Online

MYSQL CHEAT SHEET

MYSQL DATABASE

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MySQL cheat sheet document to get a quick reference keyword and use for practice:
MySQL Cheat Sheet

1. Basics
   - Connecting to MySQL Server
   - Creating a Database
   - Selecting a Database
   - Creating Tables
   - Dropping Tables

2. Data Types
   - Numeric Types (INT, FLOAT, DOUBLE, etc.)
   - String Types (VARCHAR, CHAR, TEXT, etc.)
   - Date and Time Types (DATE, TIME, DATETIME, TIMESTAMP, etc.)
   - Other Data Types (BOOLEAN, ENUM, SET, etc.)

3. Retrieving Data
   - SELECT Statement
   - Sorting (ORDER BY)
   - Filtering (WHERE)
   - Limiting Results (LIMIT)

4. Updating Data
   - INSERT INTO
   - UPDATE
   - DELETE

5. Filtering Data
   - Comparison Operators (=, <>, <, >, <=, >=)
   - Logical Operators (AND, OR, NOT)
   - IN Operator
   - BETWEEN Operator
   - LIKE Operator
   - NULL and NOT NULL

6. Advanced Queries
   - Joins (INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN)
   - Aggregate Functions (COUNT, SUM, AVG, MAX, MIN)
   - Grouping (GROUP BY)
   - HAVING Clause

7. Data Manipulation Functions
   - String Functions (CONCAT, SUBSTRING, LENGTH, etc.)
   - Date and Time Functions (NOW, DATE_FORMAT, etc.)
   - Mathematical Functions (ROUND, ABS, etc.)

8. Table Constraints
   - PRIMARY KEY
   - FOREIGN KEY
   - UNIQUE
   - NOT NULL
   - DEFAULT

9. Indexes
   - Creating Indexes
   - Types of Indexes (B-Tree, Hash, etc.)
   - Dropping Indexes

10. Transactions
   - START TRANSACTION
   - COMMIT
   - ROLLBACK

11. Views
   - Creating Views
   - Dropping Views

12. Stored Procedures
   - Creating Stored Procedures
   - Executing Stored Procedures

13. User Management
   - Creating Users
   - Granting and Revoking Privileges

14. Backing Up and Restoring Databases
   - mysqldump
   - mysqlimport

15. Common MySQL Functions (brief overview)
   - CONCAT, IF, CASE, etc.

16. Useful MySQL Tips and Best Practices
   - practice with real-world sample data and queries for your all exercises
   - Each concept try to practice at least 5 real time scenario base example to make you master in MySQL which will help you to grasp and apply skills on any other RDBMS databases using SQL.

MySQL cheat sheet document with examples and queries for various operations:

MySQL Cheat Sheet with Examples and Queries

1. Basic SQL Queries

```
-- Create a database
CREATE DATABASE mydatabase;

-- Use a database
USE mydatabase;

-- Create a table
CREATE TABLE users (
    id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(50),
    age INT,
    email VARCHAR(100)
);

-- Insert data into a table
INSERT INTO users (name, age, email)
VALUES ('John', 30, 'john@example.com');

-- Select data from a table
SELECT * FROM users;

-- Update data in a table
UPDATE users SET age = 31 WHERE name =
'John';

-- Delete data from a table
DELETE FROM users WHERE name = 'John';
```

2. Filtering and Sorting

```
-- Filter data using WHERE clause
SELECT * FROM users WHERE age > 25;

-- Sort data using ORDER BY clause
SELECT * FROM users ORDER BY age DESC;

-- Limit the number of results
SELECT * FROM users LIMIT 5;

-- Offset and Limit
SELECT * FROM users LIMIT 5 OFFSET 10;
```

3. Aggregate Functions

```
-- Count the number of rows
SELECT COUNT(*) FROM users;

-- Calculate the average age
SELECT AVG(age) FROM users;

-- Find the maximum age
SELECT MAX(age) FROM users;

-- Sum the ages
SELECT SUM(age) FROM users;
```

4. Joins

```
-- Inner Join
SELECT orders.id, orders.order_date,
customers.name
FROM orders
INNER JOIN customers ON
orders.customer_id = customers.id;

-- Left Join
SELECT orders.id, orders.order_date,
customers.name
FROM orders
LEFT JOIN customers ON orders.customer_id
= customers.id;

-- Right Join
SELECT orders.id, orders.order_date,
customers.name
FROM orders
RIGHT JOIN customers ON
orders.customer_id = customers.id;
```

5. Grouping and Aggregating

```
-- Grouping data using GROUP BY
SELECT country, COUNT(*) as count FROM
customers GROUP BY country;

-- Filtering groups using HAVING
SELECT country, COUNT(*) as count FROM
customers GROUP BY country HAVING count >
5;
```

6. Subqueries

```
-- Subquery in WHERE clause
SELECT * FROM orders WHERE customer_id
IN (SELECT id FROM customers WHERE
country = 'USA');
```

```
 -- Subquery in SELECT clause   SELECT
customer_id, (SELECT name FROM customers
WHERE id = customer_id) as customer_name
FROM orders;

7. Aliases
  -- Alias for table name
  SELECT o.id, o.order_date, c.name
  FROM orders AS o
  INNER JOIN customers AS c ON
o.customer_id = c.id;

  -- Alias for column name
  SELECT name AS full_name FROM
customers;

8. Views
  -- Create a view
  CREATE VIEW customer_details AS
  SELECT id, name, email FROM customers;

  -- Use a view
  SELECT * FROM customer_details;

9. Indexes
  -- Create an index
  CREATE INDEX idx_name ON users (name);

  -- Drop an index
  DROP INDEX idx_name ON users;

10. Transactions
   -- Start a transaction
   START TRANSACTION;

   -- SQL statements

   -- Commit the transaction
   COMMIT;

   -- Rollback the transaction
   ROLLBACK;
```

These examples cover various MySQL queries and operations. You can use them as a reference to understand how to interact with MySQL databases using SQL queries.

Happy querying!