1. What is the Difference between SQL vs NoSQL?

Feature	SQL	NoSQL
Type of DataBase	Relational database	Nonrelational database/Distributed database
Standardization	Standard Query Language exists	No proper standards defined
Reporting Tools	Various tools available to analyze the performance	Unavailability of tools to analyze data and performance
Development model	Fine-grained database model	Architects can create new DB models
Price	Expensive compared to NoSQL	Low Cost - Mostly Open Source
Schema	Predefined Schema available	Unstructured data with dynamic schema
Database Examples	Postgres, SQLite, Oracle, etc.,	BigTable, Cassandra, MongoDB, etc.,
Type of Data storage	Not suitable for hierarchical data storage	Best suitable for hierarchical data.

2. What is SQL?

SQL- A Structured Query Language, It is also pronounced as "SEQUEL" and it a Non-procedural Language that is used to operate all relational databases. Used for Database communication. Its a standard language that can be used to perform the tasks like data retrieval, data update, insert or delete data from a database.

Features of SQL:

- Portability
- Client-server architecture,
- Dynamic data definition,

- Multiple views of data,
- Complete database language,
- Interactive,
- High level,
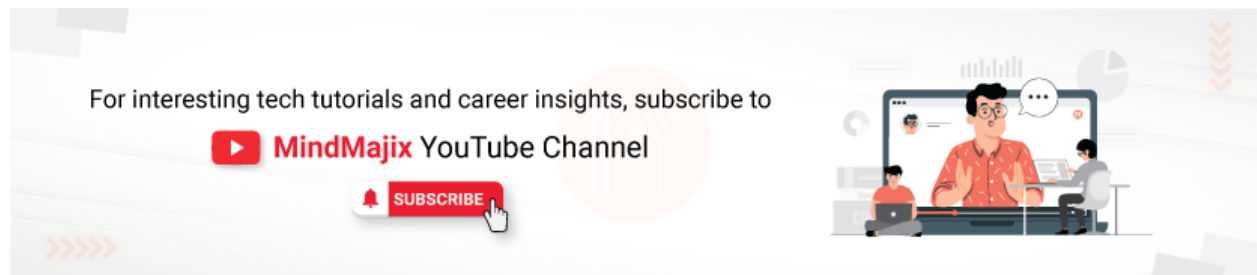- Structure and SQL standards.

3. What is SQL Server?

SQL Server is Microsoft's relational database management system (RDBMS). End-user cannot interact directly with the database server. If we want to interact with the SQL database server then we have to interact with SQL.

4. What do you know about a Database Management system?

It is basically a program that is considered when it comes to maintaining, creating, deploying, controlling as well as monitoring the use of a database. It can also be considered as a file manager which is good enough to be trusted for managing the data kept in a database than a file system.

The database approach is really a good one as it is numerous benefits for the organizations. The entire data can easily be managed simply irrespective of its size and complexity.

For interesting tech tutorials and career insights, subscribe to
▶ MindMajix YouTube Channel
🔔 SUBSCRIBE

5. What do you mean by Fields and Tables and how they are useful?

Basically, a table is a set of different rows and columns and is organized in a model. The manner of columns and rows are vertical and horizontal. In a table, there are some specific numbers of columns which remains present and is generally known as fields. There is no strict upper limit on the overall number of records which are defined by rows in the table.

6. Compare SQL with Oracle?

SQL	Oracle

It is more scalable and secure than Oracle	Oracle too is secure and scalable but not up to the extent SQL
It widely supports procedural extensions	The support to the same is limited

7. How the Inner Join in SQL is different from that of Outer Join?

An Inner join is the one that is useful for the purpose of returning the rows provided at least two tables are met critically. On the other hand, the outer join is the one that is useful for returning the value of rows and tables that generally include the records that must be the same in all the tables.

8. Can you tell something about the Primary key in SQL and what is its significance?

It is basically an array or a group of fields that generally specify a row. It is considered as one of the unique keys that always have some defined or specific value. Generally, the users need not worry about anything when it is enabled as it cannot have a null value.

It is capable to identify all the records in a database simply and the users are free to get the best possible outcome with minimum effort. This is exactly what makes sure of uniqueness.

