SQL Queries

Using lookup tables to merge local data with large, 'read-only' official databases.

Here are the queries that we ran in class two days after lecture #5 to study land use and ownership patterns in the parcel database for Boston. The queries track those in this paper: Ferreira, Joseph Jr., "*Information Technologies that Change Relationships between Low-Income Communities and the Public and Non-profit Agencies that Serve Them.*" This paper is Chapter 7 of "*High Technology and Low-Income Communities: Prospects for the Positive Use of Advanced Information Technology*," Edited by Donald A. Schön, Bish Sanyal, and William J. Mitchell, MIT Press, 1997.

```
SELECT owner, count(*) parcels FROM parcel96
 WHERE owner LIKE '%BOSTON%'
 GROUP BY owner HAVING count(*) > 1
 ORDER BY count(*) desc;
```

```
OWNER                          PARCELS
------------------------------ ----------
CITY OF BOSTON                    2876
CITY OF BOSTON BY FCL             1258
BOSTON REDEVELOPMENT AUTH          231
BOSTON HOUSING AUTHORITY           215
BOSTON KENMORE REALTY CORP         131
BOSTON UNIVERSITY TRSTS OF         111
CITY OF BOSTON FCL                  98
BOSTON WHARF CO GPS                 88
BOSTON REDEVELOPMENTAUTH            83
BOSTON REDEVELOPMNT AUTH            82
ROMAN CATH ARCH BOSTON              63
BOSTON REDVLPMNT AUTH               60
BOSTON UNIVERSITY TRSTS             56
BOSTON HOUSING AUTH                 46
BOSTON UNIVERSITY TRS OF            44
```

```
select owner, count(*) parcels, sum(totalval)/1000 totval_k,
       sum(lotsize)/43560 acres
  from parcel96
 where owner like '%BOSTON%' and owner like '%UNIV%'
 group by owner order by count(*) desc;
```

```
OWNER                          PARCELS   TOTVAL_K     ACRES
------------------------------ -------- ---------- ---------
BOSTON UNIVERSITY TRSTS OF          111     85,824      14.5
BOSTON UNIVERSITY TRSTS              56     89,008      32.8
BOSTON UNIVERSITY TRS OF             44     29,654       6.2
BOSTON UNIVERSITY TRST OF            12      6,847       2.1
BOSTON UNIVERSITY                    10     38,978      25.6
BOSTON UNIVRSTY TRSTS OF              8     18,186       2.0
```

```
BOSTON UNIVERSITY TRST                7      3,180       0.6
BOSTON UNIV TRUSTEESOF                5      1,192       0.0
BOSTON UNIVERSITY TRS                 5      8,547       2.9
BOSTON UNIV TRSTS MTGEE               3        968       0.2
BOSTON UNIVERSITY TS OF               3      1,276       0.2
BOSTON UNIVERSITY TRUSTEE OF          3      4,090       0.6
BOSTON UNIV TRST OF MASS              2        679       0.2
TRUSTEES OF BOSTON UNIV               2        755       0.2
TRSTS OF BOSTON UNIVERSITY            2      2,791       2.1
BOSTON UNIVERSKTY TRSTS OF            2        402       0.1
BOSTON UNIV TRSTS OF                  1      1,337       0.2
TRUSTEES OF BOSTON UNIVERITY          1         71       0.2
BOSTON UNIVSTY TRST OF                1      1,544       0.1
BOSTON UNIV TRSTS OF MTGEE            1        326       0.1
BOSTON UNIVERSITY TRSTS THE           1        580       0.1
BOSTON UNIVERSITY TRSTS OF.           1        333       0.1
BOSTON UNIVERSITY TR OF               1      1,774       0.6
BOSTON UNIV TRUSTEES                  1      1,800       0.2

SELECT owner, count(*) parcels, sum(totalval)/1000 totval_k,
         sum(lotsize)/43560 acres
   FROM parcel96
  WHERE owner LIKE '%BOSTON%' AND
        (owner LIKE '%REDEV%' or owner LIKE '%REDV%')
  GROUP BY OWNER;

OWNER                          PARCELS   TOTVAL_K     ACRES
------------------------------ ------- ---------- ---------
BOSTON REDEVELOMENT AUTH             1        327       0.2
BOSTON REDEVELOPMENT                 5        157       0.5
BOSTON REDEVELOPMENT AUTH          231    106,863     123.9
1BOSTON REDEVELOPMENT AUTHRTY        3         61       0.1
BOSTON REDEVELOPMENTAUTH            83          0      11.9
BOSTON REDEVELOPMENTAUTHRTY          1          0       0.1
BOSTON REDEVELOPMNT AUTH            82     32,975      23.3
