



Python

Interview Questions

Q1. What is SQL example?

SQL is a database query language that allows you to edit, remove, and request data from databases. The following statements are a few examples of SQL statements:

- SELECT
- INSERT
- UPDATE
- DELETE
- CREATE DATABASE
- ALTER DATABASE

Q2. What are basic SQL skills?

Ans- SQL skills aid data analysts in the creation, maintenance, and retrieval of data from relational databases, which divide data into columns and rows. It also enables users to efficiently retrieve, update, manipulate, insert, and alter data.

The most fundamental abilities that a SQL expert should possess are:

1. Database Management
2. Structuring a Database
3. Creating SQL clauses and statements
4. SQL System Skills like MYSQL, PostgreSQL
5. PHP expertise is useful.
6. Analyze SQL data
7. Using WAMP with SQL to create a database
8. OLAP Skills

Q3. What is schema in SQL Server?

Ans- A schema is a visual representation of the database that is logical. It builds and specifies the relationships among the database's numerous entities. It refers to the several kinds of constraints that may be applied to a database. It also describes the various data kinds. It may also be used on Tables and Views.

Schemas come in a variety of shapes and sizes. Star schema and Snowflake schema are two of the most popular. The entities in a star schema are represented in a star form, whereas those in a snowflake schema are shown in a snowflake shape.

Any database architecture is built on the foundation of schemas.

Q4. List the different types of relationships in SQL.

Ans- There are different types of relations in the database:

One-to-One – This is a connection between two tables in which each record in one table corresponds to the maximum of one record in the other.

One-to-Many and Many-to-One – This is the most frequent connection, in which a record in one table is linked to several records in another.

Many-to-Many – This is used when defining a relationship that requires several instances on each sides.

Self-Referencing Relationships – When a table has to declare a connection with itself, this is the method to employ.

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Q6. How to install SQL Server in Windows 11?

Ans- Install SQL Server Management Studio In Windows 11

Step 1: Click on SSMS, which will take you to the SQL Server Management Studio page.

Step 2: Moreover, click on the SQL Server Management Studio link and tap on Save File.

Step 3: Save this file to your local drive and go to the folder.

Step 4: The setup window will appear, and here you can choose the location where you want to save the file.

Step 5: Click on Install.



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Step 6: Close the window after the installation is complete.

Step 7: Furthermore, go back to your Start Menu and search for SQL server management studio.

Step 8: Furthermore, double-click on it, and the login page will appear once it shows up.

Step 9: You should be able to see your server name. However, if that's not visible, click on the drop-down arrow on the server and tap on Browse.

Step 10: Choose your SQL server and click on Connect.

Q7. What is the case when in SQL Server?

Ans- The CASE statement is used to construct logic in which one column's value is determined by the values of other columns.

At least one set of WHEN and THEN commands makes up the SQL Server CASE Statement. The condition to be tested is specified by the WHEN statement. If the WHEN condition returns TRUE, the THEN sentence explains what to do.

When none of the WHEN conditions return true, the ELSE statement is executed. The END keyword brings the CASE statement to a close.



CASE

WHEN condition1 THEN result1

WHEN condition2 THEN result2

WHEN conditionN THEN resultN

ELSE result

END;

Q8. What is the difference between NOW() and CURRENT_DATE()?

Ans- NOW() returns a constant time that indicates the time at which the statement began to execute. (Within a stored function or trigger, NOW() returns the time at which the function or triggering statement began to execute.

The simple difference between NOW() and CURRENT_DATE() is that NOW() will fetch the current date and time both in format 'YYYY-MM_DD HH:MM:SS' while CURRENT_DATE() will fetch the date of the current day 'YYYY-MM_DD'.

Let's move to the next question in this SQL Interview Questions.

Q9. What is BLOB and TEXT in MySQL?

Ans- BLOB stands for Binary Huge Objects and can be used to store binary data, whereas TEXT may be used to store a large number of strings. BLOB may be used to store binary data, which includes images, movies, audio, and applications.

BLOB values function similarly to byte strings, and they lack a character set. As a result, bytes' numeric values are completely dependent on comparison and sorting.

