Kevin Hance DBMS (CPSC 321) 10/17/2019 HW6

READING ASSIGNMENT:

```
mysql>
     mysql> SELECT * FROM city;
      city_name | province_name | country_code | population
      Belogonia St. Janice
Blumore Antalens
Britano St. Janice
Juefbert Antalens
Outling Flaubury
Piolas Huport
Sluurgan Oslodo
                                      1 05
                                                               97635
                                      GN
                                      05
                                                               33434
                                      GN
                                                                120
                                      | RL
                                                                 127
                                      RL
                                                                46626
                                      05
                                                                5919
                  | Huport
| Huport
      Stombus
                                      GN
                                                               13299
      Stombus
                                      I RL
                                                               49384
                   Huport
                                      GN
                                                               11043
      Tesa
       Tesa
                   Oslodo
                                      05
                                                                964
                   Flaubury
      Whita
                                      RL
                                                               52743
     12 rows in set (0.00 sec)
     mysql> SELECT GROUP_CONCAT(city_name)    FROM city WHERE population > 1000;
      GROUP_CONCAT(city_name)
      Belogonia,Blumore,Britano,Piolas,Sluurgan,Stombus,Stombus,Tesa,Whita
1. 1 row in set (0.00 sec)
```

SELECT * FROM city;

SELECT GROUP_CONCAT(city_name) FROM city WHERE population > 1000;

```
mysql> SELECT * FROM city;
 city_name | province_name | country_code | population |
  Belogonia | St. Janice
                                                 97635
             Antalens
 Blumore
                             GN
                                                  54000
                                                  33434
             St. Janice
                             05
  Britano
  Juefbert
             Antalens
                             GN
                                                   120
  Outling
             Flaubury
  Piolas
             Huport
                                                 46626
  Sluurgan
             Oslodo
                                                  5919
                             GN
  Stombus
             Huport
                                                 13299
  Stombus
                             RL
                                                 49384
             Huport
  Tesa
             Huport
                             GN
                                                 11043
             Oslodo
                                                   964
  Tesa
                                                 52743
  Whita
             Flaubury
                             RL
12 rows in set (0.00 sec)
mysql> SELECT STDDEV_POP(population), AVG(population) FROM city WHERE population > 2000;
 STDDEV POP(population) | AVG(population) |
                               40453.6667
             27011.0398
1 row in set (0.00 sec)
```

SELECT * FROM city;
SELECT STDDEV_POP(population), AVG(population) FROM city WHERE population > 2000;

