CS 327E Class 2

September 17, 2018

1) How many records does this query return?

```
SELECT * FROM Pokemon;
```

Pokemon

id	name	type	height_ft	weight_lbs	health_pts
16	Ponyta	Fire	3.03	66.1	60
56	Tyranitar	Dark	6.07	445.3	120
22	Vaporeon	Water	3.03	63.9	90
40	Charizard GX	Fire	5.07	199.5	250

a) 4
b) 5
c) 6
d) 0

2) How many fields does this query return?

```
SELECT * FROM Pokemon;
```

Pokemon

id	name	type	height_ft	weight_lbs	health_pts
16	Ponyta	Fire	3.03	66.1	60
56	Tyranitar	Dark	6.07	445.3	120
22	Vaporeon	Water	3.03	63.9	90
40	Charizard GX	Fire	5.07	199.5	250

a) 4
b) 5
c) 6
d) 0

3) How many records does this query return?

```
SELECT * FROM Pokemon
WHERE type = 'Fire';
```

Pokemon

id	name	type	height_ft	weight_lbs	health_pts
16	Ponyta	Fire	3.03	66.1	60
56	Tyranitar	Dark	6.07	445.3	120
22	Vaporeon	Water	3.03	63.9	90
40	Charizard GX	Fire	5.07	199.5	250

a) 0
b) 1
c) 2
d) 3

4) How many records does this query return?

```
SELECT * FROM Pokemon
WHERE type = 'Fire' OR type = 'Water';
```

Pokemon

id	name	type	height_ft	weight_lbs	health_pts
16	Ponyta	Fire	3.03	66.1	60
56	Tyranitar	Dark	6.07	445.3	120
22	Vaporeon	Water	3.03	63.9	90
40	Charizard GX	Fire	5.07	199.5	250

a) 0
b) 1
c) 2
d) 3

5) How many records does this query return?

```
SELECT * FROM Pokemon
WHERE height_ft = 3.03 AND health_pts >= 100;
```

Pokemon

id	name	type	height_ft	weight_lbs	health_pts
16	Ponyta	Fire	3.03	66.1	60
56	Tyranitar	Dark	6.07	445.3	120
22	Vaporeon	Water	3.03	63.9	90
40	Charizard GX	Fire	5.07	199.5	250

a) 0
b) 1
c) 2
d) 3

SQL Queries: Basic Form

```
SELECT <list of desired fields>
FROM <single table>
WHERE <boolean condition>
```

SQL Queries: Basic Form

```
SELECT <list of desired fields>
FROM <single table>
WHERE <boolean condition>
ORDER BY <list of fields to sort on>
```

Example Database

Student(<u>sid</u>, fname, lname, dob)

Class(<u>cno</u>, cname, credits)

Teacher(<u>tid</u>, fname, lname, dept)

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Student(<u>sid</u>, fname, lname, dob)

Class(<u>cno</u>, cname, credits)

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Takes(<u>sid</u>, <u>cno</u>, grade)

Teaches(<u>tid</u>, <u>cno</u>)

First Question

Who takes CS327E?

Student(<u>sid</u>, fname, lname, dob)

Class(<u>cno</u>, cname, credits)

Teacher(<u>tid</u>, fname, lname, dept)

Takes(<u>sid</u>, <u>cno</u>, grade)

Teaches(<u>tid</u>, <u>cno</u>)

First Question

Who takes CS327E?

```
SELECT sid
FROM Takes
WHERE cno = 'CS327E'
```

Student(<u>sid</u>, fname, lname, dob)

Class(<u>cno</u>, cname, credits)

Teacher(<u>tid</u>, fname, lname, dept)

Takes(<u>sid</u>, <u>cno</u>, grade)

Teaches(<u>tid</u>, <u>cno</u>)

BigQuery Demo

Second Question

Who takes CS327E *or* CS329E?

Student(sid, fname, lname, dob)

Class(cno, cname, credits)

Teacher(tid, fname, lname, dept)

Takes(sid, cno, grade)

Teaches(tid, cno)

Second Question

Who takes CS327E *or* CS329E?

```
SELECT sid
FROM Takes
WHERE cno = 'CS327E'
    OR cno = 'CS329E'
```

Student(sid, fname, lname, dob)

Class(cno, cname, credits)

Teacher(tid, fname, lname, dept)

Takes(sid, cno, grade)

Teaches(tid, cno)

iClicker Question

How many rows will this query return?

```
SELECT sid
FROM Takes
WHERE cno = 'CS327E'
    OR cno = 'CS329E'
```

A.   3 rows
B.   4 rows
C.   0 rows

Takes

sid	cno	grade
paulg	CS329E	A
paulg	CS326E	A-
paulg	CS313E	
jerryh	CS327E	B
jerryh	CS329E	A-
kev18	CS329E	
bzen26	CS313E	B+

Third Question

Who takes CS327E *and* CS329E?

Is this query a correct implementation?

```
SELECT sid
FROM Takes
WHERE cno = 'CS327E'
  AND cno = 'CS329E'
```

Student(<u>sid</u>, fname, lname, dob)

Class(<u>cno</u>, cname, credits)

Teacher(<u>tid</u>, fname, lname, dept)

Takes(<u>sid</u>, <u>cno</u>, grade)

Teaches(<u>tid</u>, <u>cno</u>)

iClicker Question

Takes

How many rows will this query return?

```
SELECT sid
FROM Takes
WHERE cno = 'CS327E'
  AND cno = 'CS329E'
```

A. 0 rows
B. 1 row
C. > 1 rows

sid	cno	grade
paulg	CS329E	A
paulg	CS326E	A-
paulg	CS313E	
jerryh	CS327E	B
jerryh	CS329E	A-
kev18	CS329E	
bzen26	CS313E	B+

BigQuery Demo

Milestone 2

http://www.cs.utexas.edu/~scohen/milestones/Milestone2.pdf