Initial results:

Create the database and grant all privileges to team members:

```
CREATE DATABASE "Fund_Raising" OWNER "yehan.ma";

REVOKE ALL on DATABASE "Fund_Raising" FROM PUBLIC;

GRANT ALL ON DATABASE "Fund_Raising" TO "ling.li627";

GRANT ALL ON DATABASE "Fund_Raising" TO lihaoran;


\c Fund_Raising;

CREATE SCHEMA fund_raising;
```

Create all table in ER models into the database Fund_Raising (Please note that the foreign key will be added after all data are inserted. The codes of altering table and adding foreign key are in SQL file):

```
psql -d Fund_Raising -a -f Database_Establish.sql


Fund_Raising=# \dt
              List of relations
 Schema |    Name     | Type  |  Owner
--------+-------------+-------+----------
 public | campaign    | table | yehanspc
 public | client      | table | yehanspc
 public | dataanalyst | table | yehanspc
 public | donor       | table | yehanspc
 public | gift        | table | yehanspc
 public | package     | table | yehanspc
(6 rows)

\d campaign;

           Table "public.campaign"
  Column   |         Type          | Modifiers
-----------+-----------------------+-----------
 projectid | integer               | not null
 date      | date                  |
 type      | character varying(20) |
 cost      | integer               | not null
 donorid   | integer               | not null
 clientid  | integer               | not null
Indexes:
    "campaign_pkey" PRIMARY KEY, btree (projectid)
Referenced by:
    TABLE "package" CONSTRAINT "package_projectid_fkey" FOREIGN KEY (projectid) REFERENCES campaign(projectid)

Fund_Raising=#

\d gift;

            Table "public.gift"
   Column    |         Type          | Modifiers
-------------+-----------------------+-----------
 giftdate    | date                  | not null
 gifttype    | character varying(50) | not null
 giftid      | integer               | not null
 giftaddress | character varying(50) |
 giftamount  | integer               | not null
 clientid    | integer               | not null
 donorid     | integer               | not null
Indexes:
    "gift_pkey" PRIMARY KEY, btree (giftid)

Fund_Raising=#
```

```
\d client;

Fund_Raising=# \d client;
                Table "public.client"
      Column      |         Type         | Modifiers
------------------+----------------------+-----------
 clienttype       | character varying(50) | not null
 clientid         | integer              | not null
 clientfirstname  | character varying(50) | not null
 clientlastname   | character varying(50) | not null
 employeeid       | integer              | not null
Indexes:
    "client_pkey" PRIMARY KEY, btree (clientid)
Foreign-key constraints:
    "client_employeeid_fkey" FOREIGN KEY (employeeid) REFERENCES dataanalyst(employeeid)
Referenced by:
    TABLE "donor" CONSTRAINT "donor_clientid_fkey" FOREIGN KEY (clientid) REFERENCES client(clientid)

\d dataanalyst;
Fund_Raising=# \d dataanalyst;
          Table "public.dataanalyst"
   Column   |         Type         | Modifiers
------------+----------------------+-----------
 employeeid | integer              | not null
 firstname  | character varying(50) | not null
 lastname   | character varying(50) | not null
Indexes:
    "dataanalyst_pkey" PRIMARY KEY, btree (employeeid)
Referenced by:
    TABLE "client" CONSTRAINT "client_employeeid_fkey" FOREIGN KEY (employeeid) REFERENCES dataanalyst(employeeid)

\d package;

Fund_Raising=# \d package;
            Table "public.package"
     Column     |         Type         | Modifiers
----------------+----------------------+-----------
 campaginid     | integer              | not null
 packageno      | integer              | not null
 designerfirst  | character varying(50) | not null
 designerlast   | character varying(50) | not null
 projectid      | integer              | not null
Indexes:
    "package_pkey" PRIMARY KEY, btree (campaginid, packageno)
Foreign-key constraints:
    "package_projectid_fkey" FOREIGN KEY (projectid) REFERENCES campaign(projectid)
```

