# SQL FOR LIBRARIANS

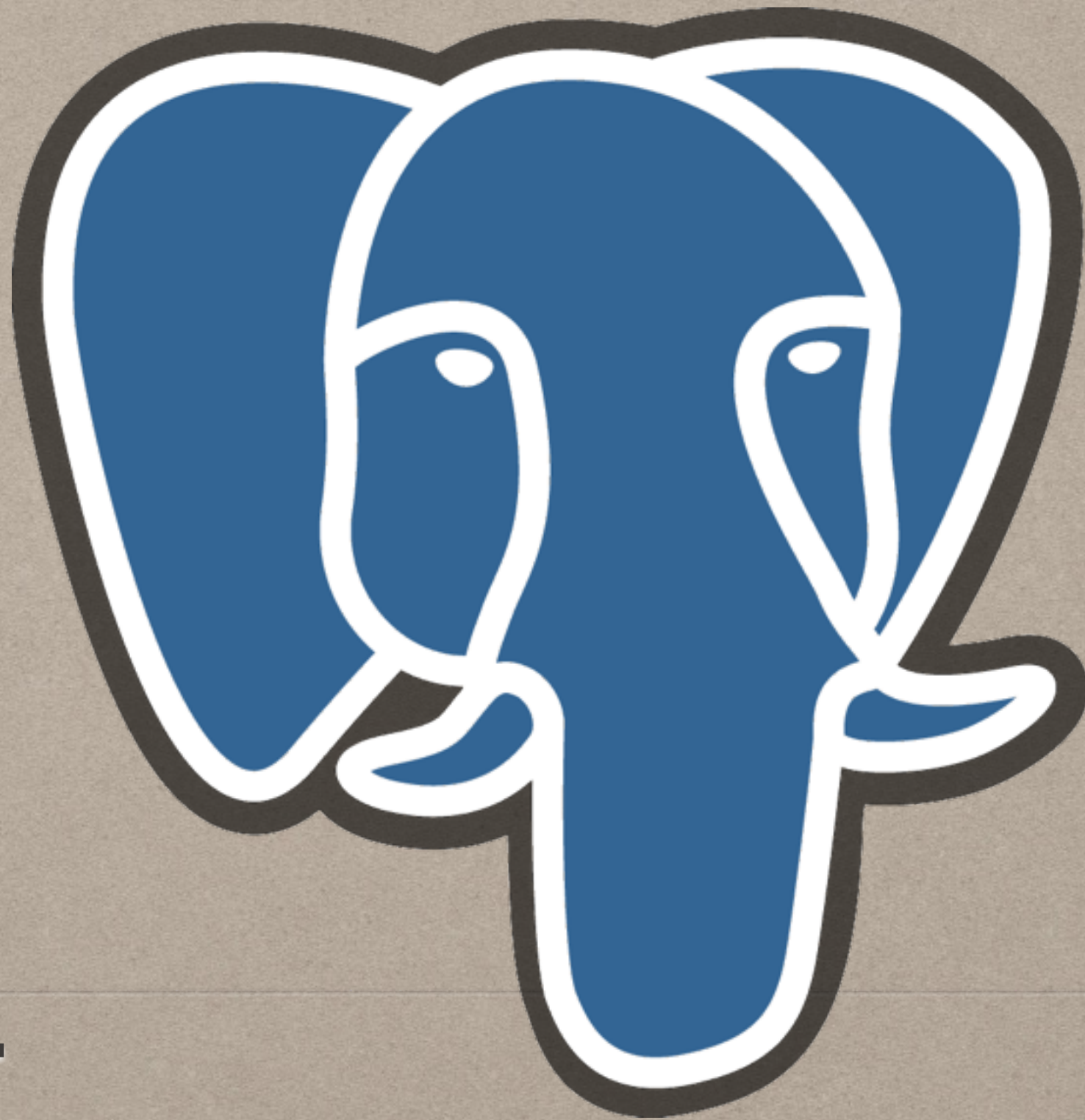## EVERGREEN INTERNATIONAL CONFERENCE BOSTON 2014 MARCH 22ND AD

# WHO

**WHAT**

**WHY**

# HOW

# WHEN

# WHAT IS SQL

- structured query language

- used for a lot more than querying
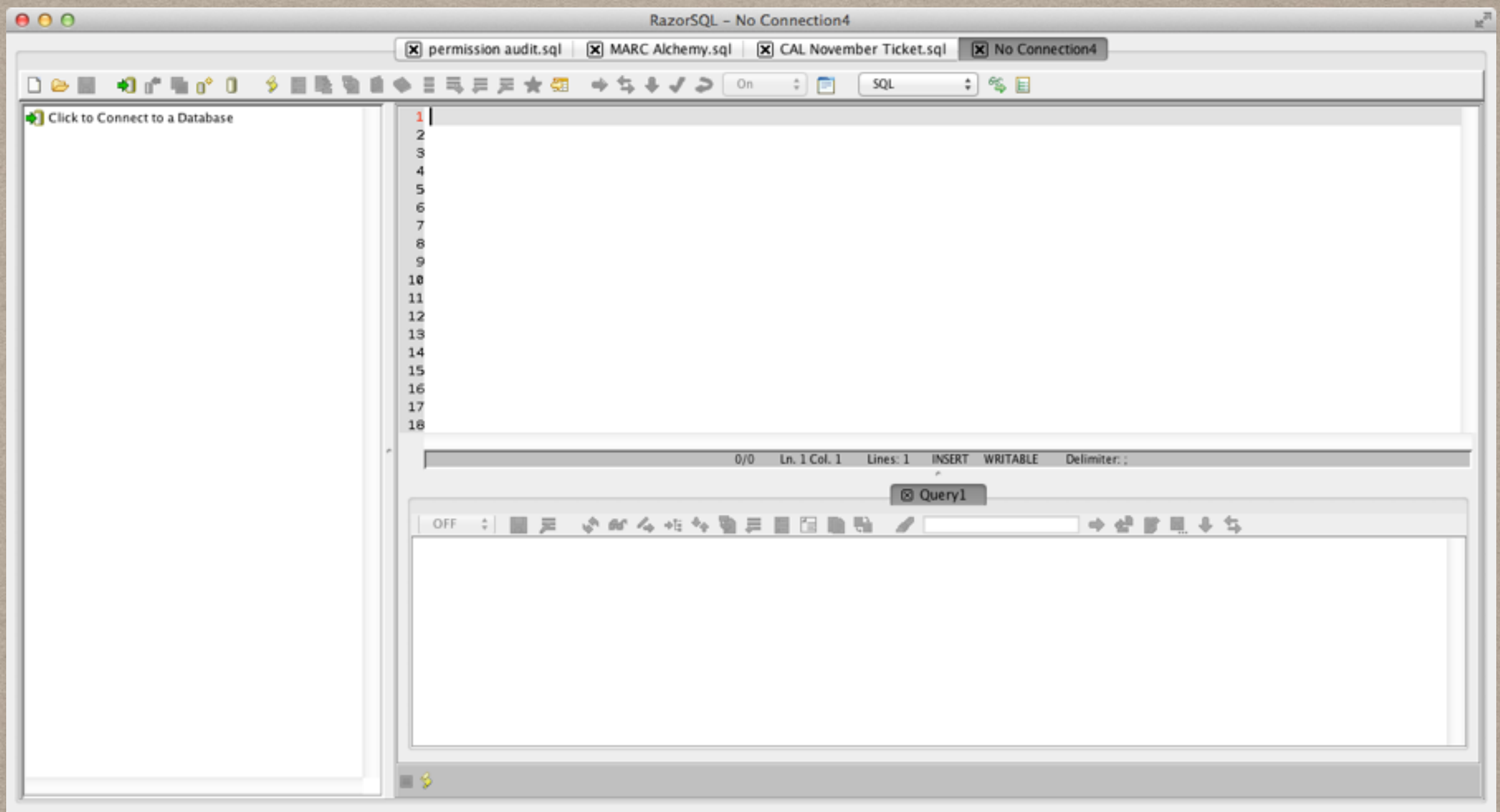
- we will focus on reporting

# CONNECTING

- user name

- password

- ip / domain / localhost

- port (5432 maybe)

- database name (often 'evergreen')

