is founded by Michael "Monty" Widenius, David Axmark, and Allan Larsson.

Easy to Use

Open Source

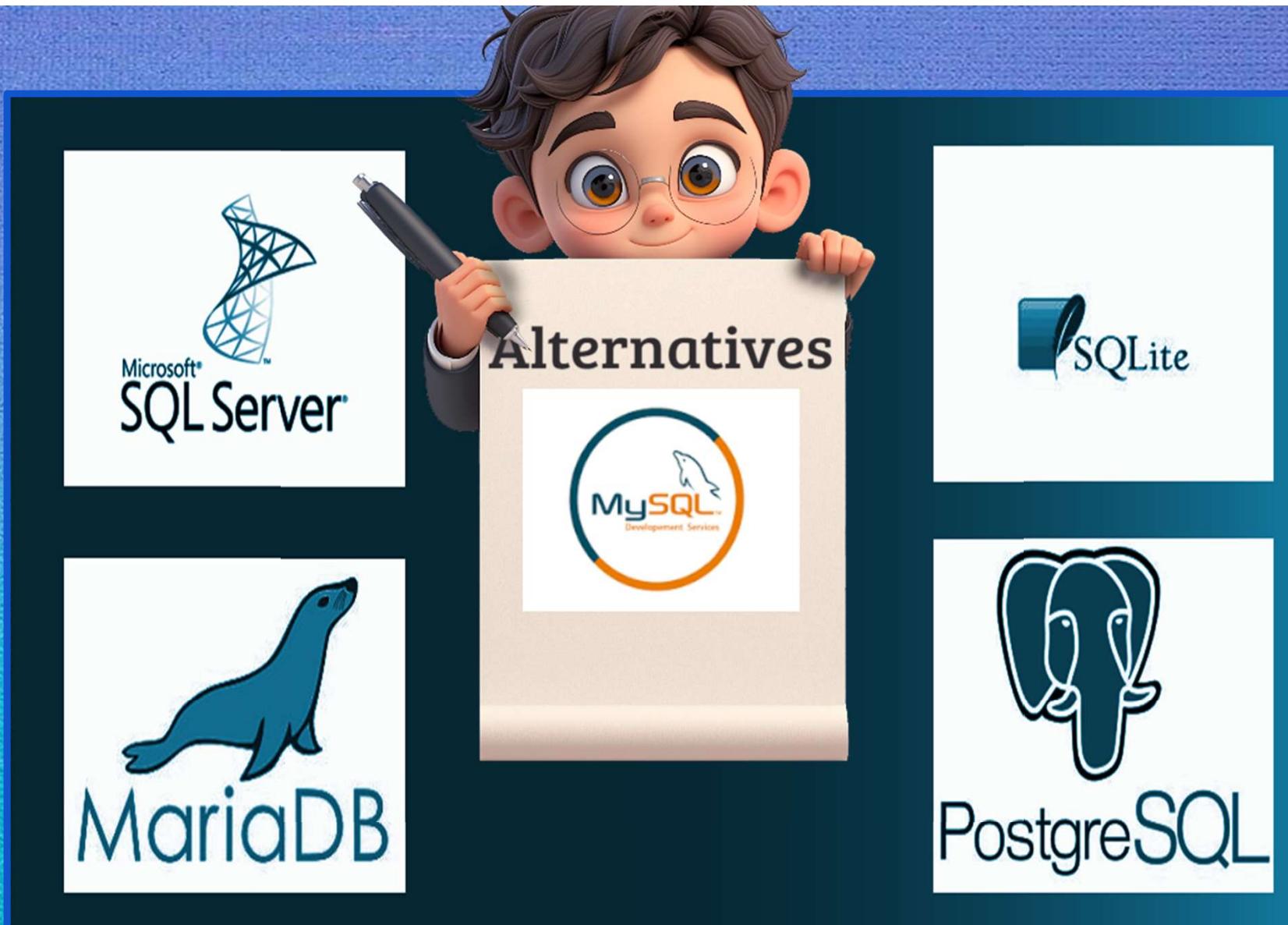
**Scalability and
Flexibility**

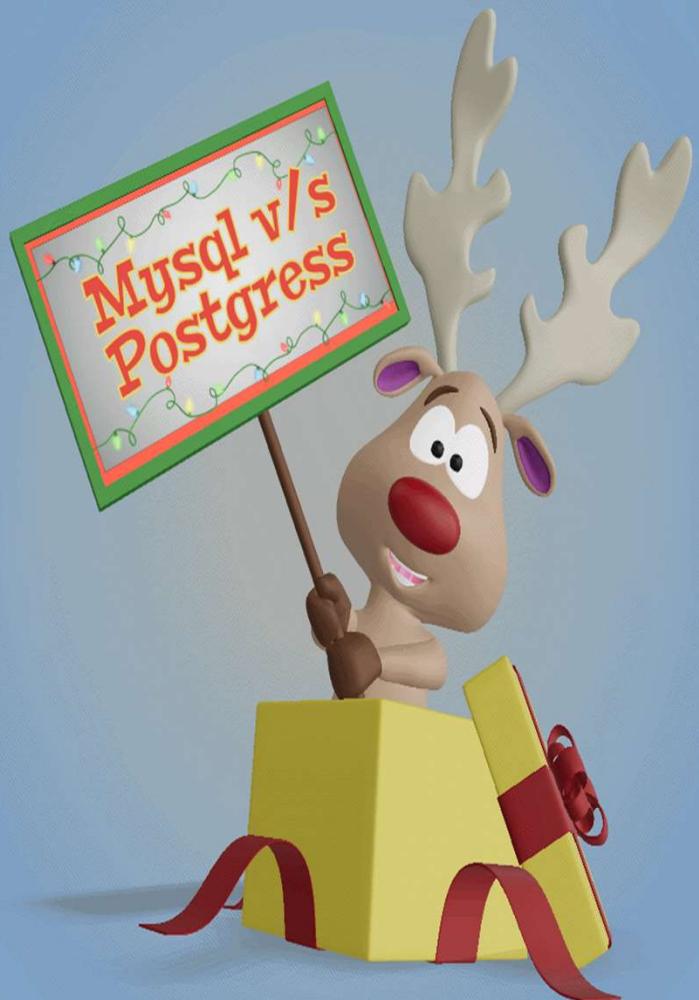
Data Security

Cross Platform

Acid Compliance







MYSQL vs POSTGRESQL



- 1 An open source relational database management system
- 2 Oracle corporation developed MySQL
- 3 MySQL is an RDBMS
- 4 MySQL supports SQL standard data types
- 5 It is easier



- 1 An open source Object relational database management system.
- 2 Postgresql global development group developed Postgresql.
- 3 PostgreSQL is an ORDBMS.
- 4 It supports advanced data types like array & user defined.
- 5 It is comparatively tough.



```
MySQL 8.0 Command Line Cli X + v
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| demo      |
| employees |
| information_schema |
| mysql      |
| performance_schema |
| sys       |
+-----+
6 rows in set (0.00 sec)

mysql> use demo;
Database changed
mysql> show tables;
+-----+
| Tables_in_demo |
+-----+
| employee      |
| ninjabatch26  |
+-----+
2 rows in set (0.00 sec)

mysql> |
```







Desc

Table

Alter

Column

Primary Key

Databases

Update

Delete

Select

Popular Use Cases



U
S
E

Online Transaction Processing

Web Applications

Mobile Applications

Content Management Systems

Social

facebook



LinkedIn



Pinterest

E-Commerce

Booking.com

NETFLIX

U B E R

airbnb

淘宝网
Taobao.com

阿里巴巴
Alibaba.com

Tech

APPDYNAMICS
part of Cisco

GitHub

HubSpot

zendesk

intuit
mint.

New Relic.