Grant all privileges of editing the table to team members:

```
GRANT All privileges ON All Tables In schema public TO lihaoran;

GRANT All privileges ON All Tables In schema public TO "ling.li627";


DROP TABLE client cascade;

Fund_Raising=> \z campaign
 Schema |   Name   | Type  |        Access privileges        | Column privileges | Policies
--------+----------+-------+---------------------------------+-------------------+----------
 public | campaign | table | "yehan.ma"=arwdDxt/"yehan.ma"+  |                   |
        |          |       | "ling.li627"=arwdDxt /"yehan.ma"+|                  |
        |          |       | lihaoran=arwdDxt /"yehan.ma"    |                   |
```

Importing data into database:

```
Fund_Raising=# COPY gift FROM '/Users/yehanspc/Dropbox/CSE530/copy_gift.csv' WITH CSV HEADER;
COPY 19947

Fund_Raising=# COPY gift FROM '/Users/yehanspc/Dropbox/CSE530/copy_gift_data2.csv' WITH CSV HEADER;
COPY 19947
Fund_Raising=# select * from gift;
   giftdate   |        gifttype         | giftid | giftaddress | giftamount | clientid | donorid
--------------+-------------------------+--------+-------------+------------+----------+---------
 2013-08-20  | Individual Contributions | 86921  | NY          |         10 |     4002 |   87442
 2013-08-16  | Individual Contributions | 86802  | OH          |          5 |     4002 |   99360
 2013-10-04  | Individual Contributions | 87688  | CA          |          5 |     4002 |  108339
 2014-07-25  | Individual Contributions | 95319  | MD          |          4 |     4002 |  102321
 2014-07-25  | Individual Contributions | 95320  | IA          |          5 |     4002 |  101517
 2014-07-25  | Individual Contributions | 95321  | OK          |         20 |     4002 |  109173
 2014-07-25  | Individual Contributions | 95322  | NC          |        150 |     4002 |   35481
 2014-07-25  | Individual Contributions | 95345  | GA          |          1 |     4002 |  102310
 2014-07-25  | Individual Contributions | 95346  | CA          |         12 |     4002 |  102135
 2014-10-30  | Individual Contributions | 97437  | NY          |         35 |     4002 |   67712
 2014-08-28  | Individual Contributions | 95952  | OK          |         20 |     4002 |  109173
 2014-09-05  | Individual Contributions | 95989  | CT          |        100 |     4002 |  105125
 2015-01-23  | Individual Contributions | 100330 | FL          |        250 |     4002 |  100907
 2014-10-17  | Individual Contributions | 97291  | IL          |        500 |     4002 |  104014
 2014-11-10  | Individual Contributions | 97737  | MD          |         10 |     4002 |  109901
 2014-11-14  | Individual Contributions | 97797  | OH          |         50 |     4002 |  103348
 2014-08-08  | Individual Contributions | 95545  | TX          |          2 |     4002 |  109776
 2014-08-08  | Individual Contributions | 95546  | OH          |         50 |     4002 |   95797
 2014-08-15  | Individual Contributions | 95736  | IL          |         50 |     4002 |   60544
 2014-08-15  | Individual Contributions | 95737  | MD          |         60 |     4002 |     342
 2014-08-15  | Individual Contributions | 95738  | NY          |        100 |     4002 |   87174
 2014-08-28  | Individual Contributions | 95951  | GA          |          1 |     4002 |  102310
 2014-07-25  | Individual Contributions | 95347  | PA          |         50 |     4002 |  110664
 2014-07-25  | Individual Contributions | 95348  | WA          |         60 |     4002 |  106054
 2014-07-28  | Individual Contributions | 95359  | CA          |          5 |     4002 |  106133
 2014-07-31  | Individual Contributions | 95380  | NC          |         15 |     4002 |  110913
 2014-07-31  | Individual Contributions | 95381  | CA          |        100 |     4002 |   37995
 2014-08-01  | Individual Contributions | 95382  | OH          |         50 |     4002 |  108264
 2013-02-14  | Individual Contributions | 82369  | FL          |         10 |     4002 |   15352
 2013-02-15  | Individual Contributions | 82642  | NY          |         25 |     4002 |  109619
 2013-02-15  | Individual Contributions | 82643  | CA          |         25 |     4002 |  103668
```

```
Fund_Raising=# COPY donor FROM '/Users/yehanspc/Dropbox/CSE530/donor2.csv' WITH CSV HEADER;
COPY 3599
Fund_Raising=# select * from donor;
  firstname   |   lastname   |        currentaddress        | donorid | gift | clientid | campaginid |      city      | state | zip  | packageno | lastgiftamount | lastgiftd