BOSTON REDEVELPMENT AUTH            41      1,418       3.0
BOSTON REDEVELPMNT AUTH             22      5,073       2.4
BOSTON REDEVELPOMENT AUTH            1         33       0.2
BOSTON REDEVLPMNT AUTH              28      7,488       3.2
BOSTON REDEVLPMNT AUTHOR            29      2,955       3.3
BOSTON REDEVLPMNT AV                 1          0       0.0
BOSTON REDVLPMNT AUTH               60      2,472       7.8
BOSTON REDVLPMNT AUTHOR             15      3,416       1.8
BOSTON REDVLPMNT AUTHORITY           1      1,095       0.5
BOSTON REDVLPMNT CORP                1        662       0.1

                               PARCELS   TOTVAL_K     ACRES
------------------------------ ------- ---------- ---------
BOSTON REDEVELOPMENT AUTH          605    164,991     182.3


CREATE TABLE blookup
       STORAGE (initial 1M NEXT 250K PCTincrease 50 MAXEXTENTS 500)
AS
SELECT DISTINCT owner, owner fix_owner
  FROM parcel96;
```

```
SELECT count(*) FROM blookup;
  COUNT(*)
----------
    103281

SELECT count(*) from parcel96;
  COUNT(*)
----------
    138001

SELECT * FROM BLOOKUP
  WHERE owner LIKE '%BOSTON%' AND
        (owner LIKE '%REDEV%' or owner LIKE '%REDV%');
OWNER                          FIX_OWNER
------------------------------ ------------------------------
BOSTON REDEVELOMENT AUTH       BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELOPMENT           BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELOPMENT AUTH      BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELOPMENT AUTHRTY   BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELOPMENTAUTH       BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELOPMENTAUTHRTY    BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELOPMNT AUTH       BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELPMENT AUTH       BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELPMNT AUTH        BOSTON REDEVELOPMENT AUTH
BOSTON REDEVELPOMENT AUTH      BOSTON REDEVELOPMENT AUTH
BOSTON REDEVLPMNT AUTH         BOSTON REDEVELOPMENT AUTH
BOSTON REDEVLPMNT AUTHOR       BOSTON REDEVELOPMENT AUTH
BOSTON REDEVLPMNT AV           BOSTON REDEVELOPMENT AUTH
BOSTON REDVLPMNT AUTH          BOSTON REDEVELOPMENT AUTH
BOSTON REDVLPMNT AUTHOR        BOSTON REDEVELOPMENT AUTH
BOSTON REDVLPMNT AUTHORITY     BOSTON REDEVELOPMENT AUTH
BOSTON REDVLPMNT CORP          BOSTON REDEVELOPMENT AUTH

17 rows selected.

SELECT owner, count(*) parcels FROM parcel96
 WHERE owner LIKE '%BOSTON%'
 GROUP BY owner HAVING count(*) > 1
 ORDER BY count(*) desc;

/* Here's the one example that we used in class to illustrate
   the use of a UPDATE statement to enforce a 'rule' that
   we construct to make some spelling corrections.  By
   saving these update statements, we can accumulate useful
   and re-usable 'knowledge' about how to categorize the
   parcel owners.
*/

update blookup set fix_owner = 'BOSTON REDEVELOPMENT AUTH'
  WHERE owner LIKE '%BOSTON%' AND
        (owner LIKE '%REDEV%' or owner LIKE '%REDV%');

17 rows updated.

create index p96owner on blookup(owner);

Once we have created an index (to speed the table join),
```

we can use this query to re-group the parcels owned by
the various BRA spellings so the earlier list of multi-parcel
owners reflects the change categorization:

```
SELECT fix_owner, count(*) parcels
  FROM parcel96 p, blookup b
 WHERE p.owner = b.owner
   and p.owner LIKE '%BOSTON%'
 GROUP BY fix_owner HAVING count(*) > 1
 ORDER BY count(*) desc;
```

```
FIX_OWNER                       PARCELS
------------------------------ ----------
CITY OF BOSTON                      2876
CITY OF BOSTON BY FCL               1258
BOSTON REDEVELOPMENT AUTH            605
BOSTON HOUSING AUTHORITY             215
BOSTON KENMORE REALTY CORP           131
BOSTON UNIVERSITY TRSTS OF           111
CITY OF BOSTON FCL                    98
BOSTON WHARF CO GPS                   88
ROMAN CATH ARCH BOSTON                63
BOSTON UNIVERSITY TRSTS               56
BOSTON HOUSING AUTH                   46

...

133 rows selected.
```