- there are a lot of SQL clients

**Terminal (as superuser)**

File   Edit   View   Search   Terminal   Help

```
postgres@localhost:/home/postgres$ psql -U evergreen -h localhost -d evergreen
Password for user evergreen:
psql (9.1.11)
SSL connection (cipher: DHE-RSA-AES256-SHA, bits: 256)
Type "help" for help.

evergreen=#
```

# CONNECTING WITH PSQL

# CONNECTING WITH RAZORSQL

# 2 DIMENSIONAL ARRAYS
## AKA
## TABLES

| id | parent_ou | ou_type | ill_address | holds_address | mailing_address | billing_address | shortname | name | email | phone | opac_visible | fiscal_calendar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | null | 1 | 3 | 3 | 3 | 3 | MI | MISKATONIC | deep@one.net | | t | 1 |
| 2 | 1 | 2 | 3 | 3 | 3 | 3 | HG | HOGWARTS | null | null | t | 1 |
| 3 | 1 | 2 | 4 | 4 | 4 | 4 | UU | UNSEEN UNIVERSITY | monkeyboy@turtle.infinity | | t | 1 |
| 4 | 2 | 3 | 3 | 3 | 3 | 3 | MT | MINAS TIRITH | reference@white.tree | 333-111-1234 | t | 1 |

# STRUCTURE

* DATABASE
  * SCHEMA
    * TABLES
    * VIEWS
    * ~~INDEXES~~
    * ~~TRIGGERS~~
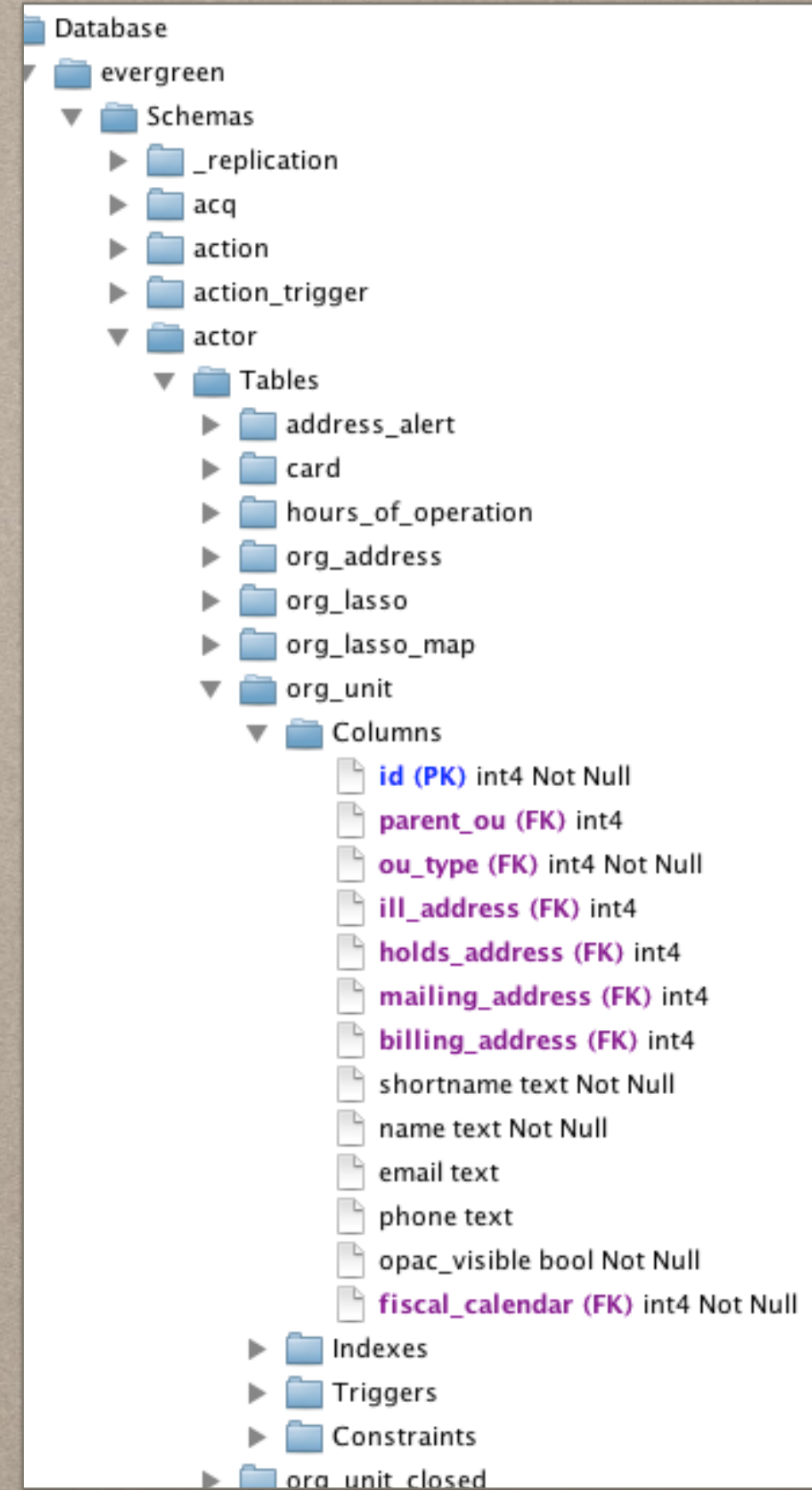    * ~~CONSTRAINTS~~
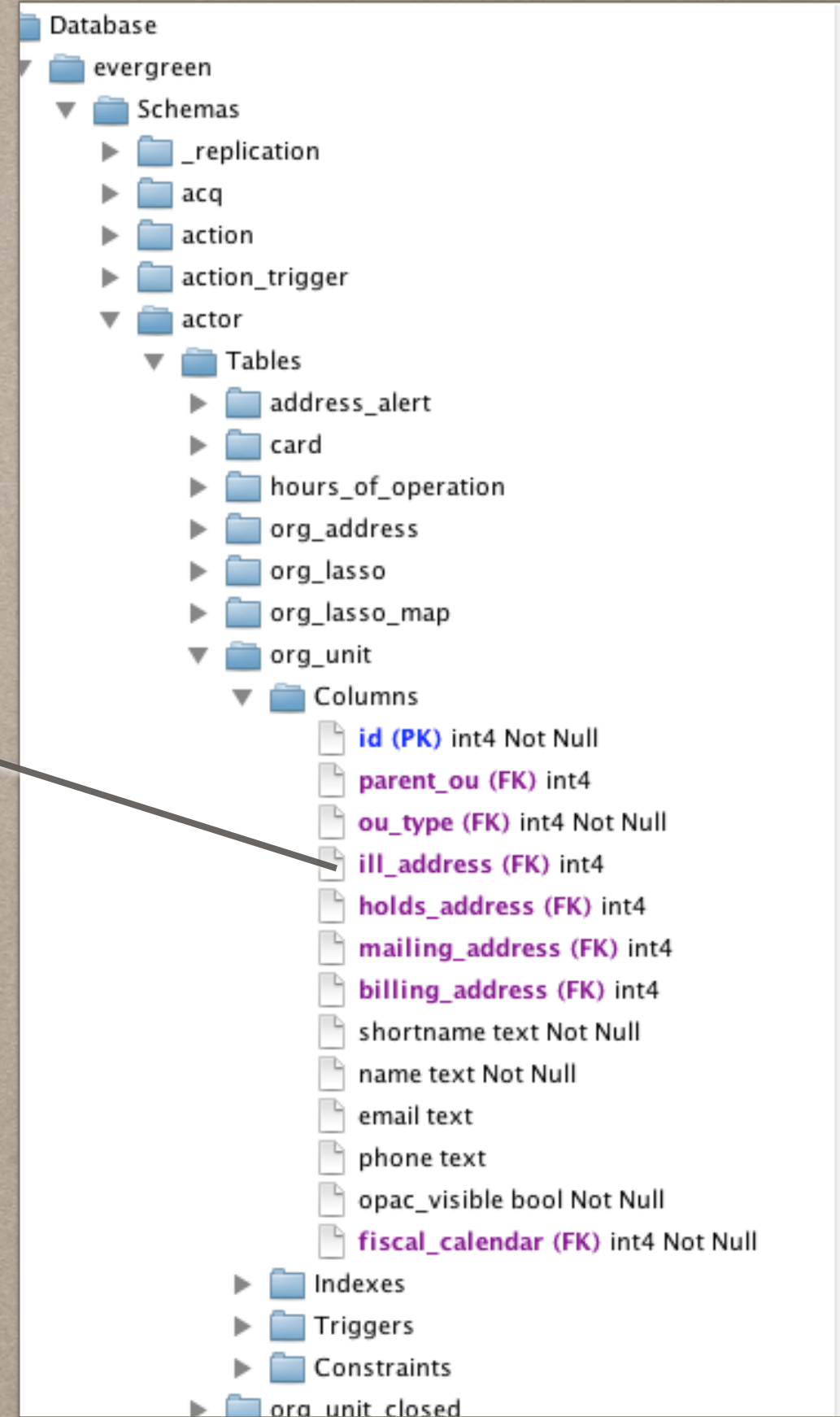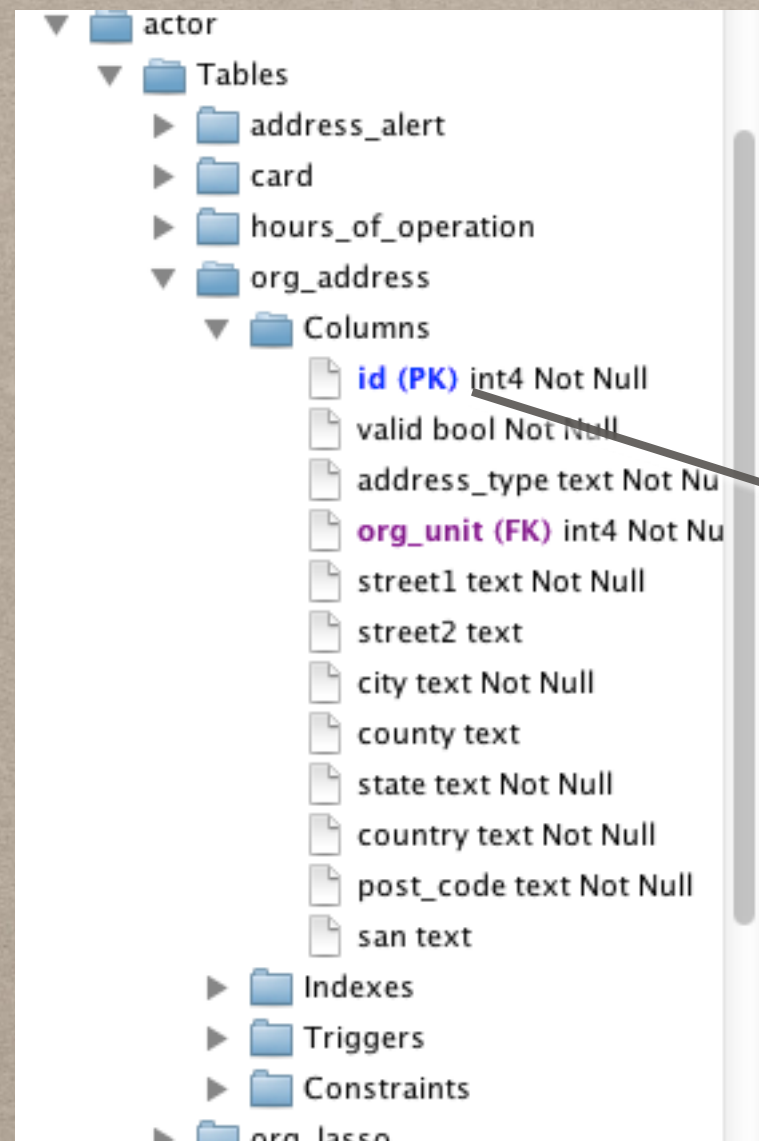    * ~~FUNCTIONS~~
    * ~~SEQUENCES~~
    * ~~USERS~~
    * ~~ROLES~~