ate | firstgiftamount | firstgiftdate
--------------+--------------+------------------------------+---------+------+----------+------------+----------------+-------+------+-----------+----------------+----------
----+-----------------+---------------
 Ellsworth    | Barnard      | 86 Leverett Rd.              |    9834 |      |          |            | Amherst,       | MA    | 1002 | R15I2     | $30.00         | 2000-11-1
3   | $30.00          | 1990-04-23
 William A.   | Darity       | 105 Heatherstone Rd.        |    7720 |      |          |            | Amherst,       | MA    | 1002 | R15I4     | $150.00        | 1993-02-0
1   | $150.00         | 1993-02-01
 Frederick    | Irving       | 315 Spencer Dr.             |    2592 |      |          |            | Amherst,       | MA    | 1002 | R15A4     | $100.00        | 2014-06-0
6   | $50.00          | 1990-03-19
 Dolores P.   | McCullough   | 3 Baldwin Ln.               |  106737 |      |          |            | Amherst,       | MA    | 1002 | R15C2     | $25.00         | 2012-01-2
6   | $25.00          | 2012-01-26
 Gregory S.   | Prince       | 15 Middle St.               |    5700 |      |          |            | Amherst,       | MA    | 1002 | R15I5     | $500.00        | 1990-02-2
6   | $500.00         | 1990-02-26
 Roy L.       | Regozin      | 116 Harkness Rd.            |   22346 |      |          |            | Pelham,        | MA    | 1002 | R15A4     | $300.00        | 2014-01-1
4   | $1,000.00       | 1990-01-08
 Michael      | Wolff        | 339 Spencer Dr.             |    6216 |      |          |            | Amherst,       | MA    | 1002 | R15I2     | $25.00         | 2001-06-1
3   | $25.00          | 1991-02-13
 Celia        | Wolsky       | 20 Sheerman Ln.             |   17931 |      |          |            | Amherst,       | MA    | 1002 | R15I1     | $15.00         | 2001-04-1
7   | $15.00          | 1990-11-05
 Nelson       | Woodfork     | 40 Flat Hills Rd.           |    8814 |      |          |            | Amherst,       | MA    | 1002 | R15I2     | $25.00         | 1997-03-2
5   | $25.00          | 1990-10-19
 Vincent      | Jackson      | PO Box 3567                 |  109561 |      |          |            | Amherst,       | MA    | 1004 | R15B2     | $25.00         | 2012-12-3
1   | $25.00          | 2012-12-31
 John         | Fisher       | 268 West St.                |  112950 |      |          |            | Cummington,    | MA    | 1026 | R15A2     | $25.00         | 2014-07-0
7   | $10.00          | 2014-07-07
 Edgar H.     | Forrest      | 15 Deerfoot Dr.             |    7895 |      |          |            | East Longmeadow, | MA  | 1028 | R15I1     | $15.00         | 1994-03-1
4   | $15.00          | 1990-03-28
 Jacob Z.     | Robonson     | PO Box 405                  |    8775 |      |          |            | East Longmeadow, | MA  | 1028 | R15I1     | $10.00         | 1997-01-2
8   | $15.00          | 1990-10-18
 Sarah-Marie  | Belcastro    | 278 Bay Rd.                 |  104482 |      |          |            | Hadley,        | MA    | 1035 | R15A2     | $40.00         | 2013-12-2
4   | $40.00          | 2010-12-24
 Jacqueline   | Brown-Hazard | 254 Walnut St.              |   89615 |      |          |            | Holyoke,       | MA    | 1040 | R15D2     | $25.00         | 2011-04-2
8   | $10.00          | 2003-03-21
 Arthur       | Shurn        | 1158 Northampton St.        |   15182 |      |          |            | Holyoke,       | MA    | 1040 | R15G1     | $20.00         | 2008-05-2
3   | $15.00          | 2003-11-07
 Dean         | Alfange      | PO Box 343                  |    8805 |      |          |            | Leverett,      | MA    | 1054 | R15A2     | $40.00         | 2014-02-2
4   | $25.00          | 1993-12-31
 Andrew J. W. | Scheffey     | PO Box 120                  |    4747 |      |          |            | Leverett,      | MA    | 1054 | R15I4     | $100.00        | 1993-12-3
1   | $10.00          | 1990-04-11
 Renwick K.   | Caldwell     | 54 Harrison Ave.            |    5239 |      |          |            | Northampton,   | MA    | 1060 | R15I2     | $25.00         | 1993-12-2
```

```
Fund_Raising=# Alter table donor
```

```
Fund_Raising-# add City varchar(50);
```

```
ALTER TABLE
```

```
Fund_Raising=# Alter table donor add State varchar(50);
```

