

A decorative graphic on the left side of the slide, consisting of a network of white lines and circles on a blue gradient background, resembling a circuit board or a neural network.

WEEK 5

SQL – DOING SELECTS AND VIEWS

STUDENT OBJECTIVES

- Upon completion of this video, you should be able to:
 - View attributes and rows from one table
 - Join tables together and view their data
 - Create a view
 - Create an alias for a table or an attribute

Basic Queries:

```
SELECT AttrName[, AttrName] FROM TableName[,TableName]  
WHERE Condition;
```

Example:

```
SELECT name FROM pet WHERE species = "Dog";
```

or

```
SELECT * FROM pet, owner WHERE pet.ownerid=owner.ownerid;  
(this is a join)
```

Creating Views:

```
CREATE VIEW ViewName AS SELECT AttrName[,  
    AttrName] FROM TableName[,TableName] WHERE  
    Condition;
```

Example:

```
CREATE VIEW ownersandpets AS SELECT firstname,  
    lastname, name FROM pet, owner WHERE  
    owner.ownerid=pet.ownerid;  
SELECT * FROM ownersandpets;
```

QUESTION: What is a view and why do we need views?

A searchable object that doesn't **STORE** data like a table but allows you to query it like a table, a virtual table (retrieves data from the real tables that are being combined together)

Tuple Variables and Aliases

- Used for long tables or to change column names within the same table.
- For example, consider this table:

```
CREATE TABLE emp (ssn CHAR(3), name VARCHAR(20), salary INT,  
    supervisorssn CHAR(3), PRIMARY KEY(ssn), FOREIGN  
    KEY(supervisorssn) REFERENCES emp(ssn));
```

```
mysql> SELECT * FROM emp;
```

ssn	name	salary	supervisorssn
333	Homer Simpson	40000	666
444	Monty Burns	100000	NULL
555	Carl Friend	50000	666
666	Waylan Smithers	45000	444
777	Lisa Simpson	20000	666

5 rows in set (0.00 sec)

NOW do this query in sql: *Find all employee bosses and their workers.*

```
mysql> SELECT * FROM emp;
```

ssn	name	salary	supervisorssn
333	Homer Simpson	40000	666
444	Monty Burns	100000	NULL
555	Carl Friend	50000	666
666	Waylan Smithers	45000	444
777	Lisa Simpson	20000	666

5 rows in set (0.00 sec)

```
mysql> SELECT e.name AS "Supervisor Name", e2.name AS  
"Employee Name" FROM emp e, emp e2 WHERE  
e.ssn=e2.supervisorssn;
```

Supervisor Name	Employee Name
Waylan Smithers	Homer Simpson
Waylan Smithers	Carl Friend
Monty Burns	Waylan Smithers
Waylan Smithers	Lisa Simpson

4 rows in set (0.00 sec)