# PK & FK

```
select * from actor.org_unit ;
```

```
                    select *
        from              actor.org_unit


;
```
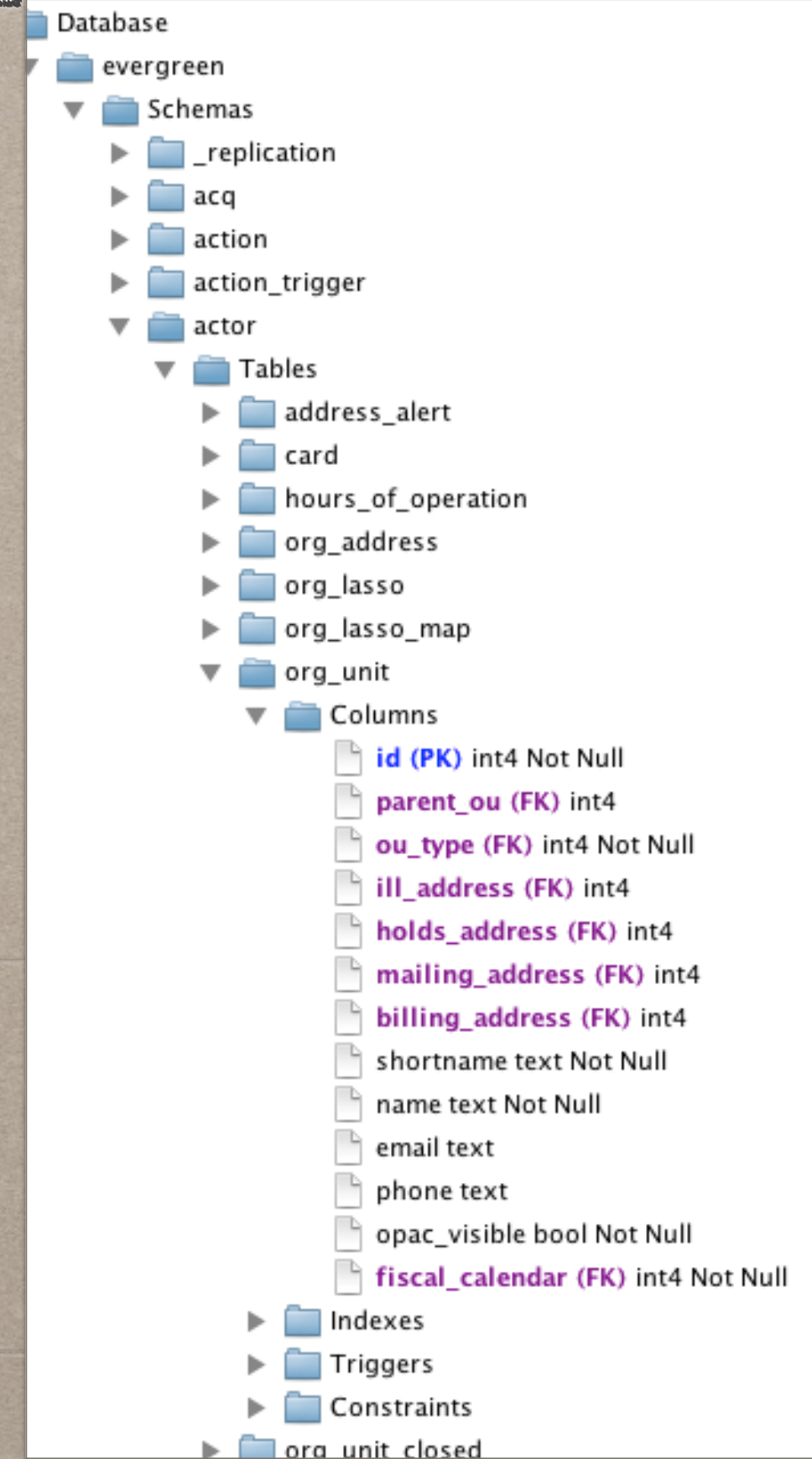
**SQL TIME!**