Finance

Bank of America



J.P.Morgan

CITI

Fidelity

VISA

CA

Manufacturing

TESLA



TOYOTA

CAT

Popular
Websites
using MySQL

Name = String

Age = Numeric

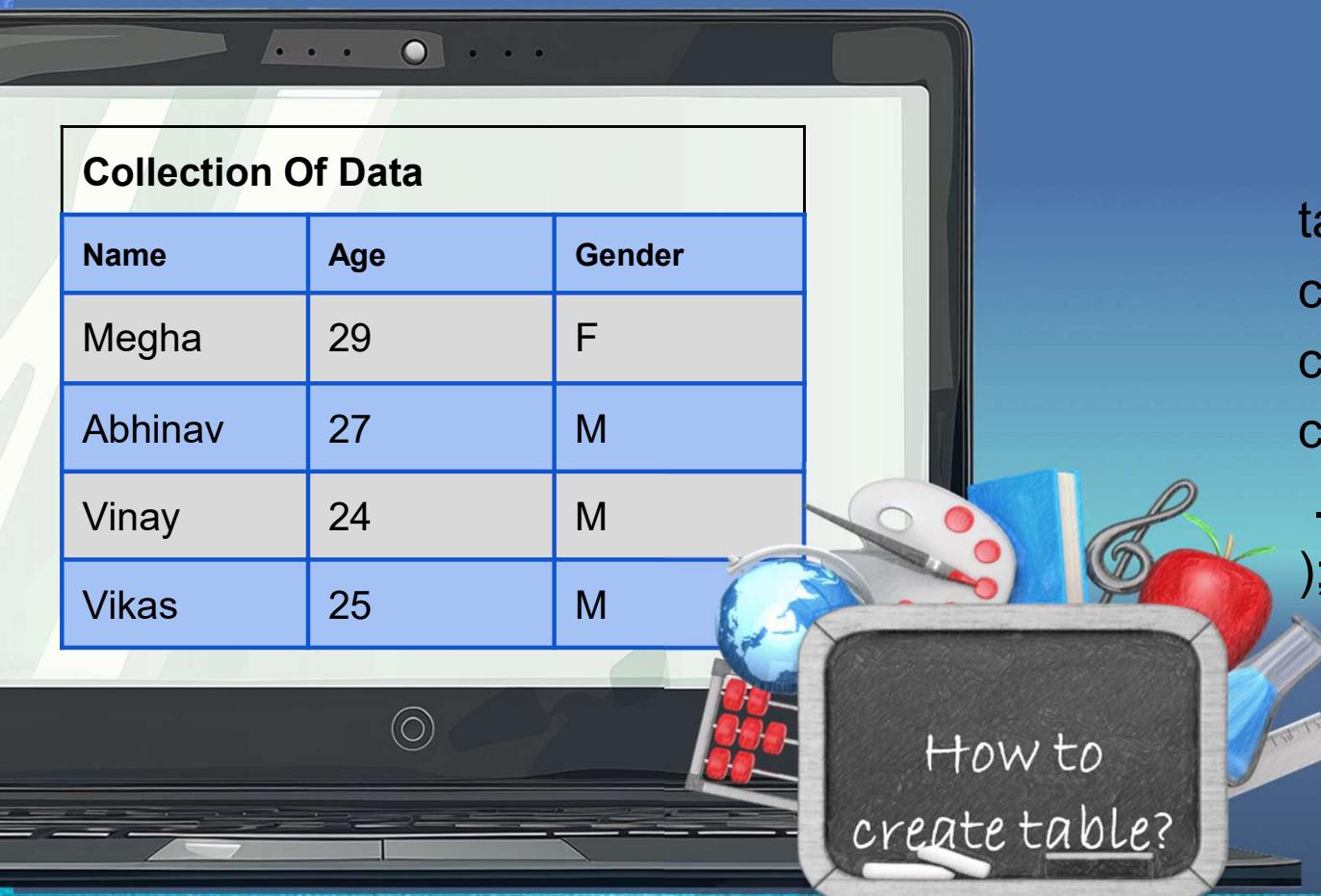
Gender = String

Create Table Syntax

Collection Of Data		
Name	Age	Gender
Megha	29	F
Abhinav	27	M
Vinay	24	M
Vikas	25	M

