Hi Kelly,

Thanks for reaching out to me and I am happy to provide you a thorough analysis on some company data in the ro_company1 database. Below I have provided my answers to your questions, and please feel free to follow-up with me if you have further questions.

Q&A

What is the price that each investor will pay for the purchase of the new company?
2,465,000

```
mysql> SELECT (30000000 - 15210000) / 6;
+---------------------------+
| (30000000 - 15210000) / 6 |
+---------------------------+
|              2465000.0000 |
+---------------------------+
1 row in set (0.00 sec)
```
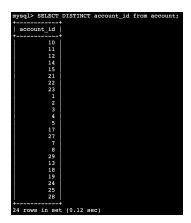
ro_company1 dataset Questions

How many accounts does company1 have? 24 accounts

```
mysql> SELECT DISTINCT account_id from account;
+------------+
| account_id |
+------------+
|         10 |
|         11 |
|         12 |
|         14 |
|         15 |
|         21 |
|         22 |
|         23 |
|          1 |
|          2 |
|          3 |
|          4 |
|          5 |
|         17 |
|         27 |
|          7 |
|          8 |
|         29 |
|         13 |
|         18 |
|         19 |
|         24 |
|         25 |
|         28 |
+------------+
24 rows in set (0.12 sec)
```

What is the primary key of the accounts table? Account_id

```
mysql> desc account;
+------------------+-----------------------------------+------+-----+---------+----------------+
| Field            | Type                              | Null | Key | Default | Extra          |
+------------------+-----------------------------------+------+-----+---------+----------------+
| account_id       | int(10) unsigned                  | NO   | PRI | NULL    | auto_increment |
| product_cd       | varchar(10)                       | NO   | MUL | NULL    |                |
| cust_id          | int(10) unsigned                  | NO   | MUL | NULL    |                |
| open_date        | date                              | NO   |     | NULL    |                |
| close_date       | date                              | YES  |     | NULL    |                |
| last_activity_date | date                            | YES  |     | NULL    |                |
| status           | enum('ACTIVE','CLOSED','FROZEN')  | YES  |     | NULL    |                |
| open_branch_id   | smallint(5) unsigned              | YES  | MUL | NULL    |                |
| open_emp_id      | smallint(5) unsigned              | YES  | MUL | NULL    |                |
| avail_balance    | float(10,2)                       | YES  |     | NULL    |                |
| pending_balance  | float(10,2)                       | YES  |     | NULL    |                |
+------------------+-----------------------------------+------+-----+---------+----------------+
11 rows in set (0.02 sec)
```

What are the possible values that could be in the status field in the account table (see above)? An ENUM, string object, specifically the values 'ACTIVE','CLOSED','FROZEN'

Which employee ID has opened the most company accounts? 1

```
mysql> SELECT open_emp_id, COUNT(*) FROM account GROUP BY open_emp_id;
+-------------+----------+
| open_emp_id | COUNT(*) |
+-------------+----------+
|           1 |        8 |
|          10 |        7 |
|          13 |        3 |
|          16 |        6 |
+-------------+----------+
4 rows in set (0.01 sec)
```

When did the employee who has opened the most accounts start working at the company? June, 22, 2001 OR READ AS 2001-06-22

```
mysql> SELECT start_date, emp_id FROM employee HAVING emp_id < 2;
+------------+--------+
| start_date | emp_id |
+------------+--------+
| 2001-06-22 |      1 |
+------------+--------+
1 row in set (0.01 sec)
```

