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Database Organization and Design

Report for the Laboratory work #3

# Theme: Basic MySQL Syntax: SELECT, WHERE, JOIN, ORDER, GROUP BY scrips, SUM and COUNT functions

**Script Examples**

* Script 1: Using SELECT and WHERE commands

-- Selecting specific columns from a table where a condition is met

SELECT customer\_name, order\_date, total\_amount

FROM orders

WHERE total\_amount > 100;

* Script 2: Using SELECT, WHERE, and ORDER BY commands

-- Selecting specific columns from a table where a condition is met, and ordering the results

SELECT customer\_name, order\_date, total\_amount

FROM orders

WHERE total\_amount > 100

ORDER BY order\_date DESC;

* Script 3: Using SELECT, WHERE, GROUP BY, and SUM functions

-- Selecting specific columns from a table where a condition is met, grouping the results, and calculating the sum

SELECT customer\_name, SUM(total\_amount) AS total\_spentFROM orders

WHERE order\_date > '2020-01-01'

GROUP BY customer\_name

ORDER BY total\_spent DESC;

* Script 4: Using SELECT, WHERE, GROUP BY, and COUNT functions

-- Selecting specific columns from a table where a condition is met, grouping the results, and counting the number of rows

SELECT customer\_name, COUNT(order\_id) AS num\_orders

FROM orders

WHERE order\_date > '2020-01-01'

GROUP BY customer\_name

ORDER BY num\_orders DESC;

* Script 5: Using SELECT, WHERE, GROUP BY, SUM, and COUNT functions

-- Selecting specific columns from a table where a condition is met, grouping the results, and calculating the sum and count

SELECT customer\_name, SUM(total\_amount) AS total\_spent, COUNT(order\_id) AS num\_orders

FROM orders

WHERE order\_date > '2020-01-01'

GROUP BY customer\_name

ORDER BY total\_spent DESC;

**Conclusion**

Script examples demonstrate various ways to manipulate and analyze data in a database using SQL commands.

* **Filtering data:** The WHERE clause is used to filter data based on specific conditions, such as selecting orders with a total amount greater than 100 or orders placed after a certain date.
* **Selecting specific columns:** The SELECT clause is used to specify which columns to include in the output, allowing users to focus on relevant data.
* **Grouping and aggregating data:** The GROUP BY clause is used to group data based on one or more columns, and aggregate functions like SUM and COUNT are used to perform calculations on the grouped data.
* **Sorting and ordering data:** The ORDER BY clause is used to sort the output in ascending or descending order based on specific columns.
* **Combining multiple clauses and functions**: The scripts demonstrate how to combine multiple clauses and functions to achieve complex data analysis tasks, such as selecting specific columns, filtering data, grouping results, and performing calculations.