

PROJECTION

- * SELECTING SPECIFIC COLUMNS

RESTRICTION

- * SELECTION
- * SPECIFIC ROWS ARE SELECTED
- * WHERE CLAUSE

```
SELECT      * (PROJECTION)
FROM        TABLENAME
WHERE       RESTRICTION
```

Operators used with Where Clause

OPERATOR TYPE	OPERATOR
COMPARISON	=,<=,>=,<>
LOGICAL	AND,OR,NOT
SPECIAL	IN,NOT IN ,BETWEEN
PATTERN MATCHING	LIKE,NOT LIKE
NULL	IS NULL,IS NOT NULL

Pattern Matching

COMMAND	DESCRIPTION
S%	BEGIN WITH S
%S	END WITH S
_S%	SECOND LETTER STARTING WITH S
_____	EXACTLY 5 LETTERS

Working with Null Values

NULL values are not 0 or a blank. It represents an unknown or inapplicable value. It cannot be compared using the relational and/or logical operators.

The special operator 'IS' is used with the keyword 'NULL' to locate NULL values

Examples:

List the employee names, who are not eligible for commission:

```
SELECT first_name FROM employees WHERE commission_pct IS NULL;
```

Column Aliasing

```
SELECT FIRST_NAME,SALARY,(SALARY+100) " newsal", (SALARY+100) as newsal,
(SALARY+100) newsal FROM EMPLOYEES
WHERE EMPLOYEE_ID=101
```

Distinct

To eliminate duplicates.

```
SELECT DISTINCT(LOCATION_ID) FROM DEPARTMENTS
```

Order By Clause

SQL uses the ORDER BY clause to impose an order on the result of a query. ORDER BY clause is used with SELECT statement

The syntax is

```
SELECT[DISTINCT] <column list> | <expr>
FROM <table>[,<table>] [WHERE condition]
[ORDER BY <columns>] [ASC|DESC]
```

One or more columns and/or expressions can be specified in the ORDER BY clause.

Examples: List the empno, ename, sal in ascending order of salary:

```
SELECT empno, ename, sal FROM emp ORDER BY sal;
```

Row Limiting Clause

LIMIT clause that tells the server to return only part of a result set. It answers questions about first or last, largest or smallest, newest or oldest, least or most expensive, and so forth.

```
mysql> select * from emp LIMIT 1;
```

--find topmost salary person

```
mysql> select * from emp order by sal desc limit 1;
```

```
+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB | MGR | HIREDATE | SAL | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+
| 7839 | KING | PRESIDENT | NULL | 1981-11-17 | 5000 | NULL | 10 |
+-----+-----+-----+-----+-----+-----+-----+
```

--skipping first 2 and displaying further 3 rows

```
mysql> select * from emp limit 2,3;
```

SET

To assign a value to a variable

```
mysql> set @v1=10;
```

Query OK, 0 rows affected (0.00 sec)

```
mysql> select * from dept where deptno=@v1;
```

```
+-----+-----+-----+
| DEPTNO | DNAME | LOC |
+-----+-----+-----+
```

| 10 | ACCOUNTING | NEW YORK |

+-----+-----+-----+

mysql> **set @v2="turner";**

Query OK, 0 rows affected (0.00 sec)

mysql> **select * from emp where ename=@v2;**