Write a query that returns only the date of the transaction and the account id (in that order) from the transaction table sort this by the most recent transaction. SELECT txn_date, account_id FROM transaction ORDER BY txn_date DESC;

```
mysql> SELECT txn_date, account_id FROM transaction ORDER BY txn_date DESC;
+---------------------+------------+
| txn_date            | account_id |
+---------------------+------------+
| 2004-12-28 00:00:00 |         15 |
| 2004-10-28 00:00:00 |         22 |
| 2004-09-30 00:00:00 |         12 |
| 2004-06-30 00:00:00 |         23 |
| 2004-06-30 00:00:00 |          3 |
| 2004-01-27 00:00:00 |         13 |
| 2004-01-12 00:00:00 |         17 |
| 2003-09-12 00:00:00 |         10 |
| 2003-07-30 00:00:00 |         28 |
| 2003-07-30 00:00:00 |         21 |
| 2002-12-15 00:00:00 |          8 |
| 2002-11-23 00:00:00 |          7 |
| 2002-09-30 00:00:00 |         24 |
| 2002-08-24 00:00:00 |         14 |
| 2001-05-23 00:00:00 |         18 |
| 2001-05-23 00:00:00 |         19 |
| 2001-03-12 00:00:00 |          5 |
| 2001-03-12 00:00:00 |          4 |
| 2000-01-15 00:00:00 |         11 |
| 2000-01-15 00:00:00 |          2 |
| 2000-01-15 00:00:00 |          1 |
+---------------------+------------+
21 rows in set (0.00 sec)
```

What is the primary key in the transaction table? txn_id

```
mysql> desc transaction;
+---------------------+-----------------------+------+-----+---------+----------------+
| Field               | Type                  | Null | Key | Default | Extra          |
+---------------------+-----------------------+------+-----+---------+----------------+
| txn_id              | int(10) unsigned      | NO   | PRI | NULL    | auto_increment |
| txn_date            | datetime              | NO   |     | NULL    |                |
| account_id          | int(10) unsigned      | NO   | MUL | NULL    |                |
| txn_type_cd         | enum('DBT','CDT')     | YES  |     | NULL    |                |
| amount              | double(10,2)          | NO   |     | NULL    |                |
| teller_emp_id       | smallint(5) unsigned  | YES  | MUL | NULL    |                |
| execution_branch_id | smallint(5) unsigned  | YES  | MUL | NULL    |                |
| funds_avail_date    | datetime              | YES  |     | NULL    |                |
+---------------------+-----------------------+------+-----+---------+----------------+
8 rows in set (0.00 sec)
```

What are the unique product types that are offered? The three unique product types offered are ACCOUNT, INSURANCE and LOAN.
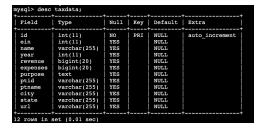
```
mysql> SELECT * FROM product_type LIMIT 10;
+-----------------+-----------------------------+
| product_type_cd | name                        |
+-----------------+-----------------------------+
| ACCOUNT         | Customer Accounts           |
| INSURANCE       | Insurance Offerings         |
| LOAN            | Individual and Business Loans |
+-----------------+-----------------------------+
3 rows in set (0.05 sec)
```

How many branches are located in MA? 3

```
mysql> SELECT state, COUNT(*) FROM branch GROUP BY state;
+-------+----------+
| state | COUNT(*) |
+-------+----------+
| MA    |        3 |
| NH    |        1 |
+-------+----------+
2 rows in set (0.01 sec)
```

Can you write a query will list the name of each branch, the address of each branch, the zip code of each branch, and a field that indicates the current time you made the query that shows in the query as a field called "querytime"? SELECT name, address, zip, now() AS querytime FROM branch;
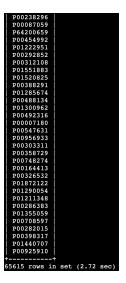
```
mysql> SELECT name, address, zip, now() AS querytime FROM branch;
+----------------+---------------------+-------+---------------------+
| name           | address             | zip   | querytime           |
+----------------+---------------------+-------+---------------------+
| Headquarters   | 3882 Main St.       | 02451 | 2020-01-31 23:03:20 |
| Woburn Branch  | 422 Maple St.       | 01801 | 2020-01-31 23:03:20 |
| Quincy Branch  | 125 Presidential Way| 02169 | 2020-01-31 23:03:20 |
| So. NH Branch  | 378 Maynard Ln.     | 03079 | 2020-01-31 23:03:20 |
+----------------+---------------------+-------+---------------------+
4 rows in set (0.01 sec)
```