ALTER TABLE

Fund_Raising=# Alter table donor add Zip integer;

ALTER TABLE

Fund_Raising=# COPY donor FROM '/Users/yehanspc/Dropbox/CSE530/copy_donor.csv' WITH CSV HEADER;

COPY 3599

Below are some query examples. We will come up with more queries after all data is imported.

SELECT GiftAmount, FirstName, LastName

From Gift, Donor

Where Gift.DonorID=Donor.DonorID AND GiftAmount>1000;

```
SELECT GiftAmount, FirstName, LastName
From Gift, Donor
Where Gift.DonorID=Donor.DonorID AND GiftAmount>1000;
 giftamount | firstname  | lastname
------------+------------+----------
       1500 | Barbara J. | Wood
       1500 | Barbara J. | Wood
(2 rows)
```

SELECT DonorID, FirstName, LastName

From Donor

Where LastGiftDate>='2010-1-1';

```
SELECT DonorID, FirstName, LastName
From Donor
Where LastGiftDate>='2010-1-1';
 donorid |    firstname    |     lastname
---------+-----------------+-------------------
    2592 | Frederick       | Irving
  106737 | Dolores P.      | McCullough
   22346 | Roy L.          | Regozin
  109561 | Vincent         | Jackson
  112950 | John            | Fisher
  104482 | Sarah-Marie     | Belcastro
   89615 | Jacqueline      | Brown-Hazard
    8805 | Dean            | Alfange
   18266 | George          | Patrickson
  106997 | Curtis          | Bess
  102482 | Loretta         | Gilreath
  110882 | Evelyn H.       | Gunn
  103292 | George          | Marshall
  105010 | Martha          | Monroe
    8782 | Alonzo D.       | Sheffield
  104362 | Cheryl A.       | Stanley
   95043 | Denise          | Wilson
  101702 | Juanita         | Youmans
  111069 | Alice E.        | McDonald
  111952 | Ella            | Holman
  107669 | Davinna         | Fuller
  105313 | Terri           | Chegwidden
    4711 | Martha J.       | Shaw
  110884 | Marvin D.       | Wurth
  103931 | James           | Duncan
  104251 | Craig           | Stuart
  106219 | Byron           | Ricketts
  108662 | Jeff            | Swann
  107255 | Parker          | Coddington
    9198 | Nason A.        | Hurowitz
  103455 | Ronald          | Loomis
  111613 | Eric            | Van Eversley
   98992 | Alice           | Schafer
  113184 | Mary E.         | Welch
  106733 | Margaret        | Saphier
  103592 | Charles         | Willie
  107040 | H. C.           | Weaver
  110770 | Nicholas        | Mastroianni
  111159 | Joanne B.       | Cunningham
    6870 | Christopher A.  | Klem
  105531 | Elaine          | Barnartt-Goldstein
  108054 | Doris E.        | Bouwensch
:...skipping...
```