

### Join, Table Operations

```
SELECT customers.ID, customers.Name,
orders.Name, orders.Amount
FROM customers, orders
WHERE customers.ID=orders.Customer_ID
ORDER BY customers.ID;
```

joining tables

```
SELECT ct.ID, ct.Name, ord.Name,
ord.Amount
FROM customers AS ct, orders AS ord
WHERE ct.ID=ord.Customer_ID ORDER BY
ct.ID;
```

renaming tables

### Basic Concepts

```
SHOW DATABASES;
```

display list of databases available

```
SHOW TABLES;
```

display list of tables in a selected database

```
SHOW COLUMNS FROM <table-
_name>;
```

show columns in a table

```
SELECT <column,list> FROM
<table_name>;
```

retrieve data in columns of a table

```
SELECT * FROM <table_na-
me>;
```

list all data in a table

```
SELECT DISTINCT <column,n-
ames> FROM <table_name>;
```

avoid duplicates and return unique ones

```
... LIMIT 5;
```

limit number of results

```
... LIMIT 3,4;
```

from array index of 3 return 4 items

```
SELECT <table.column> FROM
<table>;
```

fully qualified column.name

```
... ORDER BY <column_name-
>;
```

sort alphabetically of numerically default ascending order

```
... ORDER BY <col1,col2>;
```

first order 1 col then form 2nd col

### Filtering, Functions, Subqueries

```
... WHERE <condition>;
```

ex; ID = 7; name = 'John'/='can't'

```
=, !=, >, <, >=, <=, BETWEEN
```

comparison operators

```
... ... BETWEEN <val1> AND <va-
l2>;>
```

returns val1 to val2

```
AND, OR, IN, NOT
```

logical operators

```
... ... AND (val1=00 OR val2=88);
```

combining logics

```
... ... IN ('val1', 'val2',
'val3');
```

multiple OR alternative

```
... ... NOT IN ('val1', 'val2',
'val3');
```

exclude list items

```
SELECT CONCAT(col1, ' ', col2)
FROM <table>;
```

returns the concatenating string.

```
SELECT CONCAT(col1, ' ', col2)
AS new_col FROM <table>;
```

concat results in new col

```
... Salary+500 AS Salary FROM
<table>;
```

do operation on filed value

```
... val(UPPER) AS new_val ...
```

change to uppercase

```
LOWER(val), SQRT(val), MIN(col),
AVG(col), SUM(col), POWER(val)
```

math / str functions

```
... ... ORDER BY <col> DESC
```

order by desc or ASC

```
... WHERE Salary > (SELECT
AVG(Salary) FROM employees) ...
```

sub queries

```
... ... LIKE 'A%';
```

pattern = \_ single char, % multiple char