taxdata table questions

What type of values can be stored in the year field? An integer with a maximum length of 11 characters.

```
mysql> desc taxdata;
+----------+--------------+------+-----+---------+----------------+
| Field    | Type         | Null | Key | Default | Extra          |
+----------+--------------+------+-----+---------+----------------+
| id       | int(11)      | NO   | PRI | NULL    | auto_increment |
| ein      | int(11)      | YES  |     | NULL    |                |
| name     | varchar(255) | YES  |     | NULL    |                |
| year     | int(11)      | YES  |     | NULL    |                |
| revenue  | bigint(20)   | YES  |     | NULL    |                |
| expenses | bigint(20)   | YES  |     | NULL    |                |
| purpose  | text         | YES  |     | NULL    |                |
| ptid     | varchar(255) | YES  |     | NULL    |                |
| ptname   | varchar(255) | YES  |     | NULL    |                |
| city     | varchar(255) | YES  |     | NULL    |                |
| state    | varchar(255) | YES  |     | NULL    |                |
| url      | varchar(255) | YES  |     | NULL    |                |
+----------+--------------+------+-----+---------+----------------+
12 rows in set (0.01 sec)
```

Using the taxdata table, how many non-duplicated PTID entries are there? Your query should ONLY return the PTIDs that are unique. (distinct) 65, 615

```
| P00238296 |
| P00087059 |
| P64200659 |
| P00454992 |
| P01222951 |
| P00292852 |
| P00312108 |
| P01551883 |
| P01520825 |
| P00388291 |
| P01285674 |
| P00488134 |
| P01300962 |
| P00492316 |
| P00007180 |
| P00547631 |
| P00956933 |
| P00303311 |
| P00358729 |
| P00748274 |
| P00164413 |
| P00326532 |
| P01872122 |
| P01290054 |
| P01211348 |
| P00286383 |
| P01355059 |
| P00708597 |
| P00282015 |
| P00398317 |
| P01440707 |
| P00925910 |
+-----------+
65615 rows in set (2.72 sec)
```

What is the ID number of PTID for?

What do you think the EIN is used for?

What is the last entry in the taxdata table? Please write a single query to return this answer.

```
mysql> SELECT * FROM taxdata ORDER BY id DESC LIMIT 1;
+--------+-----------+-------------------------+------+---------+----------+----------------------------------------------
-----------------------+-----------+--------------+------------+-------+----------------------------------------------
-------------------+
| id     | ein       | name                    | year | revenue | expenses | purpose
                        | ptid      | ptname       | city       | state | url
                   |
+--------+-----------+-------------------------+------+---------+----------+----------------------------------------------
-----------------------+-----------+--------------+------------+-------+----------------------------------------------
-------------------+
| 378304 | 351330448 | Big Brothers Big Sisters | 2015 | 353120 |   304867 | Help children to reach their potential throug
h professional supports | P00932103 | Dana Bement  | Bloomington | IN    | https://s3.amazonaws.com/irs-form-990/20164228934
9303444_public.xml |
+--------+-----------+-------------------------+------+---------+----------+----------------------------------------------
-----------------------+-----------+--------------+------------+-------+----------------------------------------------
-------------------+
1 row in set (0.04 sec)
```

Lastly, can you give me a list of 50 companies at random and show me their net income?

```
mysql> SELECT name, (revenue - expenses) AS net_income FROM taxdata ORDER BY RAND() LIMIT 50;
+-----------------------------------------------------------------------+------------+
| name                                                                  | net_income |
+-----------------------------------------------------------------------+------------+
| MAINE MUSIC SOCIETY                                                    |      28921 |
| THE AMERICAN-HAITIAN FOUNDATION                                        |     101304 |
| Pennsylvania FFA Alumni Association                                    |      -8767 |
| THE GRAND CHAPTER OF FLORIDA ORDER OFTHE EASTERN STAR CHARITABLE FD INC |    3815040 |
| THE BRUCE KARATZ FAMILY FOUNDATION                                     |          0 |
| Fairplay Property Owners Association Inc                               |          0 |
| THE BALD HEAD ISLAND CHAMBER OFCOMMERCE                                |       -673 |
| SALIDA SENIOR DAYCARE INC                                              |      32017 |
| LAMAR COUNTY CHILD WELFARE BOARD                                       |     -16614 |
| CHAMPAIGN RESIDENTIAL SERVICES INC                                     |    1083834 |
| Raabe Foundation                                                      |          0 |
| WASHINGTON CLUB INCC/O JOHN C MAXWELL                                  |      44800 |
| Good Samaritan Fund & Services of Sun City Center                      |      61036 |
| ORGAN PROCUREMENT AGENCY OF MICHIGAN                                   |    4303435 |
```