9. What do you know about database testing and how it can help to get useful results for database users?

It is basically nothing but back-end testing or data testing. It generally involves keeping an eye on the integrity of the data an organization uses. It generally validates some of the very useful tasks such as database, indexes, columns, tables as well as triggers. IT also make sure that no duplicate data exist in the database which causes a very large number of problems and the best part is the junk records can also be trashed in a very reliable manner. The updating of the record is also a task that can be made easy with the help of this approach.

10. Tell something you know about the SQL constraints?

These are some important rules in the SQL which are responsible for the restrictions when it comes to deleting, updating, or changing the primary data present in the database.

11. In SQL, what do you know about the composite primary key?

The key which is created on multiple columns in a table is generally considered as the Composite primary key. However, it is not always necessary that all of them have the same meaning.

12. What is the Difference Between Stored Procedure & Functions?

Stored Procedure	Functions
It is a set of pre-compiled SQL Statements which will get executed when we call it	It will take input from the user and return only one value of any data type
Compile only one time	Compile every time
Stored Procedure will have an execution plan	The function will not have an execution plan
Support DML Commands	Not supported DML Commands
Support TCL Commands	Not supported TCL Commands
It is may or may not have an input parameter	The function must have at least one input parameter
It accepts both input and output parameters	Doesn't have output parameters
We call the stored procedure in another stored procedure	We can call a function in another function
It supports Exception Handling	It is doesn't support Exception Handling
We can call a function in stored Procedure	We can't call stored procedure in function

13. What do you know about Field in a Database?

It is basically a space that is allotted for storing some records that are present within a table. There are actually different fields and it is not always necessary that all the fields are the same in terms of size and allocation pattern.

14. Name a few commands which you think are important in SQL for managing the database?

You can answer these questions based on the commands you have used in your past if you having a bit of experience in SQL. Else, the following commands are there which are widely adopted and are very useful.

- Data Definition Language
- Transaction Control Language
- Data Query Language
- Data Manipulation Language
- Data Control Language

15. Name a few important DDL commands present in the SQL?

They are generally preferred when it comes to defining or changing the structure of a specific database in the shortest possible times due to security and other concerns. Some of the commands that can be applied and considered directly for this are as follows.

- Create
- Alter
- Drop
- Rename
- Truncate
- copy

16. Tell something about the Temp Table?

It is basically a structure in the SQL that is used for storing any sort of data that is not permanent or needs to be stored for a specific time period. Depending on the needs, it is possible to extend the space up to any extend. Generally, limited space is kept reserved as the temp table.

17. Name any two commands that are used for the purpose of managing the data present in the database

Commands that are used for the purpose of managing the data present in the database:-

- Update
- Insert

18. What do you mean by Term and how it is different from that of Index?

When it comes to handling the queries at a faster rate, the Indexes are preferred widely in SQL and they simply make sure of quick retrieval of the data and the concerned information from the table present in the database. It is possible to create the index on a single column or a group of the same.

On the other side, a View is basically nothing but the subset of a table and is used for the purpose of storing the database in a logical manner. It is actually a virtual table that has rows as well as columns that are similar to that of a real table. However, the views contain data that actually don't belong to them. The same is considered when it comes to restricting access to a database.

19. Is it possible for the users to compare the test for the NULL values in SQL?

No, the same is not possible

20. What do you mean by the term SQL?

It stands for Structured Query Language and is a powerful language to communicate the database and monitor the concerned tasks easily and reliably. A lot of important tasks such as updating the database, controlling, modifications, as well as deletion of data, can be performed with this task.

It comes with so many dedicated features that are good enough to make a database completely useful and reliable to consider. There are many commands that can be considered and help to save a lot of time when it comes to getting the best out of a database.

21. Tell something about Subquery in the SQL?

It is basically a SQL query and is generally regarded as the subset of the select statement and the process of those tasks that generally make sure of filtering the conditions related to the main query.

22. In a query, is it possible for the users to avoid duplicate records? How this can be done?

Yes, the same is possible and there are many methods that can help users to get the favorable fortune in this matter. The best one is to deploy the SQL SELECT DISTINCT query which issued to return the unique values. All the repeated values or the ones which are duplicates get deleted automatically.