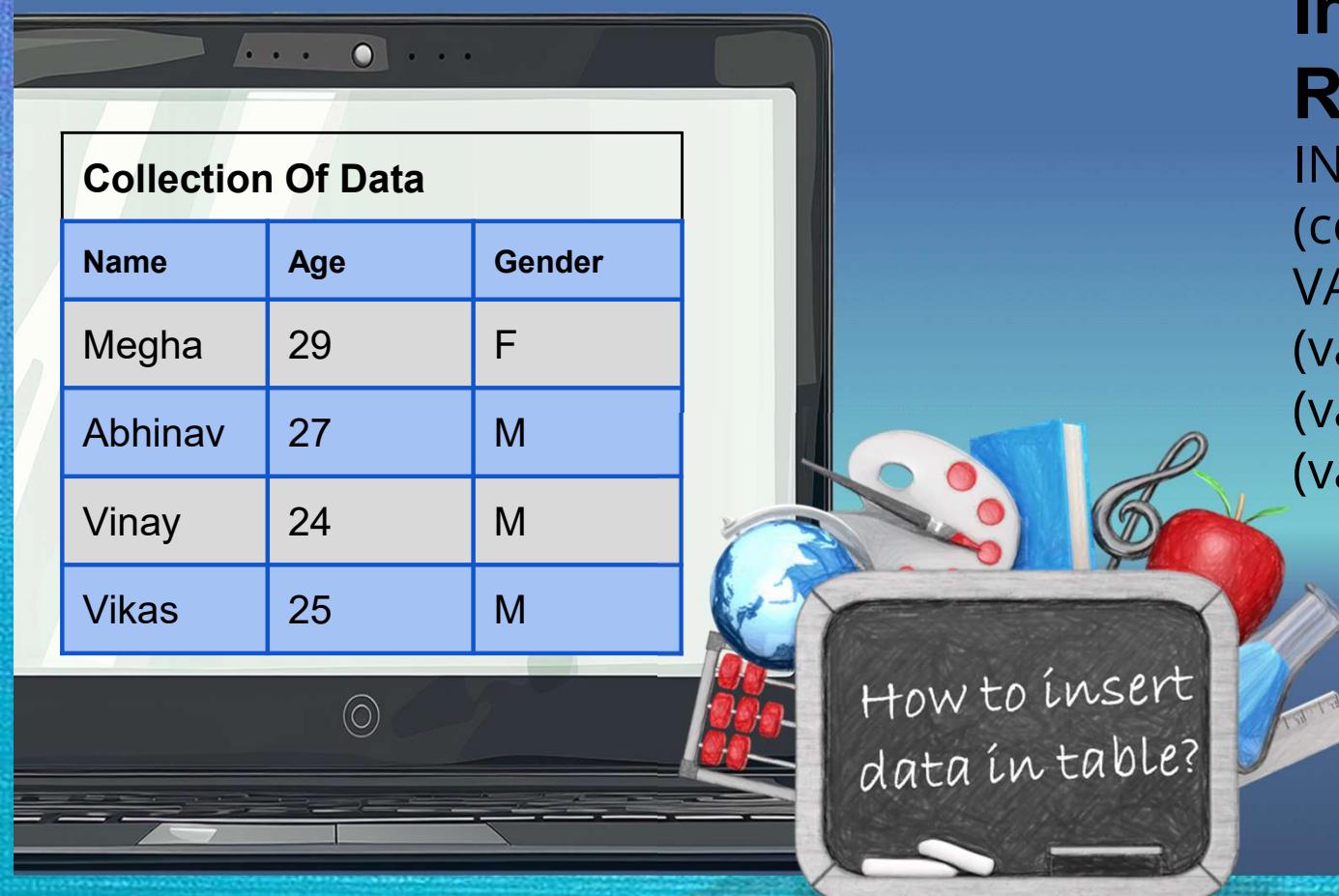
CREATE TABLE

```
table_name (  
    column1 datatype,  
    column2 datatype,  
    column3 datatype,  
    ...  
);
```



How to
create table?

```
INSERT INTO table_name (column1, column2, ....)
VALUES (value1, value2,....);
```



Insert Multiple Rows Syntax:

```
INSERT INTO table_name
(column1, column2, ...)
VALUES
(value1, value2,....),
(value1, value2,....),
(value1, value2,....);
```



Select Data with AND & OR Operators Syntax:

WHERE Age>=24 AND Age <=26

Name	Age	Gender
Megha	29	F
Abhinav	27	M
Vinay	24	M
Vikas	25	M
Shritu	26	F
Dipshikha	24	F