THE AMERICAN-HAITIAN FOUNDATION	101304
Pennsylvania FFA Alumni Association	-8767
THE GRAND CHAPTER OF FLORIDA ORDER OFTHE EASTERN STAR CHARITABLE FD INC	3815040
THE BRUCE KARATZ FAMILY FOUNDATION	0
Fairplay Property Owners Association Inc	0
THE BALD HEAD ISLAND CHAMBER OFCOMMERCE	-673
SALIDA SENIOR DAYCARE INC	32017
LAMAR COUNTY CHILD WELFARE BOARD	-16614
CHAMPAIGN RESIDENTIAL SERVICES INC	1083834
Raabe Foundation	0
WASHINGTON CLUB INCC/O JOHN C MAXWELL	44800
Good Samaritan Fund & Services of Sun City Center	61036
ORGAN PROCUREMENT AGENCY OF MICHIGAN	4303435
SHEKINAH LEARNING INSTITUTE	-440005
Partners For Progress in Delta Inc	-4542
Open Mind Project	2385
WOODLAND HILLS AQUATIC TEAM (WHAT)	4706
South Texas Youth Soccer Association	95268
LEE CENTER FIRE DEPARTMENT INC	47311
BRIDGE STREET MERCHANTS INC	9063
21ST CENTURY PARKS ENDOWMENT INC	6082125
MANSFIELD FFA ALUMNI	1121
St Nicholas Hospital of the Hospital Sisters of the Third Order of St Francis	8070503
DISCOVER QUINCY INC	9087
NANTUCKET PRESERVATION TRUST INC	267250
FANTASY FOUNTAIN FUND INC	0
GORDON STRONG TRUST	0
C5 Youth Foundation of SouthernCalifornia Inc	-100832

```
| HARBOR HOSPICE FOUNDATION                                    |    -1221 |
| HIGH COUNTRY RESOURCE CONSERVATIONAND DEVELOPMENT AREA        |    31879 |
| RICHARD REX PONN CHARITABLE TRUST FUND                       |        0 |
| ISLAMIC ASSOCIATION OF YPSILANTI INC                         |   -34346 |
| FRANKLIN CONKLIN FOUNDATION                                  |        0 |
| SCHOOL ALLIES INC                                            |        0 |
| WILLIAM B DOUGLAS TUW                                        |        0 |
| ABIDE IN THE VINE CHILD CARE CENTER                          |   -25547 |
| PORTSMOUTH SPORTS CLUB INC                                   |      624 |
| TURNER BRANDON POST 7 INC                                    |   263075 |
| Columbine Figure Skating Club                                |      -15 |
| AYNOR MIDDLE SCHOOL PTO                                      |    -1364 |
| LAKEWOOD HEALTH SYSTEM                                       | 10613357 |
| VICTORY RANCH                                                |  -212277 |
| CARPATHIA CLUB INC                                           |   179354 |
| ESCAROSA COALITION ON THE HOMELESSINC                        |     6443 |
| WILSON COUNTY LIBRARIES ENRICHMENTASSOCIATION INC            |        0 |
| EAST NEW YORK URBAN YOUTH CORPS INC                          |  -498480 |
| Satellite Senior Homes-Walnut Creek Inc                      |    -5355 |
| REBUILDING TOGETHER OF CENTRALFLORIDA INC                    |    29068 |
| OLD GREENWOOD COMMUNITY FOUNDATION                           |    44412 |

----------------------------------------------------------------------
```

I know you have also asked for a database diagram for the ro_query database. That is attached. In total, this assignment took me approximately 140 minutes.

Thank you for the opportunity! Again, let me know if you have any further questions.

Sincerely,

Aaron