# select * from actor.org_unit ;

| ou_type | ill_address | holds_address | mailing_address | billing_address | shortname | name | email | phone | opac_visible | fiscal_calendar |
|---------|-------------|---------------|-----------------|-----------------|-----------|------|-------|-------|--------------|-----------------|
| 2 | | | | | ACL | Anderson Count... | | | t | 1 |
| 2 | 2 | 2 | 2 | 2 | UCCL | Union County Lib... | | | t | 1 |
| 2 | | | | | CAL | Calhoun County ... | calho... | | t | 1 |
| 2 | 4 | 4 | 4 | 4 | BCL | Beaufort County ... | notice... | 843-... | t | 1 |
| 1 | 3 | 3 | 3 | 3 | SC LENDS | SC LENDS | | | t | 1 |
| 2 | | | | | FCL | Fairfield County ... | | | t | 1 |
| 2 | | | | | YCL | York County Libr... | circul... | | t | 1 |
| 2 | | | | | CHE | Chesterfield Cou... | librar... | | t | 1 |
| 3 | 89 | 74 | 88 | 73 | ACL-BEL | Anderson – Belt... | belton... | 864-... | t | 1 |
| 2 | | | | | DCL | Dorchester Coun... | dorch... | | t | 1 |
| 2 | | | | | KCL | Kershaw County ... | | | t | 1 |
| 2 | | | | | AHJ | Allendale-Hamp... | | | t | 1 |
| 2 | | | | | WCL | Williamsburg Co... | | | t | 1 |
| 2 | | | | | COL | Colleton | | | t | 1 |
| 5 | 90 | 92 | 91 | 93 | ACL-BKM | Anderson – Boo... | book... | 864-... | t | 1 |

select * from actor.org_unit ;

Database
  evergreen
    Schemas
      _replication
      acq
      action
      action_trigger
      actor
        Tables
          address_alert
          card
          hours_of_operation
          org_address
          org_lasso
          org_lasso_map
          org_unit
            Columns
              id (PK) int4 Not Null
              parent_ou (FK) int4
              ou_type (FK) int4 Not Null
              ill_address (FK) int4
              holds_address (FK) int4
              mailing_address (FK) int4
              billing_address (FK) int4
              shortname text Not Null
              name text Not Null
              email text
              phone text
              opac_visible bool Not Null
              fiscal_calendar (FK) int4 Not Null
            Indexes
            Triggers
            Constraints
          org_unit_closed
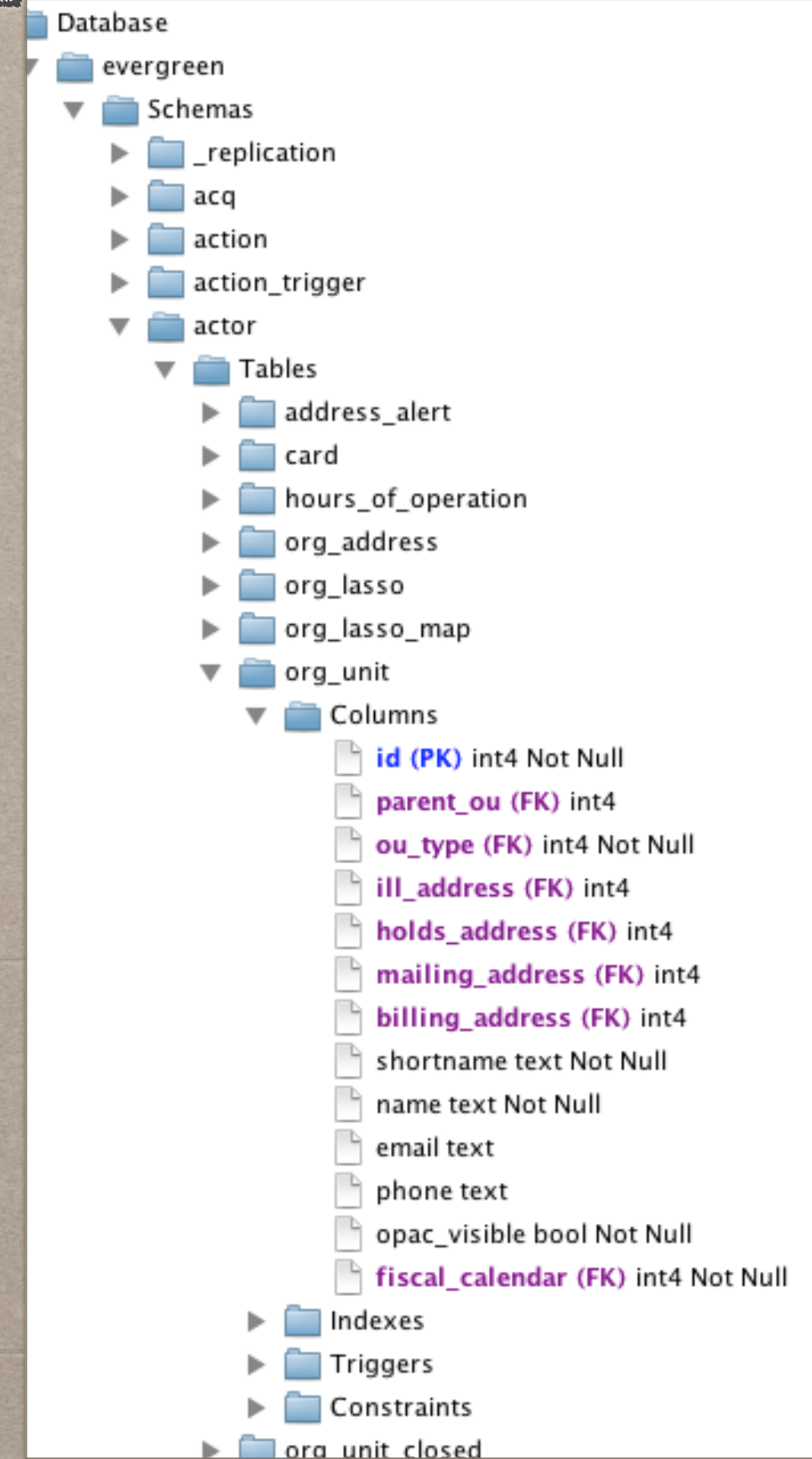
# select * from actor.org_unit ;

Database

| ou_type | ill_address | holds_address | mailing_address | billing_address | shortname | name | email | phone | opac_visible | fiscal_calendar |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | | | | ACL | Anderson Count... | | | t | 1 |
| 2 | 2 | 2 | 2 | 2 | UCCL | Union County Lib... | | | t | 1 |
| 2 | | | | | CAL | Calhoun County ... | calho... | | t | 1 |
| 2 | 4 | 4 | 4 | 4 | BCL | Beaufort County ... | notice... | 843-... | t | 1 |
| 1 | 3 | 3 | 3 | 3 | SC LENDS | SC LENDS | | | t | 1 |
| 2 | | | | | FCL | Fairfield County ... | | | t | 1 |
| 2 | | | | | YCL | York County Libr... | circul... | | t | 1 |
| 2 | | | | | CHE | Chesterfield Cou... | librar... | | t | 1 |
| 3 | 89 | 74 | 88 | 73 | ACL-BEL | Anderson – Belt... | belton... | 864-... | t | 1 |
| 2 | | | | | DCL | Dorchester Coun... | dorch... | | t | 1 |
| 2 | | | | | KCL | Kershaw County ... | | | t | 1 |
| 2 | | | | | AHJ | Allendale–Hamp... | | | t | 1 |
| 2 | | | | | WCL | Williamsburg Co... | | | t | 1 |
| 2 | | | | | COL | Colleton | | | t | 1 |
| 5 | 90 | 92 | 91 | 93 | ACL-BKM | Anderson – Boo... | book... | 864-... | t | 1 |