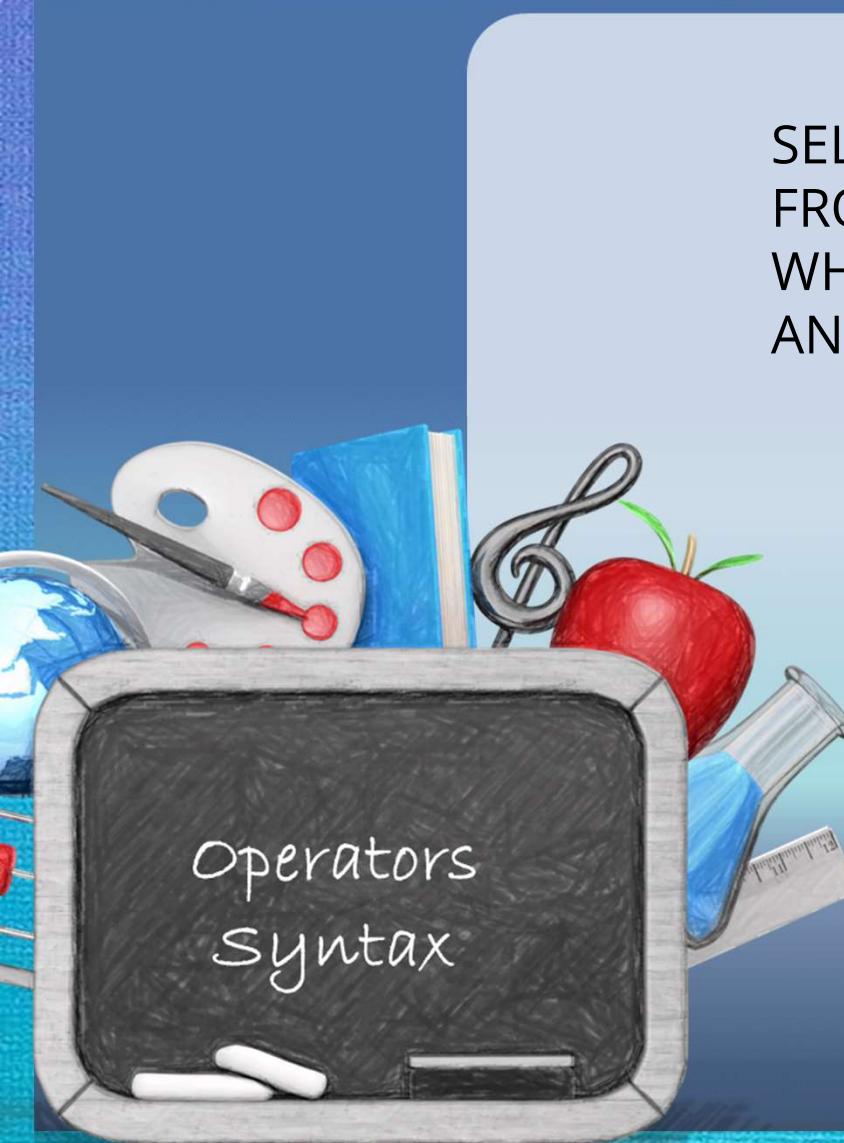
Name	Age	Gender
Vinay	24	M
Dipshikha	24	F
Vikas	25	M
Shritu	26	F



Name	Age	Gender
Abhinav	27	M
Megha	29	F



WHERE Age = 27 OR Age = 29



```
SELECT column1, column2, column3, ....  
FROM table_name  
WHERE condition1 AND condition2  
AND condition 3 ...;
```

```
SELECT column1, column2,  
FROM table_name  
WHERE condition1 OR condition2
```

Limitations



Constrained for Extremely Large Databases

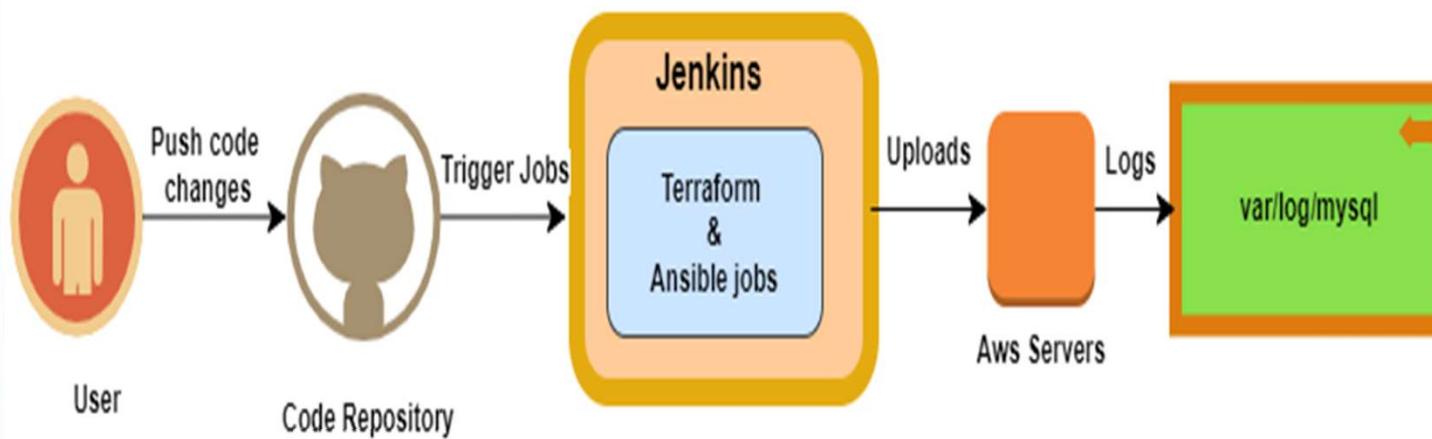
GIS Features

Memory Usage

Concurrency Issues

Lack of Full Text Search Capability

Flow Diagram



Tool Flow

