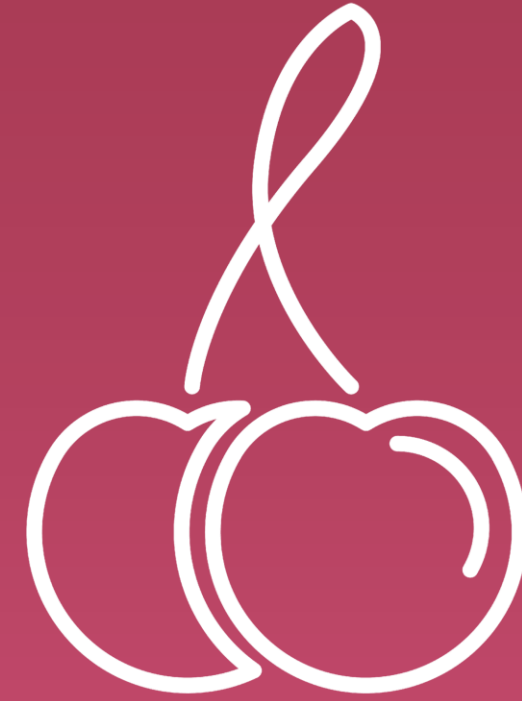


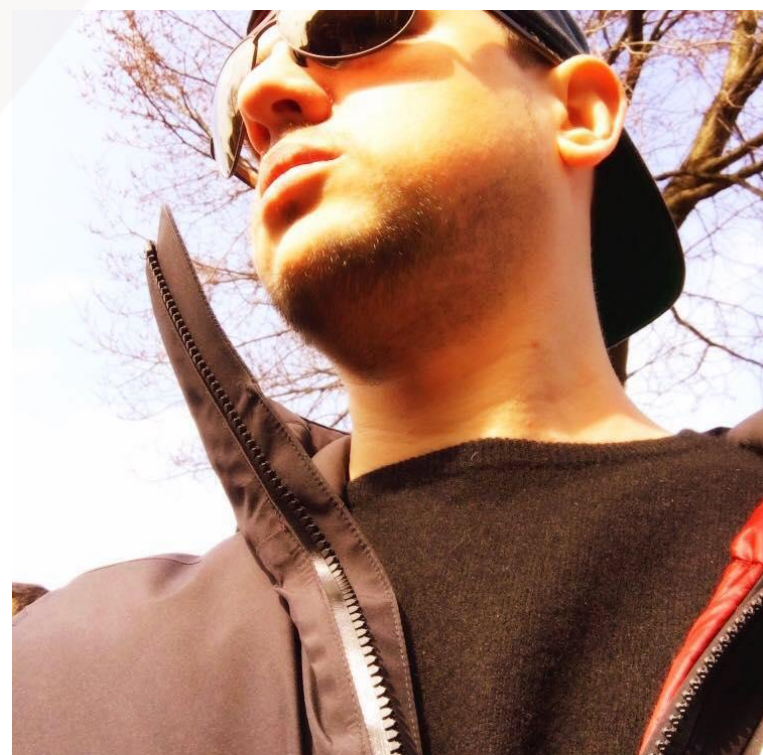
From to Meandered to Standard – Adventures in Gradual RETS Adoption



Cherre

Democratizing Real Estate Data

Cherre provides investors, insurers, brokers and other large enterprises with a platform to collect, resolve, and augment real estate data from thousands of public, private, and internal sources. By providing a “single source of truth,” Cherre empowers clients to evaluate opportunities and trends faster and more accurately, while saving them millions of dollars in manual data collection and analytics costs.



L.D. Salmanson
CEO

Email: LD@cherre.com

Website: www.cherre.com

Twitter: [@cherrecore](https://twitter.com/cherrecore)

Personal:

- Born in Providence RI
- Grew up in Israel
- IDF Captain

Work:

- Co-Founder of Cherre
- Co-Head of Private Equity at Oppenheimer & Co.
- Sold GreenCrest Capital (pre-IPO trading platform)
- Principal at Knight Capital Group (Private Equity)