- org_lasso_map
- ▼ org_unit
  - ▼ Columns
    - **id (PK)** int4 Not Null
    - **parent_ou (FK)** int4
    - **ou_type (FK)** int4 Not Null
    - **ill_address (FK)** int4
    - **holds_address (FK)** int4
    - **mailing_address (FK)** int4
    - **billing_address (FK)** int4
    - shortname text Not Null
    - name text Not Null
    - email text
    - phone text
    - opac_visible bool Not Null
    - **fiscal_calendar (FK)** int4 Not Null
  - ▶ Indexes
  - ▶ Triggers
  - ▶ Constraints
- ▶ org_unit_closed
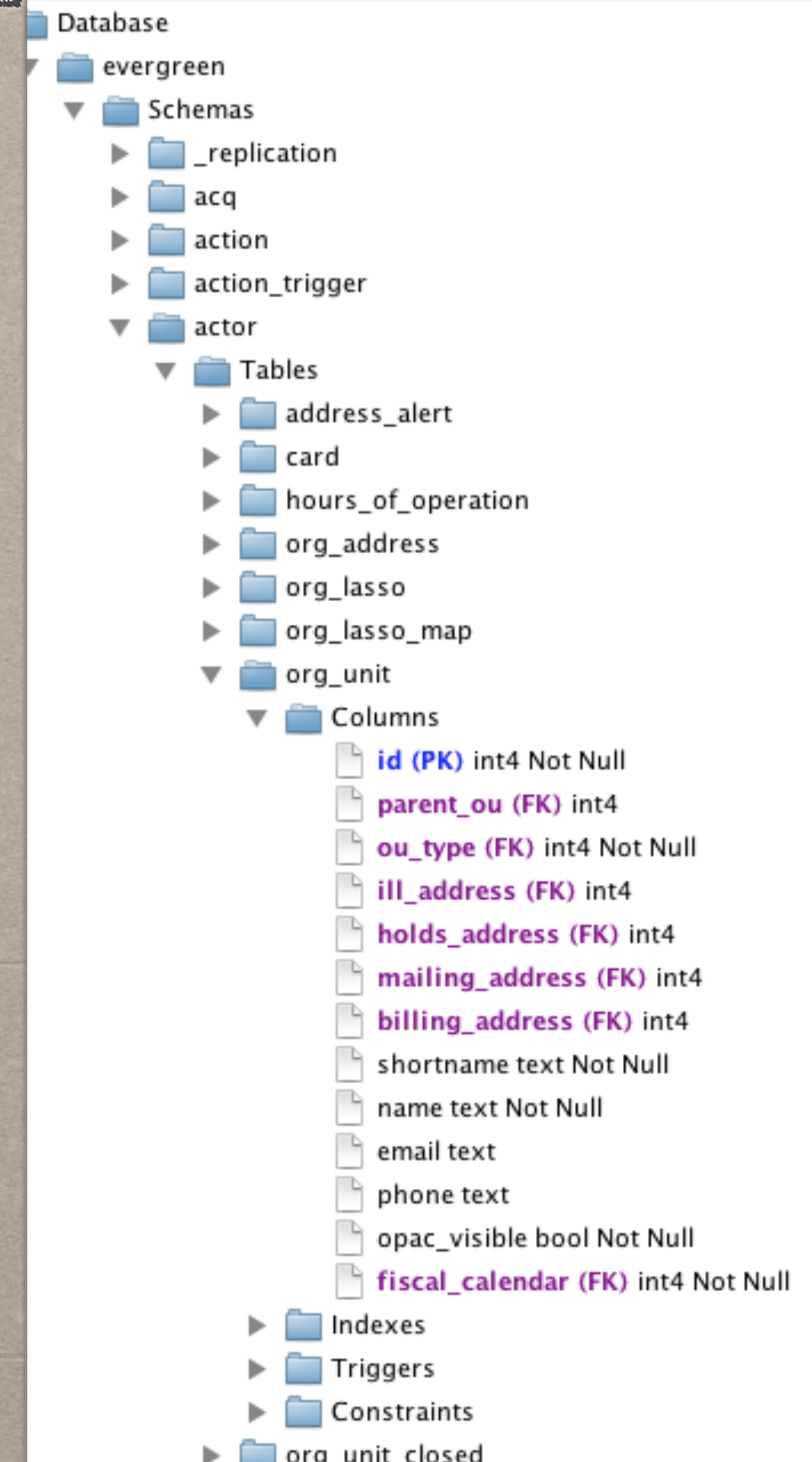
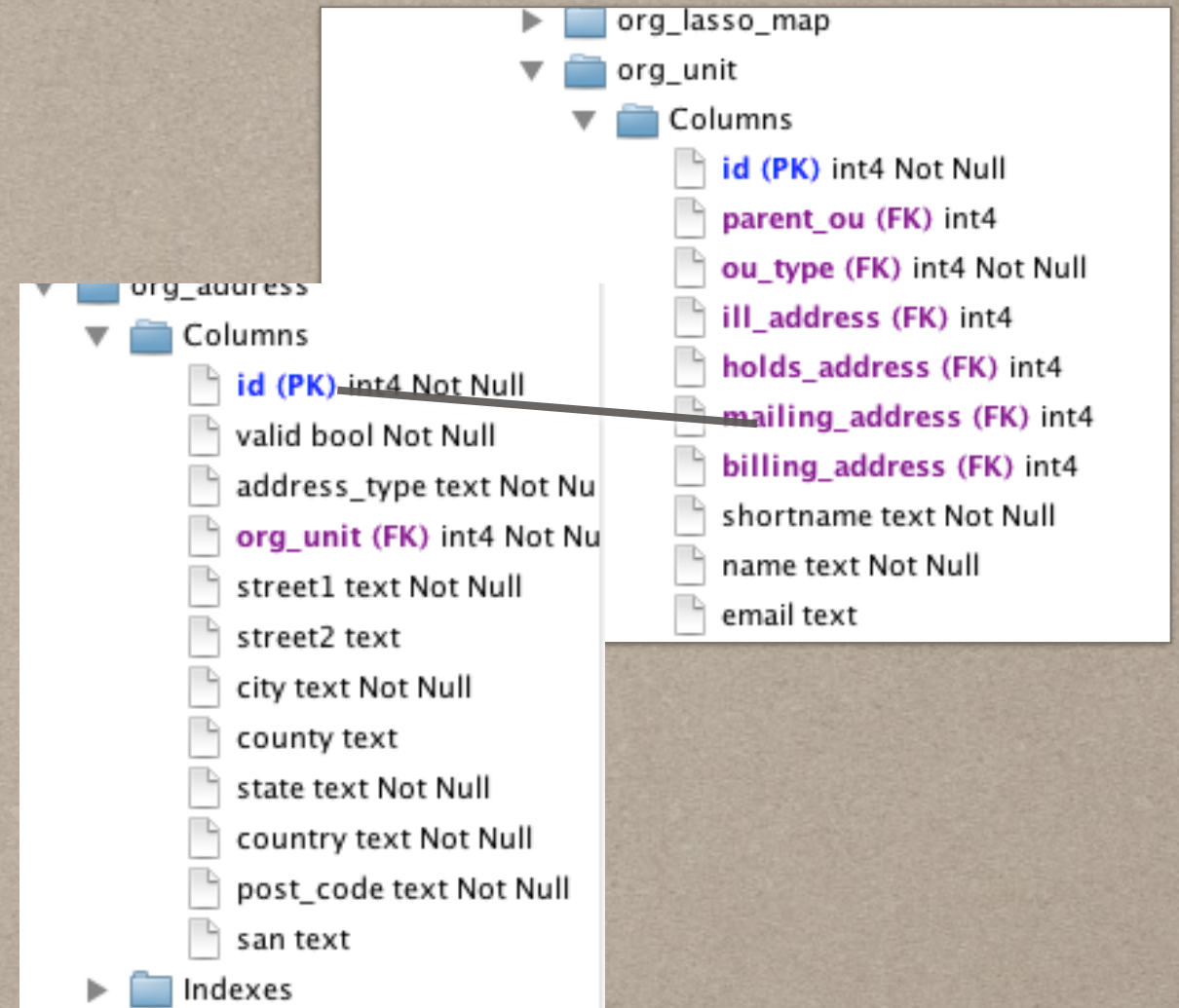select shortname, mailing_address from
actor.org_unit ;

Database
  evergreen
    Schemas
      _replication
      acq
      action
      action_trigger
      actor
        Tables
          address_alert
          card
          hours_of_operation
          org_address
          org_lasso
          org_lasso_map
          org_unit
            Columns
              id (PK) int4 Not Null
              parent_ou (FK) int4
              ou_type (FK) int4 Not Null
              ill_address (FK) int4
              holds_address (FK) int4
              mailing_address (FK) int4
              billing_address (FK) int4
              shortname text Not Null
              name text Not Null
              email text
              phone text
              opac_visible bool Not Null
              fiscal_calendar (FK) int4 Not Null
            Indexes
            Triggers
            Constraints
          org_unit_closed

