INTERMEDIATE SQL CONCEPTS

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LABS

SUMMARY OF KEYWORDS

- WHERE – condition

- DISTINCT – all unique values of column

- ORDER BY – sort all the values by a column

- LIMIT (OFFSET) – limiting the number of rows

- GROUP BY (HAVING) – grouping unique values of a particular column

- BETWEEN – range of values

SUMMARY OF KEYWORDS

- LIKE – pattern matching of text/values of a column

- AS – alias for the column

- Aggregate function (SUM, COUNT, AVG, MIN, MAX)

- Operator (AND, OR, NOT)

- IN – a list of values

- INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, SELF JOIN

SUBQUERIES

QUERY WITHIN A QUERY

SUBQUERIES

- Using multiple SELECT queries

- Using result of one select statement in another SELECT query to get information

SELECT column1,column2…
FROM table_name
WHERE column1
expression_operator (SELECT
column FROM table_name);

ENTIRE COLUMN

- Using IN operator

- Comparing entire column values to the column values in another table

SELECT column1,column2…
FROM table_name
WHERE column1 **IN (SELECT
column2 FROM table_name2);**

FILTERING LIST OF VALUES

- Compares to the values in that entire column or list of values returned

- Using IN operator and WHERE in second query

SELECT column1,column2…
FROM table_name
WHERE column1 **IN (SELECT
column2 FROM table_name2
WHERE column2 > 2);**

WITH AGGREGATE FUNCTIONS

- Comparing the value to just one value returned by aggregate function on that column

SELECT column1,column2…
FROM table_name
WHERE column1 > **(SELECT SUM(column) FROM table_name);**

CORRELATED QUERIES USING SUBQUERIES

- They are like JOINS, just a different syntax

- Compare the columns that are matching in both the tables for meaningful information

```
SELECT column1,column2…
FROM table_name A
WHERE column1 > (SELECT
SUM(column) FROM
table_name B WHERE
A.column1 = B.column1);
```

ORDER OF EXECUTION FOR SUBQUERIES

- The query inside is executed first to be able to determine what values it needs to compare it to.

- After the inner query is executed, the outer query is executed.

- Add as many conditions as you require in both the queries.

- The column you are comparing to from should have the same datatype as the column being returned.

WRITING SUBQUERIES

- Write the queries separately then combining them

- Write the inner query first then see where you want that value

- Put the inner query in parenthesis as that value in the main query

SUMMARY

- Subqueries are nested queries, used to get values from other tables and compare with our table.

- Columns datatypes should match.

- Subqueries could be used even if you don't have foreign keys in another table.

- Used with clauses like WHERE, FROM and HAVING