23. What is the significance of the default constraint in SQL?

It is used when it comes to including a default value in a column in case there is no new value provided at the time a record is inserted.

24. What are the factors that can affect the functionality of a database according to you?

There are certain things that largely matter. The first and the foremost is nothing but the size of the database in terms of its storing capacity. Of course, for a bigger database, the needs are complex and so does its management.

Thus, the first thing that can help to keep up the pace in this matter is a powerful query language or a controlling procedure. The next thing is the security of the database. In addition to this, the experience of the experts handling the important operations can also largely impact the database. Moreover, there are conditions on the operation of the same that also largely matter.

25. How can you put separate the Rename and the Alias?

A permanent name that is given to a table or a column in SQL is considered as "Rename" whereas the temporary name

given to the same is considered as "Alias"

26. What are joins in SQL?

Join is basically a query that is useful for the purpose of retrieving the columns and the rows. It is useful when users have to handle a very large number of tables at the same time.

The different types of Joins that are present in the SQL are

1. Right Jin
2. Inner Join
3. Left Join
4. Outer Join
5. Upper Join

27. What do you know about the NULL value in SQL?

It is basically a field that doesn't have any value in SQL. It is totally different from that of a zero value and must not be put equal or confused with the same. These fields are left blank during the creation of the records.

28. How can you say Normalization is a useful process in database management?

It is basically an approach with one of its primary aims is to simply impose a strict upper limit on the redundancy of the data. The users are free to go ahead with many of the normalizations forms present in the SQL and a few of them are First, second, third, and Boyce Normal Form.

29. What do you know about the stored procedure?

It is nothing but an array of some important SQL statements that are stored in the database and are responsible for performing a specific task.

30. Name the SQL procedure which makes sure an immediate action in response to an event?

The same is Trigger

31. In the Boolean Data Field, what are the possible values that users can simply store?

This can be TRUE or FALSE

32. Name the types of Indexes of which are available in SQL

There are three important types of Indexes and they are

1. Unique Index
2. Clustered Index
3. Non-Clustered Index.

33. In SQL, what is the best thing about the Views you have come across?

There are several good things about them. The very first thing is they consume almost no space which makes them good enough to be considered in every situation. At the same time, the users are able to consider views for simply retrieving the outcomes that belong to queries that are complicated in nature.

The same may need to be executed frequently. It is possible to consider this when it comes to restricting access to the database.

34. What is the Difference between SQL & MYSQL?

SQL is more natural than MYSQL. MySQL is a computer application. whose DBMS allows multiple users. It enables access to several database applications and management systems.

SQL is a more natural and standard language that is used with different applications alike. But, however no organization actually employs this standard language, rather every software firm follows its own kind of SQL version.

SQL	MYSQL
SQL stands for Structured Query Language	MySQL is an RDMS (Relational Database Management System)
Allow for accessing and manipulating DB's	MySQL is a database management system, like SQL Server, Oracle, Postgres, Informix, etc
Basically works as the prompter to a DBMS	It Facilitates multi-user access to a huge number of DBs
SQL codes & commands are used in various DBMS and RDBMS systems such as MySQL.	MySQL has SQL at its core and requires future upgrades mostly

35. What are the different types of SQL statements?

1. DQL - Data Query Language (or) Data Retrieval Language

- `SELECT` Statement

2. DML – Data Manipulation Language

DML is used for manipulation of the data itself.

- `INSERT` Statement
- `UPDATE` Statement
- `DELETE` Statement

3. DDL – Data Definition Language

DDL is used to define the structure that holds the data.

- `CREATE` Statement
- `ALTER` Statement
- `DROP` Statement
- `RENAME` Statement
- `TRUNCATE` Statement

4. DCL – Data Control Language

DCL is used to control the visibility of data.

- `GRANT` Statement
- `REVOKE` Statement

5. TCL - Transaction Control Language

- `COMMIT` Statement
- `ROLLBACK` Statement
- `SAVEPOINT` Statement

36. What are various DDL commands in SQL? Give a brief description of their purposes.

DDL Commands are used to define the structure of the table

1. CREATE

It is used to create database objects like tables, views, synonyms, indexes.

Creating Table:

Syntax-

```
Create table table_name(columnname1 datatype(size), columnname2
datatype(size),....);
```

2. ALTER

It is used to change the existing table structure.