**SELECTING COLUMNS**

select shortname, mailing_address from actor.org_unit ;

| shortname | mailing_address |
|-----------|-----------------|
| FLO | |
| SCSL | 3 |
| ACL | |
| UCCL | 2 |
| CAL | |
| BCL | 4 |
| SC LENDS | 3 |
| FCL | |
| YCL | |
| CHE | |
| ACL-BEL | 88 |
| DCL | |
| KCL | |
| AHJ | |
| WCL | |
| COL | |
| ACL-BKM | 91 |
| KCL-OVF | |

**SELECTING COLUMNS**

Database
- evergreen
  - Schemas
    - _replication
    - acq
    - action
    - action_trigger
    - actor
      - Tables
        - address_alert
        - card
        - hours_of_operation
        - org_address
        - org_lasso
        - org_lasso_map
        - org_unit
          - Columns
            - **id (PK)** int4 Not Null
            - **parent_ou (FK)** int4
            - **ou_type (FK)** int4 Not Null
            - **ill_address (FK)** int4
            - **holds_address (FK)** int4
            - **mailing_address (FK)** int4
            - **billing_address (FK)** int4
            - shortname text Not Null
            - name text Not Null
            - email text
            - phone text
            - opac_visible bool Not Null
            - **fiscal_calendar (FK)** int4 Not Null
          - Indexes
          - Triggers
          - Constraints
        - org_unit_closed

# INNER JOINS
## AKA
# JOIN



org_lasso_map
org_unit
Columns
- id (PK) int4 Not Null
- parent_ou (FK) int4
- ou_type (FK) int4 Not Null
- ill_address (FK) int4
- holds_address (FK) int4
- mailing_address (FK) int4
- billing_address (FK) int4
- shortname text Not Null
- name text Not Null
- email text

org_address
Columns
- id (PK) int4 Not Null
- valid bool Not Null
- address_type text Not Nu
- org_unit (FK) int4 Not Nu
- street1 text Not Null
- street2 text
- city text Not Null
- county text
- state text Not Null
- country text Not Null
- post_code text Not Null
- san text
Indexes

select aou.shortname, aoa.street1, aoa.city, aoa.post_code
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address;

select aou.shortname, aoa.street1, aoa.city, aoa.post_code
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address;

| shortname | street1 | city | post_code |
| --- | --- | --- | --- |
| UCCL-C | 300 East South Street | Union | 29379 |
| UCCL | 300 East South Street | Union | 29379 |
| STATELIB | 1500 Senate Street | Columbia | 29201 |
| SC LENDS | 1500 Senate Street | Columbia | 29201 |
| SCSL | 1500 Senate Street | Columbia | 29201 |
| BCL-BLU | 120 Palmetto Way | Bluffton | 29910 |
| BCL-HHI | 11 Beach City Road | Hilton Head Island | 29926 |
| BCL-LOB | P.O. Box 690 | Lobeco | 29931 |
| FCL-WIN | 300 Washington Street | Winnsboro | 29180 |
| FCL-RWY | 175 South Palmer Street | Ridgeway | 29130 |
| CHE-CHE | 119 W. Main Street | Chesterfield | 29709 |
| CHE-MAT | 227 Huger Street | Cheraw | 29520 |
| ACL-BEL | 91 Breazeale St | Belton | 29627 |
| CHE-PAG | 109 West Blakeney Street | Pageland | 29728 |
| CHE-JEF | PO Box 505 | Jefferson | 29718 |

```
select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code
as "zip code"
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address
order by 1;
```

# AS, ORDER BY

select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code as "zip code"
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address
order by 1;

| shortname | street | city | zip code |
|---|---|---|---|
| ACL–BEL | 91 Breazeale St | Belton | 29627 |
| ACL–BKM | 300 North McDuffie Street | Anderson | 29622 |
| ACL–HP | 318 North Shirley Avenue | Honea Path | 29654 |
| ACL–IVA | PO Box 38 | Iva | 29655 |
| ACL–LAN | 925 Greenville Drive | Williamston | 29697 |
| ACL–MAIN | 300 N McDuffie Street | Anderson | 29621 |
| ACL–PEN | PO Box 707 | Pendleton | 29670 |
| ACL–PIE | 1407 Hwy 86 | Piedmont | 29673 |
| ACL–POW | PO Box 51325 | Piedmont | 29642 |
| ACL–WES | 1100 West Franklin Street | Anderson | 29621 |
| AHJ–ALD | P.O. Box 280 | Allendale | 29810 |
| AHJ–BKM | P.O. Box 280 | Allendale | 29810 |
| AHJ–EST | P.O. Box 668 | Estill | 29918 |
| AHJ–HAM | 12 Locust Street | Hampton | 29924 |

**AS,**
**ORDER BY**

select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code as "zip code"
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address
where aou.shortname ilike '%ycl%'
order by 1;

| shortname | street | city | zip code |
|-----------|--------|------|----------|
| YCL–BK | 138 East Black Street | Rock Hill | 29730 |
| YCL–CL | 107 Knox Street | Clover | 29710 |
| YCL–FM | 1818 2nd Baxter Crossing | Fort Mill | 29708 |
| YCL–LW | 185 Blucher Circle | Lake Wylie | 29710 |
| YCL–RH | 138 East Black Street | Rock Hill | 29730 |
| YCL–YK | 21 East Liberty Street | York | 29745 |

# EVALUATIONS

select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code as "zip code"
from actor.org_unit aou
join actor.org_address aoa on aoa.id = aou.mailing_address
where aou.shortname ilike '%ycl%' and aoa.street1 like '%East%'
order by 1;

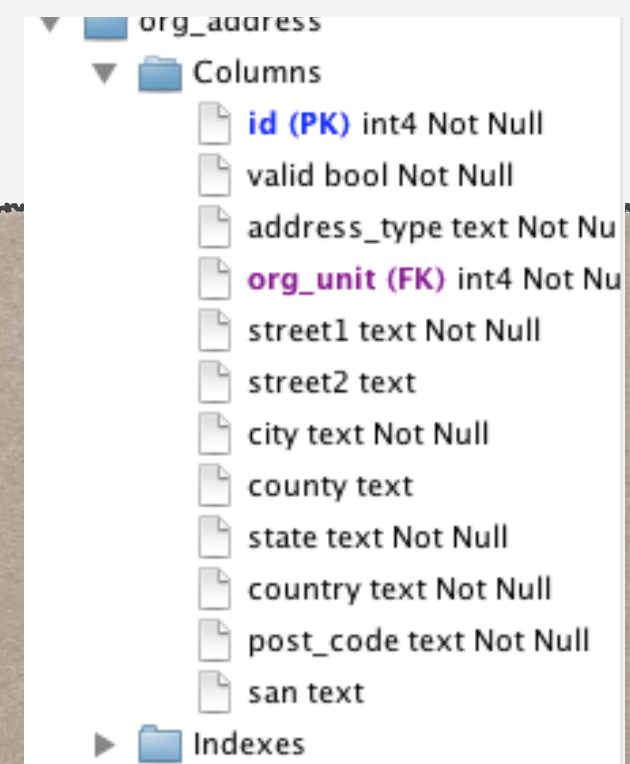| shortname | street | city | zip code |
|---|---|---|---|
| YCL–BK | 138 East Black Street | Rock Hill | 29730 |
| YCL–RH | 138 East Black Street | Rock Hill | 29730 |
| YCL–YK | 21 East Liberty Street | York | 29745 |

# 'AND' MORE RESTRICTIVE

select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code as "zip code"
from actor.org_unit aou
join actor.org_address aoa on aoa.id = aou.mailing_address
where aou.shortname ilike '%ycl%' or aoa.street1 like '%East%'
order by 1;

| shortname | street | city | zip code |
|---|---|---|---|
| FLO-LC | 221 East Main Street | Lake City | 29560 |
| FLO-PA | 100 East Main Street | Pamplico | 29583 |
| UCCL | 300 East South Street | Union | 29379 |
| UCCL-C | 300 East South Street | Union | 29379 |
| YCL-BK | 138 East Black Street | Rock Hill | 29730 |
| YCL-CL | 107 Knox Street | Clover | 29710 |
| YCL-FM | 1818 2nd Baxter Crossing | Fort Mill | 29708 |
| YCL-LW | 185 Blucher Circle | Lake Wylie | 29710 |
| YCL-RH | 138 East Black Street | Rock Hill | 29730 |
| YCL-YK | 21 East Liberty Street | York | 29745 |

