**SQL DRILLS**

1. Describe the different types of join clauses supported in SQL – the different types of joins supported by SQL are -

* INNER JOIN, this returns rows when there is a match in both tables.
* LEFT JOIN, which returns all rows from the left table, even if there are no matches in the right table.
* RIGHT JOIN returns all rows from the right table, even if there are no matches in the left table.
* FULL JOIN − returns rows when there is a match in one of the tables.
* SELF JOIN − is used to join a table to itself as if the table were two tables, temporarily renaming at least one table in the SQL statement.

Part 2

The join used in to merge the vendor table and the yarn table is a left join and this is because the resulting table returns all rows from the left table, the vendor table.

1. Explain the difference between alter and update in SQL statements.

The SQL **ALTER TABLE** command is used to add, delete or modify columns in an existing table. It is also used to ALTER TABLE command to add and drop various constraints on an existing table while, the SQL **UPDATE** Query is used to modify the existing records in a table. In short, ALTER is used to modify the structure of the relations (Tables) in the database. UPDATE Command is used to modify the data stored in a relation of the database.

Part 2

1. Change the name of the column from department\_id to dept\_id. The syntax to perform this task is below:

ALTER TABLE employee MODIFY COLUMN column\_name datatype;

VS

UPDATE employee SET department\_id = dept\_id;

1. Add a column named annual\_salary to the table. The syntax to perform this task is below:

ALTER TABLE employee ADD annual\_salary int;

1. What is the difference between DML and DDL in SQL?

Data Definition Language (DDL) and Data Manipulation Language (DML) together forms a Database Language. The basic difference between DDL and DML is that **DDL** (Data Definition Language) is used to Specify the database schema database structure. On the other hand, **DML** (Data Manipulation Language) is used to access, modify or retrieve the data from the database. Let us discuss the differences between DDL and DML, with the help of comparison chart shown below.

| **BASIS FOR COMPARISON** | **DDL** | **DML** |
| --- | --- | --- |
| Basic | DDL is used to create the database schema. | DML is used to populate and manipulate database |
| Full Form | Data Definition Language | Data Manipulation Language |
| Classification | DDL is not classified further. | DML is further classified as Procedural and Non-Procedural DMLs. |
| Commands | CREATE, ALTER, DROP, TRUNCATE AND COMMENT and RENAME, etc. | SELECT, INSERT, UPDATE, DELETE, MERGE, CALL, etc. |

1. How do you locate a duplicate record with one field? Using the table below, write a query to demonstrate.

Part 1:

SELECT yarn\_name, COUNT(vendor\_id)

FROM yarn

GROUP BY yarn\_name

HAVING COUNT (vendor\_id) > 1;

Part 2:

SELECT yarn\_name, vendor\_id, COUNT(\*)

FROM yarn

GROUP BY yarn\_name, vendor\_id

HAVING COUNT(\*) > 1;

1. What is an equivalent SQL query? Instead of the sum, find the mean duration by state.

SELECT state, AVG(duration)

FROM usa\_ufo

GROUP BY state;