- add
- modify
- drop

a) Add:

It is used to add columns into an existing table

Syntax:

```
Alter table table_name add(columnname1 datatype(size), columnname2
datatype(size),....);
```

b) Modify:

It is used to change column Datatype or datatype size only.

Syntax:

```
Alter table table_name modify(columnname1 datatype(size), columnname2
datatype(size),....);
```

c) Drop:

It is used to drop columns from the table.

Method1:

If we want to drop a single column at a time without using parentheses then we are using the following syntax.

Syntax:

```
alter table   table_namedrop column   col_name1;  -- drop ONE column
```

Method2:

If we want to drop single or multiple columns at a time with using parenthesis then we are using the following syntax.

Syntax:

```
alter table table_name drop(column_name_list);
```

Note:

In all databases, we can't drop all columns in the table.

3. DROP

It is used to remove database objects from the database.

Syntax:

```
Drop object object_name;
        (or)
Drop table table_name;
        (or)
Drop view view_name;
```

4. RENAME

It is used to renaming a table.

Syntax:

`Rename old table_name to new table_name;`

Renaming a column:

Syntax:

`Alter table table_name rename column old column_name to new column_name;`

5. TRUNCATE

Oracle 7.0 introduced truncate table command it is used to delete all rows permanently from the table.

Syntax:

`truncate table table_name;`

37. What are various DML commands in SQL? Give a brief description of their purposes.

DML Commands are used to manipulate data within a table.

There are: INSERT, UPDATE, DELETE

1. INSERT − It is used to insert data into the table

Method1:

Syntax:

`        Insert into table_name values(values1, value2, value3,……);`

Method2: Using Substitutional operator (&)

Syntax:

` Insert into table_name values(& columnname1, columnname2,.....);`

Method3: Skipping columns

Syntax:

`Insert into table_name(col1, col2,...) values(val1, val2, val3,...);`

2. UPDATE: It is used to change data in a table.

Syntax:

```
    Update table_name set columnname=new value where columnname=old
value;
```

Note: In all databases, we can also use the update statement for inserting data into a particular shell.

3. DELETE: It is used to delete rows or particular rows from a table.

Syntax:

```
Delete from table_name;
```

<div align="center">(or)</div>

```
Delete from tablename where condition;
```

38. What is the Difference Between Delete & Truncate?

Delete	Truncate
It is DML Command	It is DDL Command
It is used to delete all the records row by row	It is used to delete all the records at a time
By using the delete command we can delete a specific record	By using truncate we cannot delete a specific record
Where condition we can use with the delete command	Where condition will not work with truncate
Delete will work slow compare with truncate	Truncate will work fast compare with delete
Delete will not reset auto-generate id. Once when we delete all the records from the table.	Truncate will reset auto-generate id from starting number.

39. What is the SQL Buffer?

- All Commands of SQL are Typed at the SQL prompt.
- Only One SQL Statements is Managed in The SQL Buffer.
- The Current SQL Statement Replaces the Previous SQL Statement in the Buffer.
- The SQL Statement Can be Divided Into Different Lines Within The SQL Buffer.
- Only One Line i.e., The Current Line Can be Active at a Time in the SQL Buffer.
- At SQL Prompt, Editing is Possible Only in The Current SQL Buffer Line.
- Every Statement of SQL should be terminated Using Semi-Colon ";"
- One SQL Statement can Contain Only One Semo Colon.
- To Run the Previous OR Current SQL Statement in the Buffer Type "/" at SQL Prompt.
- To Open The SQL Editor Type "ED" at SQL Prompt.

40. What are SQL functions?

LOWER Function: (Column/Expression):

- It Converts Alpha Character Values to Lower Case.
- The Return Value Has The Same Data Type as Argument CHAR Type (CHAR or VARCHAR2)

UPPER Function:

- It Converts the Alpha Character Values to Upper Case.
- The Return Value Has The Same Data Type as Argument CHAR.

INITCAP Function:

- It Converts Alpha Character Values into Upper Case For The First Letter of Each Word, keeping all Other Letter in Lower Case.
- Words are Delimited by White Space or Characters That are Not Alphanumeric

LPAD Function:

- Pads The Character Value Right Justified to a Total Width of 'n' Character Positions.
- The Default Padding Character in Space.