# 'OR' LESS RESTRICTIVE

select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code as "zip code"
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address
where aou.shortname ilike '%ycl%' and
(aoa.street1 like '%East%' or aoa.city = 'Clover')
order by 1;

| shortname | street | city | zip code |
|---|---|---|---|
| YCL-BK | 138 East Black Street | Rock Hill | 29730 |
| YCL-CL | 107 Knox Street | Clover | 29710 |
| YCL-RH | 138 East Black Street | Rock Hill | 29730 |
| YCL-YK | 21 East Liberty Street | York | 29745 |

# USE THESE ()

```
select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code
as "zip code"
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address
where aou.shortname ilike '%ycl%' and aoa.post_code > 29720
order by 1;
```

# USE =, !=, >=, >, <, <=

select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code as "zip code"
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address
where aou.shortname ilike '%ycl%' and aoa.post_code > 29720
order by 1;

org_address
▼ 📁 Columns
  📄 **id (PK)** int4 Not Null
  📄 valid bool Not Null
  📄 address_type text Not Nu
  📄 **org_unit (FK)** int4 Not Nu
  📄 street1 text Not Null
  📄 street2 text
  📄 city text Not Null
  📄 county text
  📄 state text Not Null
  📄 country text Not Null
  📄 post_code text Not Null
  📄 san text
▶ 📁 Indexes

# USE =, !=, >=, >, <, <=

```sql
select aou.shortname, aoa.street1 as street, aoa.city, aoa.post_code
as "zip code"
from actor.org_unit aou
join actor.org_address  aoa  on aoa.id = aou.mailing_address
where aou.shortname ilike '%ycl%' and aoa.post_code > '29720'
order by 1;
```

| shortname | street | city | zip code |
|-----------|--------|------|----------|
| YCL-BK | 138 East Black Street | Rock Hill | 29730 |
| YCL-RH | 138 East Black Street | Rock Hill | 29730 |
| YCL-YK | 21 East Liberty Street | York | 29745 |

## USE =, !=, >=, >, <, <=

# CONGRATULATIONS!

SELECT *
SELECT COLUMNS
FROM
AS
JOIN
ORDER BY
WHERE
AND
OR
()
=, !=, >, <, >=, <=
LIKE
ILIKE
''

# DON'T DO THIS!!!!!!!!

```
select *
from actor.usr au
join action.hold_request ahr on ahr.usr = au.id
join action.circulation ac on ac.usr = au.id
join asset.copy acop on acop.id = ac.id
join asset.call_number call on call.id = acopy.call_number
join biblio.record_entry bre on bre.id = call.record
join metabib.real_full_rec rfr on rfr.record = bre.id
;
```

# EXPLAIN

```
select *
from actor.usr au
join action.hold_request ahr on ahr.usr = au.id
join action.circulation ac on ac.usr = au.id
;
```

```
QUERY PLAN
Merge Join  (cost=17619.93..2588005.93 rows=659222960 width=722)
  Merge Cond: (ahr.usr = au.id)
  -> Index Scan using hold_request_usr_idx on hold_request ahr  (cost=0.00..120767.67 rows=1933472 width=190)
  -> Materialize  (cost=672.37..1882641.39 rows=18597828 width=532)
      -> Merge Join  (cost=672.37..1836146.82 rows=18597828 width=532)
        Merge Cond: (au.id = ac.usr)
        -> Index Scan using usr_pkey on usr au  (cost=0.00..73994.57 rows=859067 width=312)
        -> Index Scan using circ_all_usr_idx on circulation ac  (cost=0.00..1527710.59 rows=18597828 width=220)
```

# LIMIT

```
select au.id, ahr.*
from actor.usr au
join action.hold_request ahr on ahr.usr = au.id
where au.usrname = 'rogan.hamby'
limit 10;
```

| | id | id | request_time | capture_time | fulfillment_time | checkin_time | return_time | prev_check_time | expire_ |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1599187 | 2711580 | 2014-03-01 17:01:42-05 | | | | | 2014-03-01 17:01:42-05 | 2015-0 |
| 2 | 1599187 | 2699038 | 2014-02-20 14:19:47-05 | | | | | 2014-02-20 14:19:48-05 | 2015-0 |
| 3 | 1599187 | 2644323 | 2014-01-10 10:39:17-05 | 2014-01-10 11:11:15-05 | 2014-02-11 09:07:52.679991-05 | | | 2014-01-10 10:39:18-05 | |
| 4 | 1599187 | 2635563 | 2014-01-04 10:42:08-05 | 2014-01-06 08:48:29-05 | 2014-01-10 15:20:54.650897-05 | | | 2014-01-05 10:51:18-05 | |
| 5 | 1599187 | 2635576 | 2014-01-04 10:46:08-05 | 2014-01-07 10:00:45-05 | 2014-01-07 12:09:11.141885-05 | | | 2014-01-06 12:03:25-05 | |
| 6 | 1599187 | 2569885 | 2013-11-08 10:29:51-05 | 2013-11-08 10:34:42-05 | 2013-11-08 10:51:59.025916-05 | | | 2013-11-08 10:29:51-05 | |
| 7 | 1599187 | 2569915 | 2013-11-08 10:44:02-05 | 2013-11-08 10:48:46-05 | 2013-11-08 10:51:57.545518-05 | | | 2013-11-08 10:44:02-05 | |
| 8 | 1599187 | 1198754 | 2010-11-08 15:49:16-05 | 2010-11-09 08:55:42-05 | 2010-11-12 09:28:39.368556-05 | | | 2010-11-08 15:49:17-05 | |
| 9 | 1599187 | 1198783 | 2010-11-08 16:00:34-05 | 2010-11-09 09:57:44-05 | | | | 2010-11-08 16:00:34-05 | |
| 10 | 1599187 | 1416330 | 2011-05-12 21:15:11-04 | 2011-05-14 09:18:43-04 | 2011-05-18 10:39:28.28948-04 | | | 2011-05-13 21:46:01-04 | |

# RESERVED TERMS.

SELECT
FROM
AS
JOIN
ORDER BY
WHERE
AND
OR
LIKE
ILIKE

# BETTER TERMS.

## SHORT FORM OF A TABLE
E.G. BIBLIO.RECORD_ENTRY BRE

## SOMETHING DESCRIPTIVE
E.G. PARENT ORG UNIT BECOMES PARENT

## ARBITRARY ASSIGNMENTS
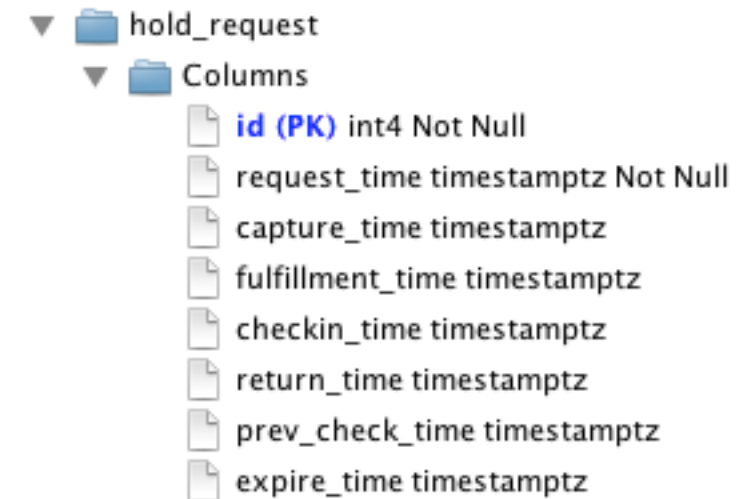E.G. A, B, PEEL, STEED

# COUNT OF PATRONS IN GROUP AND HOLDS THIS YEAR

▼ 📁 hold_request
   ▼ 📁 Columns
      📄 **id (PK)** int4 Not Null
      📄 request_time timestamptz Not Null
      📄 capture_time timestamptz
      📄 fulfillment_time timestamptz
      📄 checkin_time timestamptz
      📄 return_time timestamptz
      📄 prev_check_time timestamptz
      📄 expire_time timestamptz

```
select count(usr.id), extract(month from holds.request_time)
from actor.usr usr
join action.hold_request holds on holds.usr = usr.id
where date(holds.request_time) >= '2014-01-01'
and usr.profile in (199,204,289,195)
group by 2
order by 2 asc
;
```

```sql
select count(usr.id), extract(month from holds.request_time)
from actor.usr usr
join action.hold_request holds on holds.usr = usr.id
where date(holds.request_time) >= '2014-01-01'
and usr.profile in (199,204,289,195)
group by 2
order by 2 asc
;
```