-> (SELE			
city_name	province_name	country_code	population
Belogonia	St. Janice	0S	97635
Blumore	Antalens	GN	54000
Britano	St. Janice	OS	33434
Piolas	Huport	RL	46626
Sluurgan	Oslodo	OS	5919
Stombus	Huport	GN	13299
Stombus	Huport	RL	49384
Tesa	Huport	GN	11043
Whita	Flaubury	RL	52743
Juefbert	Antalens	GN	120
Outling	Flaubury	RL	127
Tesa	Oslodo	05	964
rsql> rsql> (SELE) -> UNION	et (0.00 sec) CT * FROM city WH ALL CT * FROM city WH		
sql> sql> (SELE) -> UNION -> (SELE)	CT * FROM city W ALL CT * FROM city W		< 20000);
/sql> /sql> (SELE) -> UNION -> (SELE) city_name	CT * FROM city W ALL CT * FROM city W + province_name +	HERE population	< 20000); + population +
vsql> vsql> (SELE) -> UNION -> (SELE)	CT * FROM city W ALL CT * FROM city W	HERE population	< 20000);
/sql> /sql> (SELE) /sql> (SELE) -> UNION -> (SELE) city_name Belogonia	CT * FROM city WH ALL CT * FROM city WH +	HERE population 	< 20000); + population + 97635
rsql> rsql> (SELE) -> UNION -> (SELE) city_name Belogonia Blumore	CT * FROM city Wh ALL CT * FROM city Wh + province_name + St. Janice	HERE population 	< 20000); + population + 97635 54000
sql> sql> (SELE) -> UNION -> (SELE) city_name Belogonia Blumore Britano Piolas	CT * FROM city Wh ALL CT * FROM city Wh +	HERE population country_code OS GN	< 20000); + population + 97635 54000 33434
sql> sql> (SELE) -> UNION -> (SELE) city_name Belogonia Blumore Britano Piolas	CT * FROM city Wh ALL CT * FROM city Wh +	HERE population country_code OS GN OS	< 20000); +
/sql> /sql> (SELE) -> UNION -> (SELE) city_name Belogonia Blumore Britano Piolas Sluurgan	CT * FROM city Wh ALL CT * FROM city Wh +	HERE population country_code OS GN OS RL	< 20000); +
/sql> /sql> (SELEGON) -> UNION -> (SELEGON) city_name Belogonia Blumore Britano Piolas Sluurgan Stombus	CT * FROM city Wh ALL CT * FROM city Wh +	HERE population country_code OS GN OS RL OS	< 20000); +
sql> sql> (SELEGOUS) -> UNION -> (SELEGOUS) city_name Belogonia Blumore Britano Piolas Sluurgan Stombus Stombus	CT * FROM city Wh ALL CT * FROM city Wh +	HERE population country_code OS GN OS RL OS	< 20000); +
sql> sql> (SELEGOUS) -> UNION -> (SELEGOUS) city_name Belogonia Blumore Britano Piolas Sluurgan Stombus Stombus Tesa Whita	CT * FROM city WH ALL CT * FROM city WH +	HERE population country_code OS GN OS RL OS GN	< 20000); +
sql> sql> (SELEGOUS) -> UNION -> (SELEGOUS) city_name Belogonia Blumore Britano Piolas Sluurgan Stombus Stombus Tesa Whita Juefbert	CT * FROM city WH ALL CT * FROM city WH +	HERE population country_code OS GN OS RL OS GN RL OS	< 20000); +
sql> sql> (SELEGOUS) -> UNION -> (SELEGOUS) city_name Belogonia Blumore Britano Piolas Sluurgan Stombus Stombus Tesa Whita Juefbert Outling	CT * FROM city Wh ALL CT * FROM city Wh +	HERE population country_code OS GN OS RL OS GN RL GN RL	< 20000); +
sql> sql> (SELEGOUS) -> UNION -> (SELEGOUS) city_name Belogonia Blumore Britano Piolas Sluurgan Stombus Stombus Tesa	CT * FROM city Wh ALL CT * FROM city Wh +	HERE population country_code OS GN OS RL OS GN RL GN RL	< 20000); +
sql> sql> (SELEGOUS) -> UNION -> (SELEGOUS) city_name Belogonia Blumore Britano Piolas Sluurgan Stombus Stombus Tesa Whita Juefbert Outling Sluurgan	CT * FROM city When ALL CT * FROM city When ALL The province_name The province_name The province Natalens The St. Janice The Huport	HERE population country_code OS GN OS RL OS GN RL GN RL GN RL	<pre>< 20000); +</pre>

```
SELECT * FROM city;
(SELECT * FROM city WHERE population > 1000)
UNION
(SELECT * FROM city WHERE population < 20000);

(SELECT * FROM city WHERE population > 1000)
UNION ALL
(SELECT * FROM city WHERE population < 20000);</pre>
```

3.

4. The main difference between INTERSECT and EXCEPT is that, if they were put into a Venn diagram, INTERSECT is the middle part where the circles overlap, and EXCEPT is the outer part where the circles do not overlap. INTERSECT could be used to find cities that have a population greater than x and less than y, where x < y, and EXCEPT could be used to find cities that have a population less than x and greater than y, where x < y.

