

WORKSHEET - 7 SQL

Q1 and Q2 have one or more correct answer. Choose all the correct option to answer your question.

1. The primary key is selected from the

- a) Composite keys
- b) Candidate keys
- c) Foreign keys
- d) Determinants

Answer : a) Composite keys

b) Candidate keys

2. Which is/are correct statements about primary key of a table?

- a) Primary keys can contain NULL values.
- b) Primary keys cannot contain NULL values.
- c) A table can have only one primary key with single or multiple fields.
- d) A table can have multiple primary keys with single or multiple fields.

Answer : b) Primary keys cannot contain NULL values.

c) A table can have only one primary key with single or multiple fields.

Q3 to Q10 have only one correct answer. Choose the correct option to answer your question.

3. Which SQL command is used to insert a row in a table?

- a) Select
- b) Create
- c) Insert

d) Drop

Answer : c) Insert

4. Which one of the following sorts rows in SQL?

- a) SORTBY
- b) ALIGNBY
- c) ORDERBY
- d) GROUPLY

Answer : c) ORDERBY

5. The SQL statement that queries or reads data from a table is

- a) QUERY
- b) READ
- c) SELECT
- d) QUERY

Answer : c) SELECT

6. Which normal form is considered adequate for relational database design?

- a) 1NF
- b) 2NF
- c) 3NF
- d) 4NF

Answer : c) 3NF

7. SQL can be used to

- a) Create database structures only
- b) Modify database data only
- c) All of the above can be done by SQL
- d) Query database data only

Answer : c) All of the above can be done by

8. SQL query and modification commands make up

- a) DDL
- b) DML
- c) HTML
- d) XML

Answer : b) DML

9. The result of a SQL SELECT statement is a(n).

- a) File
- b) Table
- c) Report
- d) Form

Answer : b) Table

10. Second normal form should meet all the rules for

- a) 1 NF
- b) 2 NF
- c) 3 NF
- d) 4 NF

Answer : a) 1NF

Q11 to Q15 are subjective answer type questions, Answer them briefly.

What are joins in SQL?

Answer : A join is an SQL operation performed to establish a connection between two or more database tables based on matching columns, thereby creating a relationship between the tables.

Different Types of SQL JOINS

- (INNER) JOIN : Returns records that have matching values in both tables.
- LEFT (OUTER) JOIN : Returns all records from the left table, and the matched records from the right table.
- RIGHT (OUTER) JOIN : Returns all records from the right table, and the matched records from the left table

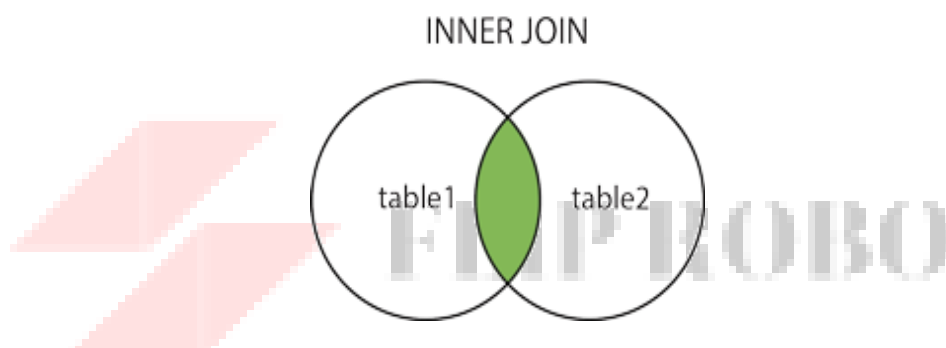
For Example :

```
SELECT Orders.OrderID, Customers.CustomerName, Orders.OrderDate  
FROM Orders  
INNER JOIN Customers ON Orders.CustomerID=Customers.CustomerID;
```

What are the different types of joins in SQL?

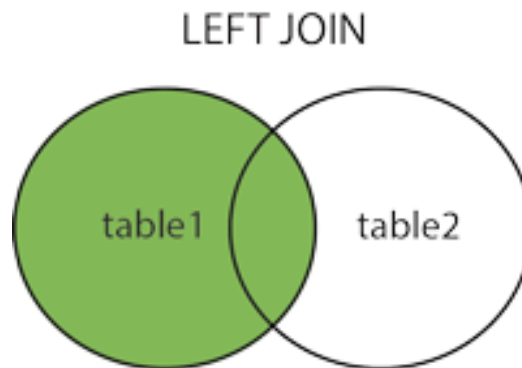
Answer : The different types of joins in SQL are as follows :

INNER JOIN: The INNER JOIN keyword selects all rows from both the tables as long as the condition satisfies. This keyword will create the result-set by combining all rows from both the tables where the condition satisfies i.e value of the common field will be same.