| count | date_part |
|-------|-----------|
| 633   | 1         |
| 582   | 2         |
| 133   | 3         |

```sql
select count(usr.id), holds.h_count
from actor.usr usr
join (select count(h.id) as h_count, usr.id as h_usr
    from action.hold_request h
    join actor.usr usr on usr.id = h.usr
    group by 2) holds on holds.h_usr = usr.id
where usr.profile in (199,204,289,195)
group by 2
order by 2 asc;
```

| count | h_count |
|-------|---------|
| 481 | 1 |
| 262 | 2 |
| 164 | 3 |
| 115 | 4 |
| 65 | 5 |
| 66 | 6 |
| 56 | 7 |
| 28 | 8 |
| 34 | 9 |
| 21 | 10 |
| 15 | 11 |
| 27 | 12 |
| 28 | 13 |
| 12 | 14 |
| 13 | 15 |
| 11 | 16 |
| 7 | 17 |
| 11 | 18 |

```sql
select count(usr.id), holds.h_count
from actor.usr usr
left join (select count(h.id) as h_count, usr.id as h_usr
    from action.hold_request h
    join actor.usr usr on usr.id = h.usr
    group by 2) holds on holds.h_usr = usr.id
where usr.profile in (199,204,289,195)
group by 2
order by 2 asc;
```

| count | h_count |
|-------|---------|
| 481   | 1       |
| 262   | 2       |
| 164   | 3       |
| 115   | 4       |
| 65    | 5       |
| 66    | 6       |
| 56    | 7       |
| 28    | 8       |
| 34    | 9       |
| 21    | 10      |
| 15    | 11      |
| 27    | 12      |
| 28    | 13      |
| 12    | 14      |
| 13    | 15      |
| 11    | 16      |
| 7     | 17      |
| 11    | 18      |
| 5837  |         |

# OUTER JOINS
## LEFT JOIN AMERICAN.RIGHTS ON AMERICAN.RIGHTS = NSA.PROGRAMS

# SUBQUERIES / IN LISTS

# COUNT()

# DATE()

```sql
select count(usr.id), holds.h_count
from actor.usr usr
left join (select count(h.id) as h_count, usr.id as h_usr
    from action.hold_request h
    join actor.usr usr on usr.id = h.usr
    group by 2) holds on holds.h_usr = usr.id
where usr.profile in (199,204,289,195)
group by 2
order by 2 asc;
```

# CONGRATULATIONS!

```sql
SELECT COUNT(acirc.id), ac.barcode AS copy_barcode, acl.NAME AS
"shelving location",
acn.label AS "call number", msr.title, MAX(acirc.xact_start) AS "last
circulation"
FROM asset.COPY ac
JOIN asset.copy_location acl ON ac.LOCATION = acl.id
LEFT JOIN ACTION.circulation acirc ON acirc.target_copy = ac.id
JOIN asset.call_number acn ON acn.id = ac.call_number
JOIN reporter.materialized_simple_record msr ON msr.id = acn.record
JOIN actor.org_unit child ON child.id = ac.circ_lib
JOIN actor.org_unit parent ON parent.id = child.parent_ou
WHERE acl.NAME ILIKE '%adult video cassette%'
AND date(ac.create_date) <= NOW() - INTERVAL '3 years'
AND child.shortname = 'YCL-RH'
AND ac.deleted = FALSE
GROUP BY 2, 3, 4, 5
HAVING MAX(acirc.xact_start) < NOW() - INTERVAL '3 years'
ORDER BY 4;
```

```sql
SELECT SUM(copies.cont) AS "copies", SUM(circs.cont) AS "circs", SUM(good_copies.cont) AS "still circulating",
SUM(rh_copies.cont) AS "rh copies", SUM(rh_circs.cont) AS "rh circs",
SUM(yk_copies.cont) AS "yk copies", SUM(yk_circs.cont) AS "yk circs",
SUM(fm_copies.cont) AS "fm copies", SUM(fm_circs.cont) AS "fm circs",
SUM(cl_copies.cont) AS "cl copies", SUM(cl_circs.cont) AS "cl circs",
SUM(lw_copies.cont) AS "lw copies", SUM(lw_circs.cont) AS "lw circs",
msr.author, msr.title, msr.publisher, msr.pubdate, msr.isbn, bre.id AS "bib id", date(bre.create_date) AS "created on"
FROM reporter.materialized_simple_record msr
JOIN biblio.record_entry bre ON bre.id = msr.id
LEFT JOIN (
        SELECT COUNT(ac.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org1 ON ac.circ_lib = org1.id
        JOIN actor.org_unit circ_org ON circ_org.id = org1.parent_ou
        WHERE msr.author ILIKE '%patterson, james%' AND circ_org.shortname = 'YCL' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) copies ON copies.bib = bre.id
JOIN (
        SELECT COUNT(ac.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org1 ON ac.circ_lib = org1.id
        JOIN actor.org_unit circ_org ON circ_org.id = org1.parent_ou
        WHERE msr.author ILIKE '%patterson, james%' AND circ_org.shortname = 'YCL' AND ac.circ_modifier != 'RENTAL'
        AND ac.status IN (0, 1, 6)
        GROUP BY 2
) good_copies ON good_copies.bib = bre.id
LEFT JOIN (
        SELECT COUNT(ac.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-YK' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) yk_copies ON yk_copies.bib = bre.id
LEFT JOIN (
        SELECT COUNT(ac.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-LW' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) lw_copies ON lw_copies.bib = bre.id
LEFT JOIN (
        SELECT COUNT(ac.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-FM' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) fm_copies ON fm_copies.bib = bre.id
LEFT JOIN (
        SELECT COUNT(ac.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-CL' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) cl_copies ON cl_copies.bib = bre.id
LEFT JOIN (
        SELECT COUNT(ac.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-RH' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) rh_copies ON rh_copies.bib = bre.id
LEFT JOIN (
        SELECT COUNT(circ.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org1 ON ac.circ_lib = org1.id
        JOIN actor.org_unit circ_org ON circ_org.id = org1.parent_ou
        LEFT JOIN ACTION.circulation circ ON circ.target_copy = ac.id
        WHERE msr.author ILIKE '%patterson, james%' AND circ_org.shortname = 'YCL' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) circs ON circs.bib = bre.id
LEFT JOIN (
        SELECT COUNT(circ.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        LEFT JOIN ACTION.circulation circ ON circ.target_copy = ac.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-RH' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) rh_circs ON rh_circs.bib = bre.id
LEFT JOIN (
        SELECT COUNT(circ.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        LEFT JOIN ACTION.circulation circ ON circ.target_copy = ac.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-YK' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) yk_circs ON yk_circs.bib = bre.id
LEFT JOIN (
        SELECT COUNT(circ.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        LEFT JOIN ACTION.circulation circ ON circ.target_copy = ac.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-FM' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) fm_circs ON fm_circs.bib = bre.id
LEFT JOIN (
        SELECT COUNT(circ.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        LEFT JOIN ACTION.circulation circ ON circ.target_copy = ac.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-LW' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) lw_circs ON lw_circs.bib = bre.id
LEFT JOIN (
        SELECT COUNT(circ.id) AS "cont", bre.id AS "bib"
        FROM reporter.materialized_simple_record msr
        JOIN biblio.record_entry bre ON bre.id = msr.id
        LEFT JOIN asset.call_number call ON call.record = bre.id
        LEFT JOIN asset.COPY ac ON ac.call_number = call.id
        JOIN actor.org_unit org ON ac.circ_lib = org.id
        LEFT JOIN ACTION.circulation circ ON circ.target_copy = ac.id
        WHERE msr.author ILIKE '%patterson, james%' AND org.shortname = 'YCL-CL' AND ac.circ_modifier != 'RENTAL'
        GROUP BY 2
) cl_circs ON cl_circs.bib = bre.id
WHERE msr.author ILIKE '%patterson, james%'
GROUP BY 14, 15, 16, 17, 18, 19, 20
ORDER BY 20 DESC
;
```