RPAD Function:

- Pads the Character Value Left Justified to a Total Width of 'n' Character positions.
- The Default Padding Character is Space.

LTRIM Function:

- It Enables to TRIM Heading Character From a Character String.
- All The Leftmost Character That Appear in The SET are Removed.

RTRIM Function:

- It Enables the Trimming of Trailing Character From a Character STRING.
- All the Right Most Characters That Appear in The Set are Removed.

TRIM Function:

- It Enables to TRIM Heading or Trailing Character or Both From a Character String.
- If LEADING is Specified Concentrates On Leading Characters.
- If TRAILING is Specified Concentrates on Trailing Characters.
- If BOTH OR None is Specified Concentrates Both on `LEADING` and TRAILING.
- Return the VARCHAR2 Type.

Advanced SQL Interview Questions & Answers

41. How to Open SQL Server?

```
Goto -> Start -> All Programms -> Microsoft SQL Server 2008 R2 -> SQL
Server management Studio.
```

42. What are SQL Injections? And How to Prevent SQL Injection Attacks?

It is a mechanism for getting secure data from the database.

SQL Injection Attacks::

- By providing proper validations for input fields.
- By using parameterized queries.
- By using stored procedures
- By using frequent code reviews
- We must not display database error messages in frontend
- An SQL injection is a code injection technique, used to attack data-driven applications.

43. Difference Between Scalar Valued Functions & Table Valued Functions in SQL?

Scalar Valued Functions	Table-Valued Functions
It will process on a single row at a time & return only one value of any database	It will process on multiple rows at a time & return multiple rows (or) single row from the table

The return type of scalar-valued function is a datatype	The return type of table-valued function is a table
The scalar-valued function will have as begin block end	The table-valued function will not have as begin end
Syntax to call Scalar Valued Functions is:: `SELECT dbo. funname(values);`	Syntax to call Table-Valued Functions is:: `SELECT  * FROM dbo.funname(values);`

44. How can you say that Database testing is different from that of GUI testing?

- GUI testing is always performed at the front end whereas Database testing is performed at the back end
- When it comes to dealing with testable items, generally the users prefer GUI testing. These items are present clearly./ On the other hand, the Database testing deals with the testable items that are hidden and are not directly visible to the users
- Structured Query Language largely matters in Database approach where the same doesn't have any application with the GUI
- Invalidating the test boxes are a part of the GUI database whereas the Database testing is totally different in this manner

45. Write a Query to view the indexes that are applied to the table?

`stored procedure_helpindex table_name`

46. What is the Difference Between Long & Lob Datatypes?

Long	Lob
It stores up to 2GB of Data	It stores up to 4 GB of Data
A table can contain only one long column	A table can contain more than Lob column
A subquery cannot select a Long data type column	A subquery can select Lob Column

47. What is the Difference Between (Null Value Function) nvl() & Coalesce()

nvl is an oracle function whereas Coalesce is an ANSI Function and also coalesce performance is very high as compare to NVL Function.

NVL Function internally uses implicit conversions i.e NVL Function returns a value if the exp1, exp2 does not belong to the same datatype also if exp2 automatically converted into exp1 whereas in coalesce function exp1, exp2 must belong to the same data type.

Examples1:

```
SELECT nvl('a', sysdate) FROM dual;
```

Output: a

Examples2:

```
SELECT Coalesce('a', sysdate) FROM dual;
```

Error: inconsistent datatypes: expected CHAR got DATE

48. What is Tuple?

Tuples are the members of a relation. An entity type having attributes can be represented by a set of these attributes called tuple.

49. What is Query & Query Language?

- A query is a statement requesting the retrieval of information.
- The portion of dimly that involves information retrieval is called a query language.

50. What is the Difference Between Views & Materialized Views?

Views	Materialized Views
The view does not store data	Materialized view stores data
Security purpose	Improved performance purpose
When we ar4e dropping base table then view can't be accessible	When we are dropping base table also materialized view can be accessible

Through the view, we can perform DML Operation	We can't perform DML operation

51. What are the different aggregate functions in SQL?

`AVG(), MIN(), MAX(), SUM(), COUNT()`

52. What is data independence?

A database system keeps data separate from the software data structure.