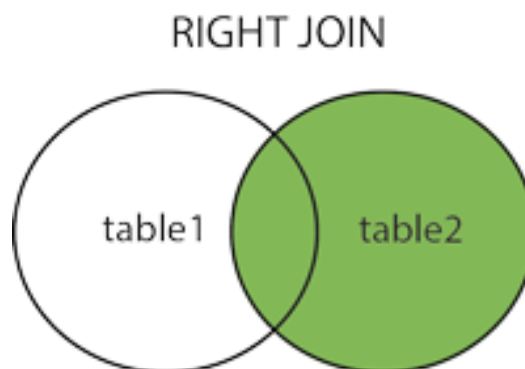


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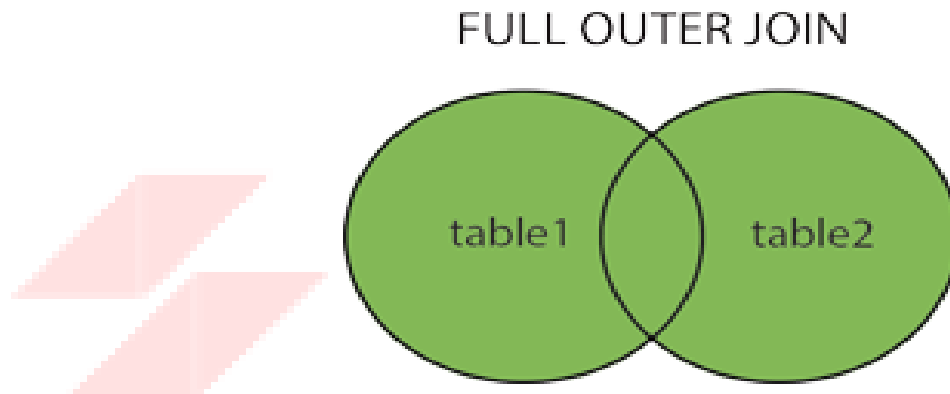
LEFT JOIN: This join returns all the rows of the table on the left side of the join and matching rows for the table on the right side of join. The rows for which there is no matching row on right side, the result-set will contain null.



RIGHT JOIN: RIGHT JOIN is similar to LEFT JOIN. This join returns all the rows of the table on the right side of the join and matching rows for the table on the left side of join. The rows for which there is no matching row on left side, the result-set will contain *null*. RIGHT JOIN is also known as RIGHT OUTER JOIN.



FULL JOIN: FULL JOIN creates the result-set by combining result of both LEFT JOIN and RIGHT JOIN. The result-set will contain all the rows from both the tables. The rows for which there is no matching, the result-set will contain *NULL* values.



What is SQL Server?

Answer : SQL SERVER is a relational database management system (RDBMS) developed by Microsoft. It is primarily designed and developed to compete with MySQL and Oracle database.

What is primary key in SQL?

Answer : A primary key is the column or columns that contain values that uniquely identify each row in a table. A database table must have a primary key for Optim to insert, update, restore, or delete data from a database table. Optim uses primary keys that are defined to the database.).

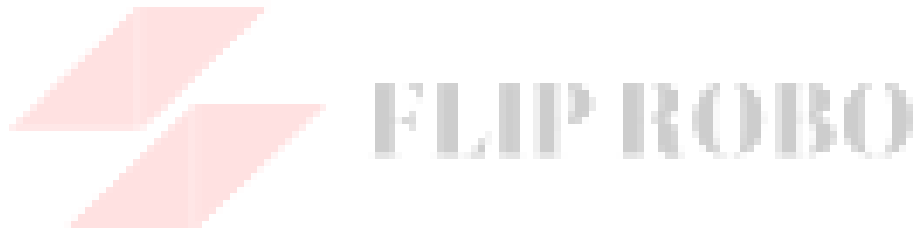
Properties of primary key:

1. It enforces uniqueness by not accepting any duplicate values.
2. A primary key uniquely identifies each field.
3. A table can only take one primary key.
4. Primary columns have a maximum length of 900 bytes.
5. A primary key column cannot accept null values.

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11.What is ETL in SQL?

Answer : ETL stands for Extract, Transform and Load, which is a process used to collect data from various sources, transform the data depending on business rules/needs and load the data into a destination database. The need to use ETL arises from the fact that in modern computing business data resides in multiple locations and in many incompatible formats. For example business data might be stored on the file system in various formats (Word docs, PDF, spreadsheets, plain text, etc.,) or can be stored as email files, or can be kept in a various database servers like MS SQL Server, Oracle and MySQL for example. Handling all this business information efficiently is a great challenge and ETL plays an important role in solving this problem.



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