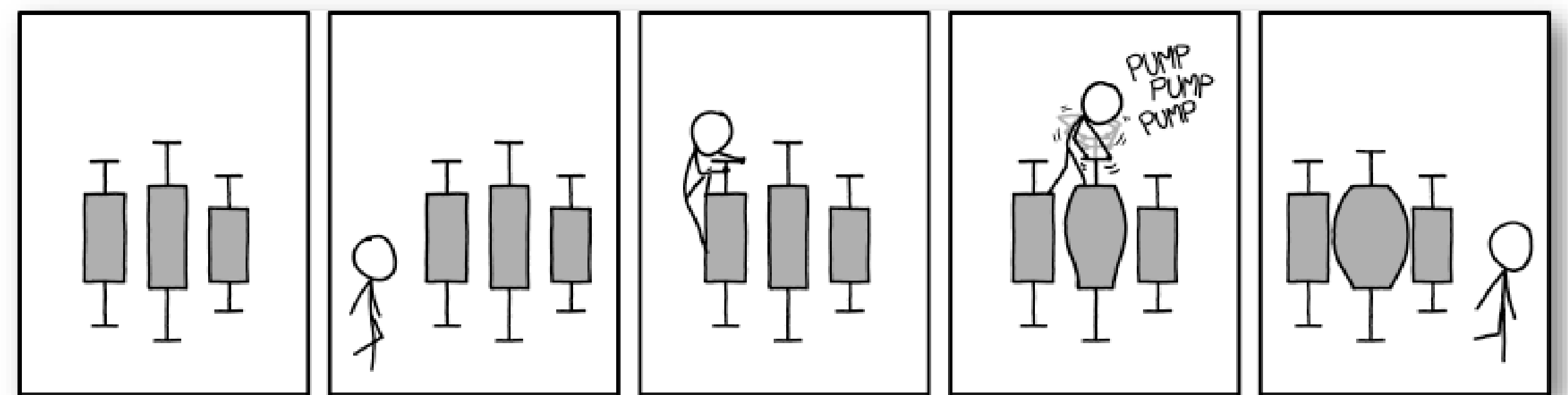
Education:

- MBA from Wharton (*Joseph Wharton Scholar*)
- B.A., LL.B., LL.M. from IDC Herzliya (*summa cum laude*)



From to Meandered to Standard – Adventures in Gradual RETS Adoption

1. What our world should look like
2. What our world actually looks like
3. What we can do to make our world look like it should

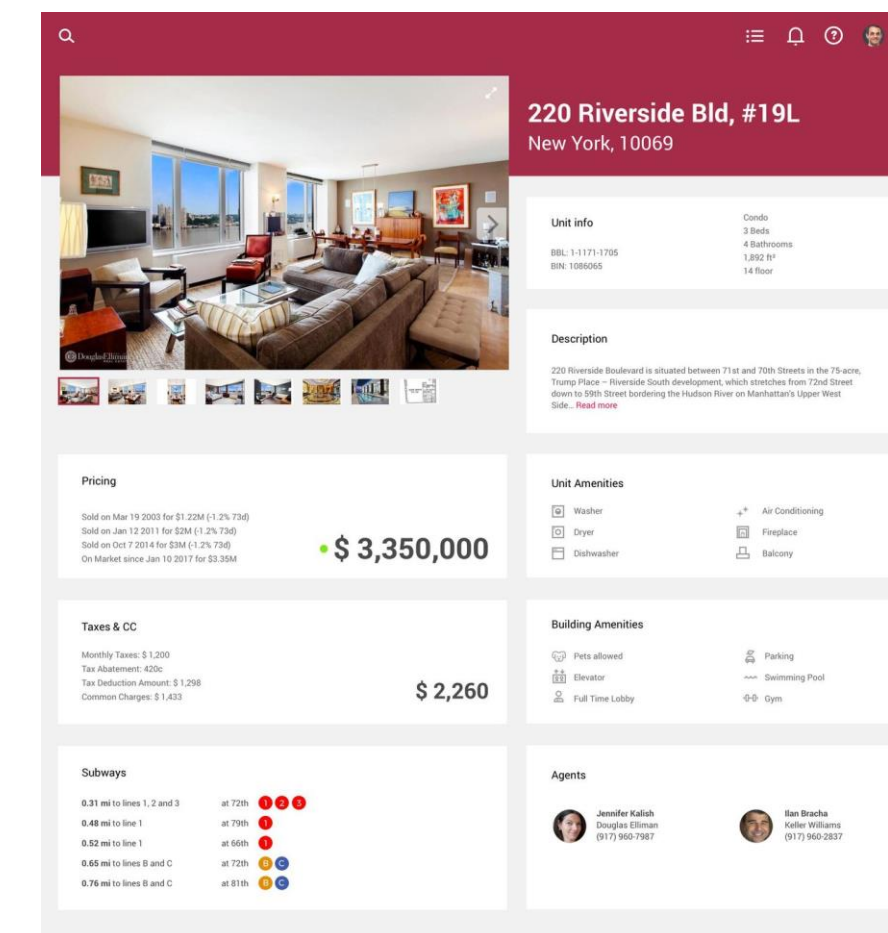


The dream...