53. What is Data Integrity?

Data must satisfy the integrity constraints of the system for data Quality.

54. What is Deadlocking?

It is the situation where two transactions are waiting for the other to release a lock on an item.

55. What is Decryption?

Taking encoded text and converting it into text that you are able to read.

56. What is Projection?

The Projection of a relation is defined as a projection of all its tuples over a set of attributes. It yields a vertical subset of the relation. The projection operation is used to view the number of attributes in the resultant relation or to reorder attributes.

57. What is Encryption?

Encryption is the coding or scrambling of data so that humans can not read them directly.

58. What is Cardinality?

The number of instances of each entity involved in an instance of a relation of a relationship describes how often an entity can participate in the relationship. (1:1, 1: many, many: many).

59. What is Transaction Control?

- Oracle Server Ensures Data Consistency Based Upon Transaction.

- Transactions Consist of DML Statements That Make Up One Consistent Change To The Data

60. What are the Transaction Start & End Cases?

- A Transaction Begins When The First Executable SQL Statement is Encountered.
- The Transaction Terminates When The Following Specifications Occur.
  - A COMMIT OR ROLLBACK is Issued
  - A DDL Statement Issued
  - A DCL Statement Issued.
- The User Exists The SQL * Plus
- Failure of Machine OR System Crashes.
- A DDL Statement OR A DCL Statement is Automatically Committed And Hence Implicitly Ends A Transaction.

61. What is GRANT Command?

Syntax:

```
SQL> GRANT< Privilage Name1>, ,
          ON

          TO ;
```

GRANT Command is Used When We Want The Database To Be Shared With Other Users.

The Other Users Are GRANTED With Certain Type of RIGHTS.

GRANT Command Can Be issued Not Only on TABLE OBJECT, But Also on VIEWS, SYNONYMS, INDEXES, SEQUENCES Etc.

```
SQL> GRANT SELECT
          ON EMP
          TO ENDUSERS;
SQL> GRANT INSERT, SELECT, DELET
          ON EMP
          TO OPERATORS;
SQL> GRANT INSERT (Empno, Ename, Job)
          ON Emp

          To EndUsers;
```

62. What is REVOKE Command?

Syntax:

```
SQL> REVOKE< Privilage Name1>, ,
          ON

             FROM;
```

REVOKE Command is Used When We Want One Database To Stop Sharing The Information With Other Users.

Revoke Privileges is Assigned Not Only On TABLE Object, But Also on VIEWS, SYNONYMS, INDEXES Etc.

```
SQL> REVOKE INSERT, DELETE
```

ON EMP

FROM Operators;

63 How do I Connect to Oracle OR SQL * Plus?

Double Click the SQL*Plus ShortCut on the Desktop.

```
Start -> Run -> Type SQLPlus OR SQLPlusW in Open Box and Click OK.
```

```
Start -> Programs -> Oracle -> Application Development -> SQL*Plus
```

In the Login Box OR Login Prompt Type the User Name and Password as Supplied by the Administrator.

The Host String is Optional and is provided by the Administrator.

64. What are PL/SQL Tables?

- Objects of Type "TABLE" Are Called PL/SQL Tables.
- They Are Modeled As Database Tables But Are Not Same.
- PL/SQL TABLES Use A "PRIMARY KEY" To Give Array Like Access To Rows.
- PL/SQL Tables Are Very Dynamic in Operation, Giving The Simulation To Pointers in 'C' Language.
- They Help in Integrating The Cursors For Dynamic Management of Records At Run Time.
- They Make Runtime Management of Result Sets Very Convenient.

> Explore Oracle PL SQL Interview Questions

65. What is the Difference Between SQL and PL/SQL?

SQL	PL/SQL
Its complete name is a structured query language	Its complete name is procedural Language / Structured Query Language
It doesn't have any facility of branching or looping	It has the complete facility of branching or looping
In SQL, only one statement can be sent to Oracle Engine.	It increases the execution time In PL/SQL, a complete block of statements can be sent to Oracle engine at a time, reducing traffic
In SQL, the use of variables is not possible	In PL/SQL, the results of the statements can be stored in variables and can be used further as per the requirement
It doesn't have the capacity for a procedural language	It fully supports procedural language
In SQL, there is no facility of error management. In case of an error condition, It is the Oracle Engine that tracks it.	In PL/SQL, the results of the statements can be stored in variables and can be used further as per the requirement

66. What is a CURSOR?

CURSOR is a Handle OR Pointer To The CONTEXT AREA

67. What is The CURSOR Usage?

Using a CURSOR, The PL/SQL program can control the CONTEXT AREA, As the SQL Statement is being processed.

