

Please include the following declaration together with your signature on the cover page of your submissions/reports:

I Mo Danthuluru declare that I have completed this assignment completely and entirely on my own, without any consultation with others. I understand that any breach of the UAB Academic Honor Code may result in severe penalties.

webDB Username : mvdanthuweb

webDB Password : mvdanthuuab

1. Screen shot that shows how you use \copy command to import tuples from the provided text file 'copy-to-weather.txt Download copy-to-weather.txt' into 'weather' table. Screen shot of the table schema and the current tuples in 'weather' table after import. Screen shot of you using 'insert into weather ...' statement to insert a few more tuples into 'weather' and displaying the current tuples in 'weather' after insertions. (4pts)

```
mvdanthu=> CREATE TABLE weather (
city varchar(80),
temp_lo int, -- low temperature
temp_hi int, -- high temperature
prcp real, -- precipitation
[date date]);
CREATE TABLE
mvdanthu=> CREATE TABLE cities (
name varchar(80) primary key,
[location point]);
CREATE TABLE
[mvdanthu=> \COPY weather(city, date, temp_lo, temp_hi, prcp) FROM '/home/ad.uab.]
edu/weather.txt';
COPY 2
[mvdanthu=> select * from weather;
city | temp_lo | temp_hi | prcp | date
-----+-----+-----+-----+-----
birmingham | 60 | 80 | 3.55 | 2005-10-12
tuscaloosa | 60 | 75 | 10 | 2005-10-02
(2 rows)

[mvdanthu=>
[mvdanthu=>
[mvdanthu=>
[mvdanthu=> INSERT INTO weather VALUES ('san francisco', 70, 86, 0.25, '1994-11-27');
INSERT 0 1
[mvdanthu=> INSERT INTO weather VALUES ('los angeles', 75, 90, 0.50, '1994-04-29');
INSERT 0 1
[mvdanthu=> select * from weather;
city | temp_lo | temp_hi | prcp | date
-----+-----+-----+-----+-----
birmingham | 60 | 80 | 3.55 | 2005-10-12
tuscaloosa | 60 | 75 | 10 | 2005-10-02
san francisco | 70 | 86 | 0.25 | 1994-11-27
los angeles | 75 | 90 | 0.5 | 1994-04-29
(4 rows)

mvdanthu=>
```

2. Insert a few tuples into 'cities' and submit a screen shot of the 'cities' table content. (3pts)

```
[mvdanthu=> INSERT INTO cities VALUES ('birmingham', '(-293.0, 33.0)');
INSERT 0 1
[mvdanthu=> INSERT INTO cities VALUES ('tuscaloosa', '(-103.0, 21.0)');
INSERT 0 1
[mvdanthu=> INSERT INTO cities VALUES ('san francisco', '(-88.0, 29.0)');
INSERT 0 1
[mvdanthu=> INSERT INTO cities VALUES ('los angeles', '(-32.0, 44.0)');
INSERT 0 1
[mvdanthu=> select * from cities;
```

name	location
birmingham	(-293,33)
tuscaloosa	(-103,21)
san francisco	(-88,29)
los angeles	(-32,44)

(4 rows)

```
[mvdanthu=>
```

3. Screen shots of the results returned by the two join statements on Slide #7 (3pts)

```
mvdanthu=> SELECT city, temp_lo, temp_hi, prcp,
date, location FROM weather join
cities on weather.city=cities.name;
```

city	temp_lo	temp_hi	prcp	date	location
birmingham	60	80	3.55	2005-10-12	(-293,33)
tuscaloosa	60	75	10	2005-10-02	(-103,21)
san francisco	70	86	0.25	1994-11-27	(-88,29)
los angeles	75	90	0.5	1994-04-29	(-32,44)

