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**DE-Week 2 Task#3**

**SQL:**

“SQL (Structured Query Language) is a programming language used to manage and manipulate data stored in relational databases. It allows you to create, modify, and query databases to extract the data you need.

In simpler terms, SQL helps you organize, store, and retrieve data from databases. It's a way to communicate with a database and ask it questions to get the information you want. For example, you can use SQL to search for all the customers who have made a purchase in the last month, or to update the price of a product in the database.”

**DDL:**

“DDL (Data Definition Language) is a part of SQL that is used to create, modify, and delete the structure of a database. It deals with defining and managing the objects in a database, such as tables, indexes, and constraints.

In simpler terms, DDL is used to create and change the structure of a database. For example, you can use DDL to create a new table to store customer information or to add a new column to an existing table. You can also use DDL to delete tables or modify their structure, such as changing the data type of a column or adding a new index to a table.

DDL is an important aspect of database management because it allows you to control and organize the way data is stored and managed in a database.”

**DML:**

“DML (Data Manipulation Language) is a part of SQL that is used to insert, update, and delete data in a database. It deals with manipulating the data stored in a database, such as adding new records, changing existing ones, or removing them.

In simpler terms, DML is used to add, modify, and delete data in a database. For example, you can use DML to add a new customer record to a table, update the phone number of an existing customer, or delete a customer record from the table.

DML is an important aspect of database management because it allows you to change the data stored in a database, which is essential for maintaining accurate and up-to-date information.”

**DQL:**

“DQL (Data Query Language) is a part of SQL that is used to retrieve data from a database. It deals with querying the data stored in a database, such as searching for specific records or retrieving information based on certain conditions.

In simpler terms, DQL is used to ask questions of a database and retrieve the data you need. For example, you can use DQL to search for all the customers who live in a specific city, retrieve the total sales for a particular product, or find the average salary of employees in a certain department.

DQL is an important aspect of database management because it allows you to extract useful information from a database, which can be used for reporting, analysis, and decision-making.”

**Task5**

**SQL Data Types:**

Data types in SQL are used to define the type of data that can be stored in a database column. Different types of data require different storage formats, which is why data types are important. Here are some common data types in SQL with examples:

1. INTEGER - This data type is used for whole numbers, such as 1, 2, 3, etc. For example, the **id** column in a **Students** table might be defined as **INTEGER**.
2. VARCHAR - This data type is used for variable-length character strings, such as names or addresses. For example, the **name** column in a **Students** table might be defined as **VARCHAR (50)** to allow for up to 50 characters.
3. DATE - This data type is used for dates, such as birthdays or enrollment dates. For example, the **birthdate** column in a **Students** table might be defined as **DATE**.
4. DECIMAL - This data type is used for decimal numbers, such as 3.71 or 0.05. For example, the **gpa** column in a **Students** table might be defined as **DECIMAL(3,2)** to allow for up to 3 digits before the decimal and 2 digits after the decimal.
5. BOOLEAN - This data type is used for boolean values, which can be either **TRUE** or **FALSE**. For example, the **is\_active** column in a **Students** table might be defined as **BOOLEAN**.