TECHNICAL WORK:

mysql>

1. <insert images of "SELECT * FROM <each table>"

AND c.inflation > @inflation

AND p.area < @area;

```
-> FROM province p, country c
       -> WHERE c.country_code = p.country_code
       -> AND c.gdp > @gdp
       -> AND c.inflation > @inflation
       -> AND p.area < @area;
     country_name | country_code | gdp
              05
     Oswaldo
                                78000
   1 row in set (0.00 sec)
2.
  SET @gdp = 60000;
  SET @inflation = 3.0;
  SET @area = 10000;
  SELECT DISTINCT c.country_name, c.country_code, c.gdp, c.inflation
  FROM province p, country c
  WHERE c.country_code = p.country_code
  AND c.gdp > @gdp
```

mysql> SELECT DISTINCT c.country_name, c.country_code, c.gdp, c.inflation

```
mysql> SELECT DISTINCT c.country_name, c.country_code, c.gdp, c.inflation
        -> FROM province p INNER JOIN country c ON c.country_code = p.country_code
        -> WHERE c.gdp > @gdp
        -> AND c.inflation > @inflation
        -> AND p.area < @area;
                                           | inflation |
     country name | country code | gdp
                                   78000
     Oswaldo
                                                   6.7
   1 row in set (0.00 sec)
3. l
   SET @gdp = 60000;
   SET @inflation = 3.0;
   SET @area = 10000;
   SELECT DISTINCT c.country_name, c.country_code, c.gdp, c.inflation
   FROM province p INNER JOIN country c ON c.country_code = p.country_code
   WHERE c.gdp > @gdp
   AND c.inflation > @inflation
   AND p.area < @area;
    mysql> SELECT p.country_code, c.country_name, p.province_name, ct.city_name, ct.population, p.area
       -> FROM country c, province p, city ct
       -> WHERE p.country_code = c.country_code
-> AND p.province_name = ct.province_name
       -> AND ct.population < @population;
     country_code | country_name | province_name | city_name | population | area
                                             Juefbert
     GN
                  Geneva
                               Antalens
                                                             120
                                                                   72003
     RI
                  Renlandia
                               Flaubury
                                             Outling
                                                             127
                                                                   5690
     05
                 Oswaldo
                              Oslodo
                                                             964
                                                                   8712
                                             Tesa
4. 3 rows in set (0.00 sec)
   SET @population = 1000;
   SELECT p.country code, c.country name, p.province name, ct.city name,
   ct.population, p.area
   FROM country c, province p, city ct
   WHERE p.country_code = c.country_code
   AND p.province_name = ct.province_name
   AND ct.population < @population;
```

```
SELECT p.country_code, c.country_name, p.province_name, ct.city_name, ct.population, p.area
        -> FROM country c
       -> INNER JOIN province p ON p.country_code = c.country_code
       -> INNER JOIN city ct ON p.province_name = ct.province_name
       -> WHERE ct.population < @population;
     country_code | country_name | province_name | city_name | population |
     GN
                               Antalens
                                             Juefbert
                                                                  72003
                  Geneva
     RL
                  Renlandia
                                             Outling
                                                                   5690
                               Flaubury
     05
                  Oswaldo
                               Oslodo
                                             Tesa
                                                                   8712
    3 rows in set (0.00 sec)
   SELECT p.country_code, c.country_name, p.province_name, ct.city_name,
   ct.population, p.area
   FROM country c
   INNER JOIN province p ON p.country_code = c.country_code
   INNER JOIN city ct ON p.province_name = ct.province_name
   WHERE ct.population < @population;
    mysql> SELECT SUM(area) FROM province;
      SUM(area)
          308126
      row in set (0.00 sec)
6.
   SELECT SUM(area) FROM province;
```

SELECT MIN(gdp), MAX(gdp), AVG(gdp), MIN(inflation), MAX(inflation), AVG(inflation) FROM country;

```
mysql> SET @country_code = 'OS';
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT COUNT(*), AVG(population) FROM city WHERE country_code = @country_code;
+-----+
| COUNT(*) | AVG(population) |
+-----+
| 4 | 34488.0000 |
+-----+
1 row in set (0.00 sec)
```

```
SET @country_code = 'OS';
SELECT COUNT(*), AVG(population) FROM city WHERE country_code = @country_code;
```

SET @province_name = "Oslodo";
SELECT AVG(population) FROM city WHERE province_name = @province_name;

- 10. Question does not exist
- 11. and 12. I was unable to come up with a query that satisfied the requirements described in these questions.