TEXT values behave similarly to a character string or a non-binary string. The comparison/sorting of TEXT is completely dependent on the character set collection.

Q10. How to create a stored procedure using SQL Server?

A stored procedure is a piece of prepared SQL code that you can save and reuse again and over.

So, if you have a SQL query that you create frequently, save it as a stored procedure and then call it to run it.

You may also supply parameters to a stored procedure so that it can act based on the value(s) of the parameter(s) given.

Stored Procedure Syntax

```
CREATE PROCEDURE procedure_name
```

```
AS
```

```
sql_statement
```

GO;

Execute a Stored Procedure

EXEC procedure_name;

Q11. What is Database Black Box Testing?

Black Box Testing is a software testing approach that involves testing the functions of software applications without knowing the internal code structure, implementation details, or internal routes. Black Box Testing is a type of software testing that focuses on the input and output of software applications and is totally driven by software requirements and specifications. Behavioral testing is another name for it.

Q12. Where MyISAM table is stored?

Prior to the introduction of MySQL 5.5 in December 2009, MyISAM was the default storage engine for MySQL relational database management system versions. It's based on the older ISAM code, but it comes with a lot of extra features. Each MyISAM table is split into three files on disc (if it is not partitioned). The file names start with the table name and end with an extension that indicates the file type. The table definition is stored in a .frm file, however this file is not part of the MyISAM engine; instead, it is part of the server. The data file's suffix is .MYD (MYData). The index file's extension is .MYI (MYIndex). If you lose your index file, you may always restore it by recreating indexes.

Q13. How to find the nth highest salary in SQL?

Ans- The most typical interview question is to find the Nth highest pay in a table. This work can be accomplished using the dense rank() function.

Employee table

employee_name	salary
---------------	--------

A	24000
---	-------

C	34000
---	-------

D	55000
---	-------

E	75000
---	-------

F	21000
---	-------

G	40000
---	-------

H	50000
---	-------

SELECT * FROM(



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```
SELECT employee_name, salary, DENSE_RANK()
```

```
OVER(ORDER BY salary DESC)r FROM Employee)
```

```
WHERE r=&n;
```

To find to the 2nd highest salary set $n = 2$

To find 3rd highest salary set $n = 3$ and so on.

Q14. What do you mean by table and field in SQL?

A table refers to a collection of data in an organised manner in form of rows and columns. A field refers to the number of columns in a table. For example:

Table: StudentInformation

Field: Stu Id, Stu Name, Stu Marks

Q15. What is the difference between CHAR and VARCHAR2 datatype in SQL?

Both Char and Varchar2 are used for characters datatype but varchar2 is used for character strings of variable length whereas Char is used for strings of fixed length. For example, char(10) can only store 10 characters and will not be able to store a string of any other length whereas varchar2(10) can store any length i.e 6,8,2 in this variable.

Q16. What is a Primary key?

- ☐ A Primary key in SQL is a column (or collection of columns) or a set of columns that uniquely identifies each row in the table.
- ☐ Uniquely identifies a single row in the table
- ☐ Null values not allowed

Q17. What are Constraints?

Ans- Constraints in SQL are used to specify the limit on the data type of the table. It can be specified while creating or altering the table statement. The sample of constraints are:

- ☐ NOT NULL
- ☐ CHECK
- ☐ DEFAULT
- ☐ UNIQUE
- ☐ PRIMARY KEY
- ☐ FOREIGN KEY

Q18. What is a Unique key?

Ans- Uniquely identifies a single row in the table.

- ☐ Multiple values allowed per table.
- ☐ Null values allowed.

Q19. What is a foreign key in SQL?

- ☐ Foreign key maintains referential integrity by enforcing a link between the data in two tables.
- ☐ The foreign key in the child table references the primary key in the parent table.
- ☐ The foreign key constraint prevents actions that would destroy links between the child and parent tables.

Q20. What do you mean by data integrity?

Ans- Data Integrity defines the accuracy as well as the consistency of the data stored in a database. It also defines integrity constraints to enforce business rules on the data when it is entered into an application or a database.