(4 rows)

```
mvdanthu=> SELECT W1.city, W1.temp_lo AS low,
W1.temp_hi AS high, W2.city, W2.temp_lo
AS low, W2.temp_hi AS high
FROM weather W1 JOIN weather W2
on W1.temp_lo < W2.temp_lo AND
W1.temp_hi > W2.temp_hi;
```

city	low	high	city	low	high
------	-----	------	------	-----	------

(0 rows)

```
[mvdanthu=>
```

4. Screen shot of you updating/deleting the content of a table using 'update weather... where...' and 'Delete from weather ... where...' statements (3pts)

```
mvdanthu=> select * from weather;
```

city	temp_lo	temp_hi	prcp	date
birmingham	60	80	3.55	2005-10-12
tuscaloosa	60	75	10	2005-10-02
san francisco	70	86	0.25	1994-11-27
los angeles	75	90	0.5	1994-04-29

(4 rows)

```
mvdanthu=> update weather set temp_lo=temp_lo+3 where temp_hi>85;
```

UPDATE 2

```
mvdanthu=> select * from weather
```

```
mvdanthu-> ;
```

city	temp_lo	temp_hi	prcp	date
birmingham	60	80	3.55	2005-10-12
tuscaloosa	60	75	10	2005-10-02
san francisco	73	86	0.25	1994-11-27
los angeles	78	90	0.5	1994-04-29

(4 rows)

```
mvdanthu=> delet from weather where city = 'san francisco';
```

ERROR: syntax error at or near "delet"

LINE 1: delet from weather where city = 'san francisco';

^

```
mvdanthu=> delete from weather where city = 'san francisco';
```

DELETE 1

```
mvdanthu=> select * from weather;
```

city	temp_lo	temp_hi	prcp	date
birmingham	60	80	3.55	2005-10-12
tuscaloosa	60	75	10	2005-10-02
los angeles	78	90	0.5	1994-04-29

(3 rows)

```
mvdanthu=>
```

5. Screen shot of you adding a column 'population' to the 'cities' table. (3pts)

```
[mvdanthu=> select * from cities;
```

name	location
birmingham	(-293,33)
tuscaloosa	(-103,21)
san francisco	(-88,29)
los angeles	(-32,44)

(4 rows)

```
[mvdanthu=> alter table cities add column population int;
```

```
ALTER TABLE
```

```
[mvdanthu=> select * from cities;
```

name	location	population
birmingham	(-293,33)	
tuscaloosa	(-103,21)	
san francisco	(-88,29)	
los angeles	(-32,44)	

(4 rows)

```
mvdanthu=> █
```

6. Follow the instruction on Slide #10 "Add constraint". There could be an error msg if there is a tuple in 'weather' whose 'city' component is not present in 'cities' table. Fix this problem by inserting that city into 'cities' and re-add the foreign key constraint to 'weather'. Then try to insert a tuple into 'weather' whose 'city' component is not present in the 'cities' table. Submit the screen shot of the entire process. (4pts)

```
[mvdanthu=> alter table weather add primary key (city, date);
```

```
ALTER TABLE
```

```
[mvdanthu=> alter table cities add primary key (name);
```

```
ERROR: multiple primary keys for table "cities" are not allowed
```

```
mvdanthu=> alter table weather add foreign key (city) references
```

```
[cities;
```

```
ALTER TABLE
```

```
[mvdanthu=> select * from weather; select * from cities;
```

city	temp_lo	temp_hi	prcp	date
birmingham	60	80	3.55	2005-10-12
tuscaloosa	60	75	10	2005-10-02
los angeles	78	90	0.5	1994-04-29

(3 rows)

name	location	population
birmingham	(-293,33)	
tuscaloosa	(-103,21)	
san francisco	(-88,29)	
los angeles	(-32,44)	

(4 rows)

```
[mvdanthu=> INSERT INTO weather VALUES ('shelton', 75, 85, 0.25, '1994-11-27');
```

```
ERROR: insert or update on table "weather" violates foreign key constraint "weather_city_fkey"
```

```
DETAIL: Key (city)=(shelton) is not present in table "cities".
```

```
mvdanthu=> █
```