ASSIGNMENT-7

SQL – 7

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

B. Candidate keys

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

B. Primary keys cannot contain NULL values…

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?

C. Insert

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

C. ORDERBY

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

C. SELECT

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

C. 3NF

7. SQL can be used to

C. All of the above can be done by SQL

8. SQL query and modification commands make up

B. DML

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

B. Table

10. Second normal form should meet all the rules for

A. 1 NF

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

11. What are joins in SQL?

Joins in SQL are used to combine rows from two or more tables based on a related column between them.

When two or more tables have a related column, the related data can be combined into a single table by using a JOIN clause in a SELECT statement. The result is a new table that includes columns from both tables, and each row in the new table contains data from both tables for the related columns.

There are several types of joins in SQL, including:

- INNER JOIN: returns only the rows that have matching values in both tables.
- LEFT JOIN (or LEFT OUTER JOIN): returns all the rows from the left table and the matching rows from the right table, and if there is no match, NULL values will be returned for the right table's columns.
- RIGHT JOIN (or RIGHT OUTER JOIN): returns all the rows from the right table and the matching rows from the left table, and if there is no match, NULL values will be returned for the left table's columns.
- FULL JOIN (or FULL OUTER JOIN): returns all the rows from both tables, and if there is no match, NULL values will be returned for the non-matching columns.

12. What are the different types of joins in SQL?

INNER JOIN: returns only the rows that have matching values in both tables. It is the most common type of join and is the default type of join when using the JOIN keyword.

LEFT JOIN (or LEFT OUTER JOIN): returns all the rows from the left table and the matching rows from the right table, and if there is no match, NULL values will be returned for the right table's columns.

RIGHT JOIN (or RIGHT OUTER JOIN): returns all the rows from the right table and the matching rows from the left table, and if there is no match, NULL values will be returned for the left table's columns.

13. What is SQL Server?

SQL Server is a relational database management system (RDBMS) developed by Microsoft. It is used to manage and store data for a wide variety of applications, including business intelligence, enterprise resource planning, and data warehousing. SQL Server provides a robust and reliable platform for storing and retrieving data, and it is widely used in small, medium and large organizations.

SQL Server supports both the SQL (Structured Query Language) and T-SQL (Transact-SQL) languages. T-SQL is an extension of SQL and is used to add advanced functionality to SQL Server. It includes a wide range of features that enable you to create and manage databases, tables, and views, as well as to insert, update, and retrieve data from the database.

SQL Server also provides various tools for data management, such as SQL Server Management Studio, which is used for managing and administering SQL Server instances, and SQL Server Data Tools, which is used for designing, developing and deploying data-tier applications.

SQL Server has different editions such as Express, Web, Standard, and Enterprise, which provide different features and scalability options to meet the specific needs of organizations. It also supports integration with other Microsoft technologies such as SharePoint and Excel, which allows for greater data analysis and reporting capabilities.

14. What is primary key in SQL?

A primary key in SQL is a unique identifier for each record in a database table. It is used to enforce the integrity of the data and ensure that each record can be identified and accessed in a predictable way.

A primary key is a column or set of columns in a table that is used to uniquely identify each row in the table. It is defined by using the PRIMARY KEY constraint when creating a

table. The primary key ensures that there are no duplicate values in the table, and it can also be used to create relationships between tables.

15. What is ETL in SQL?

ETL stands for Extract, Transform, and Load. It is a process used to transfer data from one or more sources, transform the data to meet the requirements of the target system, and then load the data into the target system.

In the context of SQL, ETL is a process that is used to extract data from one or more databases, apply a series of transformations to the data to make it usable in the target system, and then load the transformed data into the target system. The target system can be another database, a data warehouse, or any other system that can store and process data.

The "Extract" step involves reading data from one or more sources, such as a relational database, a flat file, or an external API. This data is typically read into a staging area, where it can be cleaned, transformed and validated before loading it to the target system.

The "Transform" step involves applying a series of data transformations to the data, such as filtering, sorting, and joining data from multiple sources, as well as calculating new fields, cleaning and validating the data.

The "Load" step involves loading the transformed data into the target system, such as a data warehouse or another database.

SQL Server has an ETL tool called SQL Server Integration Services (SSIS), which is widely used to perform ETL operations. It provides a rich set of data integration and transformation capabilities, including a drag-and-drop interface for creating data integration workflows, and a powerful set of data transformation components that can be used to perform a wide range of data integration tasks.