

MySQL Cheat Sheet

1. Database Operations

CREATE DATABASE school;

USE school;

DROP DATABASE school;

2. Table Operations

```
CREATE TABLE students (  
    id INT PRIMARY KEY AUTO_INCREMENT,  
    name VARCHAR(100),  
    age INT,  
    grade CHAR(1)  
);
```

SHOW TABLES;

DESCRIBE students;

DROP TABLE students;

3. Data Insertion

INSERT INTO students (name, age, grade) VALUES ('Alice', 14, 'A');

INSERT INTO students (name, age, grade) VALUES

('Bob', 15, 'B'),

('Charlie', 16, 'C');

4. Data Retrieval

SELECT * FROM students;

SELECT name, grade FROM students;

SELECT * FROM students WHERE grade = 'A';

SELECT * FROM students ORDER BY age DESC;

SELECT * FROM students LIMIT 3;

5. Update & Delete

```
UPDATE students SET grade = 'A' WHERE name = 'Bob';
```

```
DELETE FROM students WHERE age > 15;
```

6. Aggregate Functions

```
SELECT COUNT(*) FROM students;
```

```
SELECT AVG(age) FROM students;
```

```
SELECT MAX(age) FROM students;
```

```
SELECT grade, COUNT(*) FROM students GROUP BY grade;
```

7. Joins

```
CREATE TABLE subjects (
```

```
    student_id INT,
```

```
    subject VARCHAR(50)
```

```
);
```

```
SELECT students.name, subjects.subject
```

```
FROM students
```

```
JOIN subjects ON students.id = subjects.student_id;
```

8. Constraints

```
ALTER TABLE students ADD CONSTRAINT unique_name UNIQUE (name);
```

```
ALTER TABLE students MODIFY age INT NOT NULL;
```

```
ALTER TABLE subjects ADD FOREIGN KEY (student_id) REFERENCES students(id);
```

9. STL-Like Examples

```
SET: SELECT DISTINCT column FROM table;
```

```
MAP: SELECT key_column, COUNT(*) FROM table GROUP BY key_column;
```

```
STACK: SELECT * FROM table ORDER BY id DESC LIMIT 1;
```

```
PRIORITY QUEUE: SELECT * FROM table ORDER BY priority_column DESC;
```

10. Indexes & Views

```
CREATE INDEX idx_name ON students(name);
```

```
CREATE VIEW top_students AS SELECT * FROM students WHERE grade = 'A';
```

11. Stored Procedures

```
DELIMITER //
```

```
CREATE PROCEDURE getAllStudents()
```

```
BEGIN
```

```
    SELECT * FROM students;
```

```
END;
```

```
//
```

```
CALL getAllStudents();
```