68. What are the CURSOR Features?

- CURSOR Allows to FETCH and process Rows returned by a SELECT statement, One Row at a time.
- A CURSOR is named, such that it can be referenced by the PL/SQL programmer dynamically at run time.

69. What are the Different Types of Constraints?

- Null Constraint

- Not Null Constraint
- Primary Key Constraint
- Unique Key Constraint
- Foreign Key Constraint
- Composite Primary Key Constraint
- Default Constraint
- Check Constraint

SQL Statements Interview Questions

70. What is %Found in SQL Statements?

- This attribute returns a boolean value either true or false.
- This attribute returns true when the fetch statement returns at least one records.

Syntax:

```
cursorname%found
SQL>declare
Cursor c1 is select * from emp
Where ename ='&ename';
i emp% rowtype;
begin
open c1;
fetch c1 into i;
If c1%found then
dbms_outpit.put_line(your employee exists'||' '||i.ename|| '
'||i.sal);
else if c1%not found then
dbms_output.put_line('your employee does not exists');
end if;
close c1;
end;

/
```

Output: enter value forename:murali

Employee doe snot exists

Output: enter value forename:KING

Employee exists KING 7400

71. Explain Eliminating Explicit Cursor Life Cycle (or) Cursor FOR Loops?

Using cursor for loop we are eliminating explicit cursor life cycle i.e whenever we are using cursor for loop no need to use open, fetch, close statement explicitly i.e when we are using cursor for loop oracle server only internally automatically opens the cursor, and then fetch data from the cursor and close the cursor.

Syntax: For an index

```
varname in cursor name
```

```
Loop
```

```
stmts;
```

```
end loop;
```

Note:

In cursor for the loop index variable internally behaves like a record type variable. (%row type)

72). What are the Cursor Attributes?

Attribute Name	Return Value	Condition
%found	True ------------ False	If fetch statement return at least one row ------------------------------------- ---------- If the fetch statement doesn't return any row
%notfound	True ------------ False	If the fetch statement doesn't return any row ------------------------------------- -----------

		If fetch statement return at least one row
%isopen	True ------------ False	If the cursor is already opened ------------------------------------- ------------ If the cursor is not opened
%rowcount	Number	If counts number of records number fetches from the cursor

73. What is an Autonomous Transaction?

- Autonomous transactions are independent transactions used in anonymous blocks, procedures, functions, triggers.
- Generally, we are defining autonomous transaction as child procedure.
- Whenever we are calling autonomous procedure in the main transaction and also the main transaction TCL commands never affected on autonomous TCL commands procedure because these are independence procedure.
- If we want to procedure autonomous then we are using autonomous transaction pragma, commit i.e in declare section of the procedure we are defining autonomous transaction pragma and also we must use commit in procedure coding.

74. What is Out Mode?

We can also use out mode parameter I function, but these functions are not allowed to execute by using select statement. If we want to return more no.of values from a function then only we are allowed to use out parameter. Here also out parameter behaves like an uninitialized variable.

75. What is SQL Loader?

SQL Loader is a utility program that is used to transfer data from flat into oracle database. SQL Loader always executes control file based on the type of flat file we are creating control file and then submit control file to SQL loader then only SQL loader transfer file into flat file into oracle Data Base during this file some other files also created.

- Logfile
- Bad file
- Discard file

76. What is SQL %bulk_rowcount

Oracle introduced sql%bulk_rowcount the attribute which is used to count the affected number of rows within each group in bulk bind process. (all statements).

Syntax:

```
sql%bulk_rowcount(index varname);
```

77. What is Authid current_user

- When a procedure has an authed current_user clause then those procedures are allowed to execute the only owner of the procedure.
- These procedures are not allowed to executes by another user if any user givings permission also. Generally whenever we are reading data from the table and performs some DML operations then only data security principles of view developers use this clause in procedures.
- This clause is used in procedures specification only.