It just works!



Key	Value
StreetNumber	220
StreetName	Riverside
StreetSuffix	Blvd.
UnitNumber	22F
BedroomsTotal	1
BathroomsFull	1



Key	Value		
StreetNumber	220		
StreetName	Riverside		
StreetSuffix	Blvd.		
UnitNumber	22F		
BedroomsTotal	1		
BathroomsFull	1		



It just works!










Key	Value
StreetNumber	220
StreetName	Riverside
StreetSuffix	Blvd.
UnitNumber	22F
BedroomsTotal	1
BathroomsFull	1

Key	Value
StreetNumber	9
StreetName	Park
StreetSuffix	Ave
UnitNumber	
BedroomsTotal	4
BathroomsFull	1



220 Riverside Bld, #19L

New York, 10069

Unit info

886, 1 + 171-1708

886, 1088088

Closets

3 Beds

4 Bathrooms

3,682 sq ft

14 Floor

Description

220 Riverside Boulevard is situated between 71st and 76th Streets in the 75-act, Trump Place - Riverside South development, which stretches from 71st Street down to 80th Street bordering the Hudson River on Manhattan's Upper West Side. Read more

Pricing

Sold on Mar 18 2003 for \$1,234K (+1.2% 75d)

Sold on Jan 12 2011 for \$2M (+1.2% 75d)

Sold on Oct 7 2014 for \$3M (+1.2% 75d)

On Market since Jan 10 2017 for \$3,350K

\$ 3,350,000

Taxes & CC

Monthly Taxes: \$ 1,200

Tax Abatement: 40%

Tax Deduction Allowed: \$ 1,200

Common Charges: \$ 1,633

\$ 2,260

Subways

0.31 mi to Lines 1, 2 and 3

at 71st

0.48 mi to Line 1

at 79th

0.62 mi to Line 1

at 86th

0.65 mi to Lines B and C

at 72nd

0.78 mi to Lines B and C

at 81st

Unit Amenities

Weather

Open

Subwoofer

Air Conditioning

Fireplace

Battery

Building Amenities

Pets allowed

Storage

Full Time Lobby

Parking

Swimming Pool

Gym

Agents

Jennifer Kulis

Douglas Elliman

(917) 960-7987

Ken Bruck

Keller Williams

(917) 960-0817

Key	Value	Value	
StreetNumber	220	9	
StreetName	Riverside	Park	
StreetSuffix	Blvd.	Ave	
UnitNumber	22F		
BedroomsTotal	1	4	
BathroomsFull	1	1	



It just works!





Key	Value
StreetNumber	220
StreetName	Riverside
StreetSuffix	Blvd.
UnitNumber	22F
BedroomsTotal	1
BathroomsFull	1



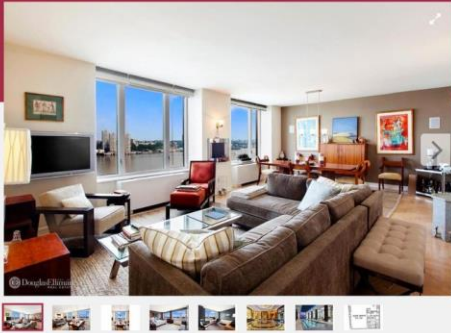


Key	Value
StreetNumber	9
StreetName	Park
StreetSuffix	Ave
UnitNumber	
BedroomsTotal	4
BathroomsFull	1





Key	Value
StreetNumber	619
StreetName	Beresford
StreetSuffix	Ave
UnitNumber	
BedroomsTotal	3
BathroomsFull	5



220 Riverside Bld, #19L

New York, 10069

Unit info

886, 1 + 171-1708

886, 1088088

Closets

3 Beds

4 Bathrooms

3,682 sq ft

14 Floor

Description

220 Riverside Boulevard is situated between 71st and 76th Streets in the 75-act, Trump Place - Riverside South development, which stretches from 71st Street down to 80th Street bordering the Hudson River on Manhattan's Upper West Side. Read more

Pricing

Sold on Mar 10 2003 for \$1,234K (+ 2% 75d)

Sold on Jan 10 2011 for \$2M (+ 1.2% 75d)

Sold on Oct 7 2014 for \$2M (+ 1.2% 75d)

