1. What is MySQL?

MySQL is an open-source relational database management system (RDBMS) that stores and manages data:

* What it is

MySQL is a database system that uses structured query language (SQL) to organize data into tables and enforce rules between data fields.

1. In which language has MySQL been written?

MySQL is written in C and C++. Its SQL parser is written in yacc, but it uses a home-brewed lexical analyzer.

1. What are the advantages of using MySQL?

1.Opensource

2.Data security

3.Scalability on Demand

4.Higher Efficiency

5.24×7 Server Uptime

6.Complete Transactional Support

1. What is a database?

A database is a collection of organized information that's stored electronically in a computer system:

* Definition

A database is a collection of related information that can be stored, retrieved, and edited.

.5.What does 'MySQL' stand for?

MySQL stands for "My Structured Query Language". It's a relational database management system (RDBMS) that uses Structured Query Language (SQL) to store and manage data.

6.How to check MySQL version?

MySQL Client allows getting the version info by running the SELECT VERSION() command in the MySQL database. Here is the syntax for MySQL SELECT VERSION query: SELECT VERSION();

7. What does a MySQL database contain?

A MySQL database contains data organized into tables, schemas, and other components, including:

* **Tables**: Contain records in rows and columns.
* **Schemas**: Define how data is organized and stored, and the relationships between tables.
* **Grant tables**: Contain information about user accounts and their privileges.
* **System tables**: Include tables for audit logs, firewalls, and servers.
* **INFORMATION\_SCHEMA**: Contains tables and columns that describe the database.

MySQL is a relational database management system (RDBMS) that stores data in separate tables, which allows for better optimization of data retrieval and updates. MySQL also supports ACID transactions, which ensure that data modifications are consistent and reliable, even if the system fails.

8. List the ways to interact with MySQL?

* **Connect using Studio for MySQL**:
  1. Open the Database Connection Properties dialog box
  2. Enter the connection details, including the host, port, user, and password
  3. Click Test Connection to verify the details
* **Connect using dbeaver**:
  1. Right-click the Databases > MySQL Server node in the Services window
  2. Select Connect
  3. Provide a password to connect to the server
* **Connect using MySQL (CLI)**:
  1. Use the mysql command to connect to your database
  2. Replace [host] and [username] with the corresponding values in the Connection Details section
* **Create a database**:
  1. Use the dbname in the MySQL create database command
  2. Replace dbname with a database name
  3. Use an underscore to separate words in the dbname
* **Insert data**:
  1. Write the INSERT INTO query in a string
  2. Pass it to cursor.execute()
* **Update and delete data**:
  1. Use a cursor object for the delete and update commands
  2. Call db.commit()

9. What are the different tables in MySQL?

There are different types of tables in MySQL, including transaction-safe and non-transaction-safe tables:

* **Transaction-safe tables**: These include InnoDB and BDB.
* **Non-transaction-safe tables**: These include HEAP, ISAM, MERGE, and MyISAM.

10. What are MySQL Database Queries?

1. **SELECT**
2. **INSERT**
3. **UPDATE**
4. **DELETE**
5. **CREATE**
6. **DROP**
7. **ALTER**
8. **JOIN**

11. What are some common MySQL commands?

* DDL (data definition language)
* DML(data manipulate language)
* DQL(Data query language)
* DCL(data control language)
* TCL(Transaction Control Language )
* Utility Commands

12. How to create a database in MySQL?

Here's the syntax for the CREATE DATABASE statement: CREATE DATABASE databasename.

For example, to create a database called "testDB", you can use the following statement: CREATE DATABASE testDB.

You can check the list of databases with the following SQL command: SHOW DATABASES.

13. How to create table using MySQL?

1. CREATE TABLE table\_name ( column1 datatype, column2 datatype, ...
2. ExampleGet your own SQL Server. CREATE TABLE Persons ( PersonID int, ...
3. CREATE TABLE new\_table\_name AS. SELECT column1, column2,... FROM existing\_table\_name. ...
4. Example. CREATE TABLE TestTable AS. SELECT customername, contactname.

14. How to insert data in MySQL?

INSERT INTO table\_name values (column\_1,column\_2,column\_3) VALUES (value\_1,value\_2,value\_3)

15. How do you remove a column form a database?

1.ALTER TABLE table\_name

2. DROP [COLUMN] column\_name;

16. How do you delete data from MySQL table?

* **DELETE FROM table\_name**: Deletes all records from the table
* **DELETE FROM table\_name WHERE condition**: Deletes specific records from the table
* **WHERE condition**: Specifies which records to delete

17. How can you view a database in MySQL?

* DATABASE() to find out which database is currently selected
* SHOW TABLES to find out what tables the default database contains
* SHOW CREATE TABLE to obtain the CREATE TABLE statement necessary to create an existing table
* SHOW INDEX FROM tbl\_name to produce information about indexes on a table

18. What are string data types in MySQL?

Char: It is used to store for fixed length string

Varchar: It is used to store variable length string

Text:Text is used to store long text strings

Tinytext: is a string data type used for very small text values.

Medium Text: is used for storing larger strings, up to 16,777,215 characters.

Longtext: is used for storing very large strings, up to 4,294,967,295 characters.

Enum: is used to store one of several predefined values.

Set: is similar to ENUM, but it allows multiple values to be stored from a predefined list.

19.what is difference between mysql and sql?

|  |  |
| --- | --- |
| SQL | MySQL |
| SQL is a query programming language that manages RDBMS. | MySQL is a relational database management system that uses SQL. |
| SQL is primarily used to query and operate database systems. | MySQL allows you to handle, store, modify and delete data and store data in an organized way. |
| SQL does not support any connector. | MySQL comes with an in-built tool known as MySQL Workbench that facilitates creating, designing, and building databases. |
| SQL follows a simple standard format without many or regular updates. | MySQL has numerous variants and gets frequent updates. |
| SQL supports only a single storage engine. | MySQL offers support for multiple storage engines along with plug-in storage, making it more flexible. |
| SQL does not allow other processors or even its own binaries to manipulate data during execution. | MySQL is less secure than SQL, as it allows third-party processors to manipulate data files during execution. |

20.what is difference between char and varchar?

Char is used to store a fixed length string and Varchar is used to store a variable length string.