Syntax:

```
Create or replace procedure procedurename(formal parameters)
Authid current_user
is/as
-----------
Begin
----------
[exeception]
------------

End[procedurename];
```

78 What is Row-Level-Attribute?

In this method, a single variable can represent all different datatype into a single unit. This variable is also called a record type variable.

Row Level Attribute is represented by using %rowtype.

Syntax:

```
variable_name table_name%rowtype;
```

79. What are the types of Blocks in PL/SQL?

PL/SQL has 2 types of blocks

- Anonymous Block
- Named Block

Anonymous Block	Name Block
This block does not have a name	This block having a name
These blocks are not stored in the oracle database	These blocks are automatically permanently stored in Database
These blocks are not allowed to call in the client application	These blocks are allowed to call in the client application

80. Write a PL/SQL cursor program which is used to display total salary from emp table without using sum() function by using cursor for loop?

```
sql>
declare
        cursor c1 is select*from emp
        n number(10):=0;
        begin
        for i in c1
        loop
        n:=n+i.sal;
        end loop;
        dbms_output.put_line ('total salary is: '||' '||n);
        end;

         /?
```

Output: total salary is: 42075

81. What is Normalization?

Normalization is a scientific process that is called decomposing a table into a number of tables. This process automatically reduces duplicate data and also automatically avoids insertion, update, deletion problems.

In the design phase of SDLC, database designers design the LOGICAL MODEL of the database in this logical model only database designers use the normalization process by using normal forms.

82. What is Super Key?

A column or a combination of columns that uniquely identify a record in a table is called a Super Key.

83. What is the Candidate Key?

A minimal super key uniquely identifying a record a table is called a candidate key

(or)

A super key is a subset of another super key then those super keys are not a candidate key.

84. What is a Bad File?

This file extension is .bad

Bad file stores rejected records based on

1. Data type mismatch
2. Business rule violation

The bad file is automatically created as the same name as the Flat file, we can also create Bad file explicitly by using the bad file clause within the control file.

85. What is Discard File?

This file extension is .dsc

Discards file we must specify within control file by using the discard file clause.

Discard file also stores rejected record based on when clause condition within the control file. This condition must be satisfied with a table table_name clause.

86. What is Autoincrement?

In all databases generating primary key value automatically is called the auto-increment concept. In Oracle, we are implementing the auto-increment concept by using row-level triggers, sequences. i.e here we creating sequence in SQL and use this sequence in PL/SQL row-level trigger.

```
SQL> create table test (sno number(10), primary key, name
varchar2(10));
```

87. What is Dynamic SQL?

It is the combination of SQL, PL/SQL i.e SQL statements are executed dynamically with PL/SQL block using execute immediate clause.

Generally, in PL/SQL block we are not allowed to use DDL, DCL statements using Dynamic SQL DDL, DCL statement within PL/SQL block.

Syntax:

```
begin
execute immediate 'sql statement'
end;

/
```

88. What are the Different SQL Servers Versions available in the market?

SQL Server	Code Name
SQL Server 2017	vNext
SQL Server 2016	Helsinki
SQL Server 2014	Hekaton
SQL Server 2012	Denali
SQL Server 2008 R2	Kilimanjaro
SQL Server 2008	Katmai
SQL Server 2005	Yukon
SQL Server 2000	Shiloh

SQL Server 7.0	Sphinx

89. Write a dynamic SQL program to display a number of records from emp table?

```
SQL>
declare
          z number(10);
          begin
          execute immediate 'select count * FROM emp'
          into z;
          dbms_output.put_line(z);
           end;

           /?
```

90. Write a dynamic SQL program for passing department number 20 retrieve dept names, Loc from dept table?

```
SQL>
declare
         v_deptno number(10):=20;
         v_dname varchar2(10);
         v_loc varchar2(10);
         begin
         execute immediate 'select dname, loc FROM dept where
deptno=1' into v_dname, v_loc using  v_deptno;
         dbms_output.put_line(v_dname ||' '|| v_loc);
         end;

         /?
```