On Market since Jan 10 2017 for \$3,350K

\$ 3,350,000

Taxes & CC

Monthly Taxes: \$ 1,200

Tax Abatement: 40%

Tax Deduction Allowed: \$ 1,200

Common Charges: \$ 1,633

\$ 2,260

Subways

0.31 mi to Lines 1, 2 and 3

at 71st

0.46 mi to Line 1

at 79th

0.62 mi to Line 1

at 86th

0.65 mi to Lines B and C

at 72nd

0.78 mi to Lines B and C

at 81st

Unit Amenities

Weather

Open

Subwasher

Air Conditioning

Fridgefree

Battery

Building Amenities

Pets allowed

Storage


Full Time Lobby

Parking

Swimming Pool

Gym


Agents



Jennifer Kulis

Douglas Elliman



(917) 960-7987



Eva Bruck

Keller Williams

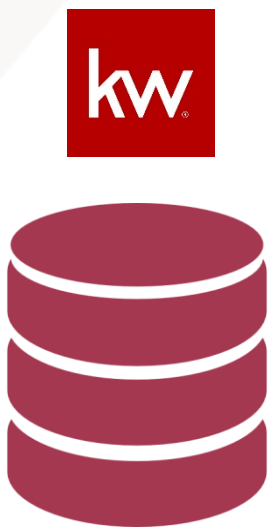
(917) 960-0837




Key	Value	Value	Value
StreetNumber	220	9	619
StreetName	Riverside	Park	Beresford
StreetSuffix	Blvd.	Ave	Ave
UnitNumber	22F		
BedroomsTotal	1	4	3
BathroomsFull	1	1	5

The nightmare...

Yay, I have a client!



Key	Value
Building	220 Riverside Blvd.
Unit	22F
Bedrooms	1
Bathrooms	1



220 Riverside Bld, #19L

New York, 10069

Unit info

Condo
1 BR, 1-1/2 Baths
1,482 Sq Ft
14 Box

Description

220 Riverside Boulevard is situated between 71st and 76th Streets in the 19 zone, Trump Place - Riverside South development, which stretches from 71st Street down to 89th Street bordering the Hudson River on Manhattan's Upper West Side. [Read more](#)

Pricing

Sold on Mar 19 2003 for \$1,234K (+2% 75d)
Sold on Jan 12 2011 for \$2M (+12% 75d)
Sold on Oct 7 2014 for \$3M (+12% 75d)
On Market since Jan 19 2017 for \$2,350K






\$ 3,350,000

Taxes & CC






Monthly Taxes: \$ 1,200
Tax Abatement: 4206
Tax Deduction Amount: \$ 1,298
Common Charges: \$ 1,432

\$ 2,260







Subways

0.31 mi to lines 1, 2 and 3	at 72nd	
0.48 mi to line 1	at 78th	
0.52 mi to line 1	at 66th	
0.65 mi to lines B and C	at 72nd	
0.76 mi to lines B and C	at 81st	



Unit Amenities

 Washer	 Air Conditioning
 Dishwasher	 Fireplace
	 Balcony

Building Amenities

 Pets allowed	 Parking
 Elevator	 Swimming Pool
 Full Time Lobby	 Gym

Agents

 Jennifer Kulich Kulich Williams (917) 960-7987	 Ben Bruck Kulich Williams (917) 960-2837
---	---



Yay, I have another client!



Key	Value
Building	220 Riverside Blvd.
Unit	22F
Bedrooms	1
Bathrooms	1



Key	Value
Street_Number	9
Street_Name	Park
Street_Suffix	Ave
Unit_Number	NULL
Beds	4
Baths	1

220 Riverside Bld, #19L

New York, 10069

Unit info

Condo
3 Beds
4 Bathrooms
3,482 Sq Ft
14 Room

Description

220 Riverside Boulevard is situated between 71st and 76th Streets in the 75 zone, Trump Place - Riverside South development, which stretches from 71st Street down to 89th Street bordering the Hudson River on Manhattan's Upper West Side. [Read more](#)

Pricing

Sold on Mar 19 2020 for \$1,228K (+2% 7d)
Sold on Jan 12 2017 for \$2M (+12% 7d)
Sold on Oct 7 2014 for \$3M (+12% 7d)
On Market since Jan 19 2017 for \$2,358K

\$ 3,350,000

Unit Amenities

Washer
Dryer
Dishwasher

Air Conditioning
Fireplace
Balcony

Taxes & CC

Monthly Taxes: \$1,200
Tax Abatement: \$200
Tax Deduction Amount: \$1,200
Common Charges: \$1,400

