SQL

- ● Group By, Having, Aggregating function

```
SELECT <unaggregated field>, <aggregate function>
FROM <single table>
JOIN <single table> ON <join condition>
WHERE <boolean condition>
GROUP BY <unaggregated field>
HAVING <boolean condition>
ORDER BY <fields to sort on>
```

- ● COUNT()
  - ○ COUNT(*) counts NULL
  - ○ COUNT(field) ignores NULL
  - ○ COUNT(DISTINCT field) returns the number of distinct values of a field, ignoring NULL

SQL Demo

How many students are taking each class?

```
Select c.cno, count(t.sid) as num_stu
From college.Class c left join college.Takes t on
c.cno = t.cno
Group by cno
Order by cno
```

For each student who is 19-years old or older and is earning at least 3 class credits, how many total class credits are such students earning?

```
Select s.sid, sum(credits) as num_credits
From college.Student s join college.Takes t on s.sid =
t.sid
Join college.Class c on t.cno = c.cno
Group by s.sid
```

Database Views

CREATE VIEW statement creates a virtual table that is dependent on other tables.

Examples : **snippets**/create_views.sql

Data visualization site: datastudio.google.com