\$ 2,260

Building Amenities

Pets allowed
Elevator
Full Time Lobby

Parking
Swimming Pool
Gym

Subways

0.31 mi to lines 1, 2 and 3 at 72nd
0.48 mi to line 1 at 78th
0.52 mi to line 1 at 66th
0.65 mi to lines B and C at 72nd
0.76 mi to lines B and C at 81st

at 72nd
at 78th
at 66th
at 72nd
at 81st

Agents

Jennifer Kulich
Keller Williams
(917) 960-7987

Ben Brucke
Keller Williams
(917) 960-2837



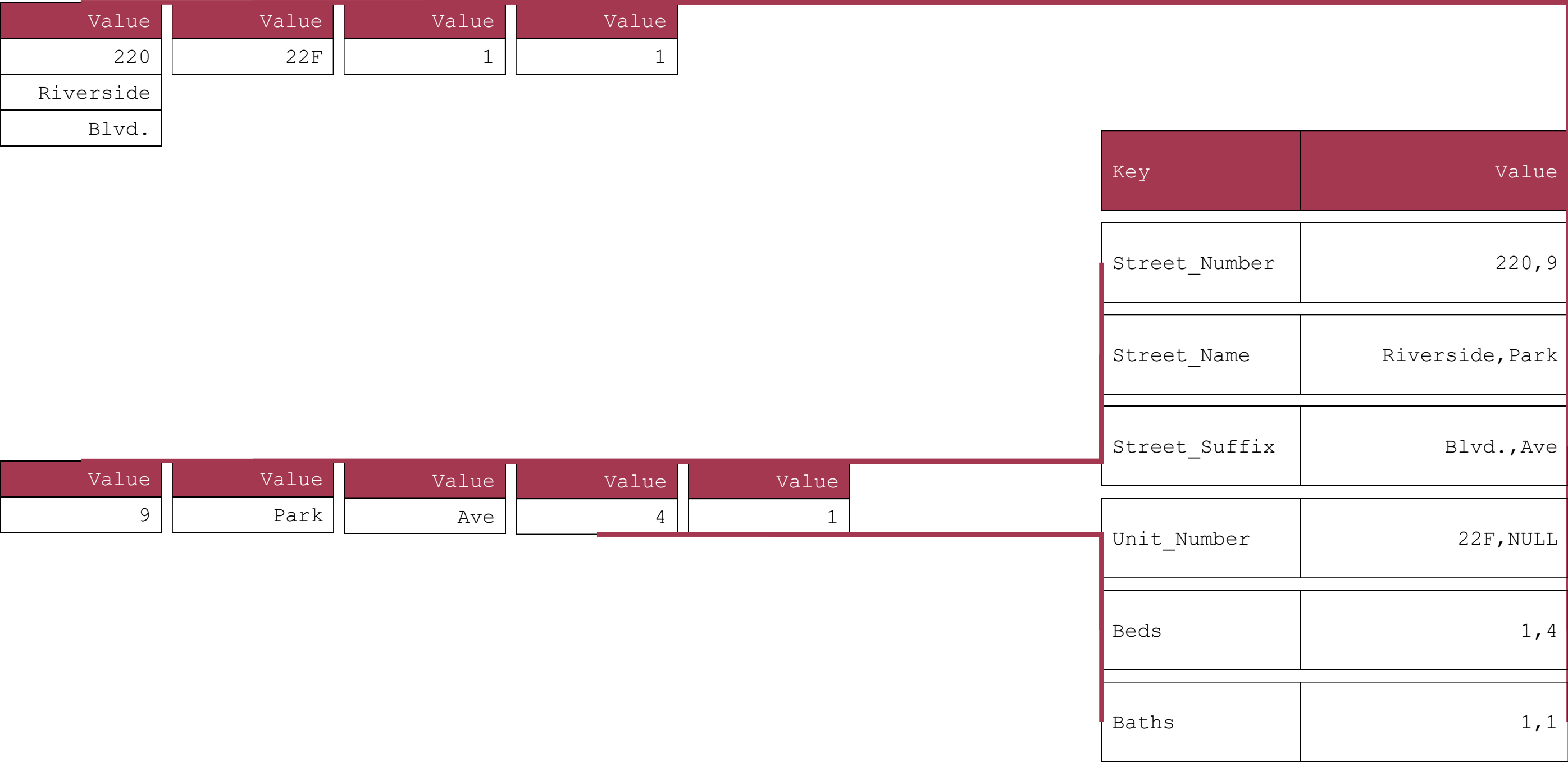
A little work, but I got this



Key	Value
Building	220 Riverside Blvd.
Unit	22F
Bedrooms	1
Bathrooms	1



Key	Value
Street_Number	9
Street_Name	Park
Street_Suffix	Ave
Unit_Number	NULL
Beds	4
Baths	1



Oh, I have another client



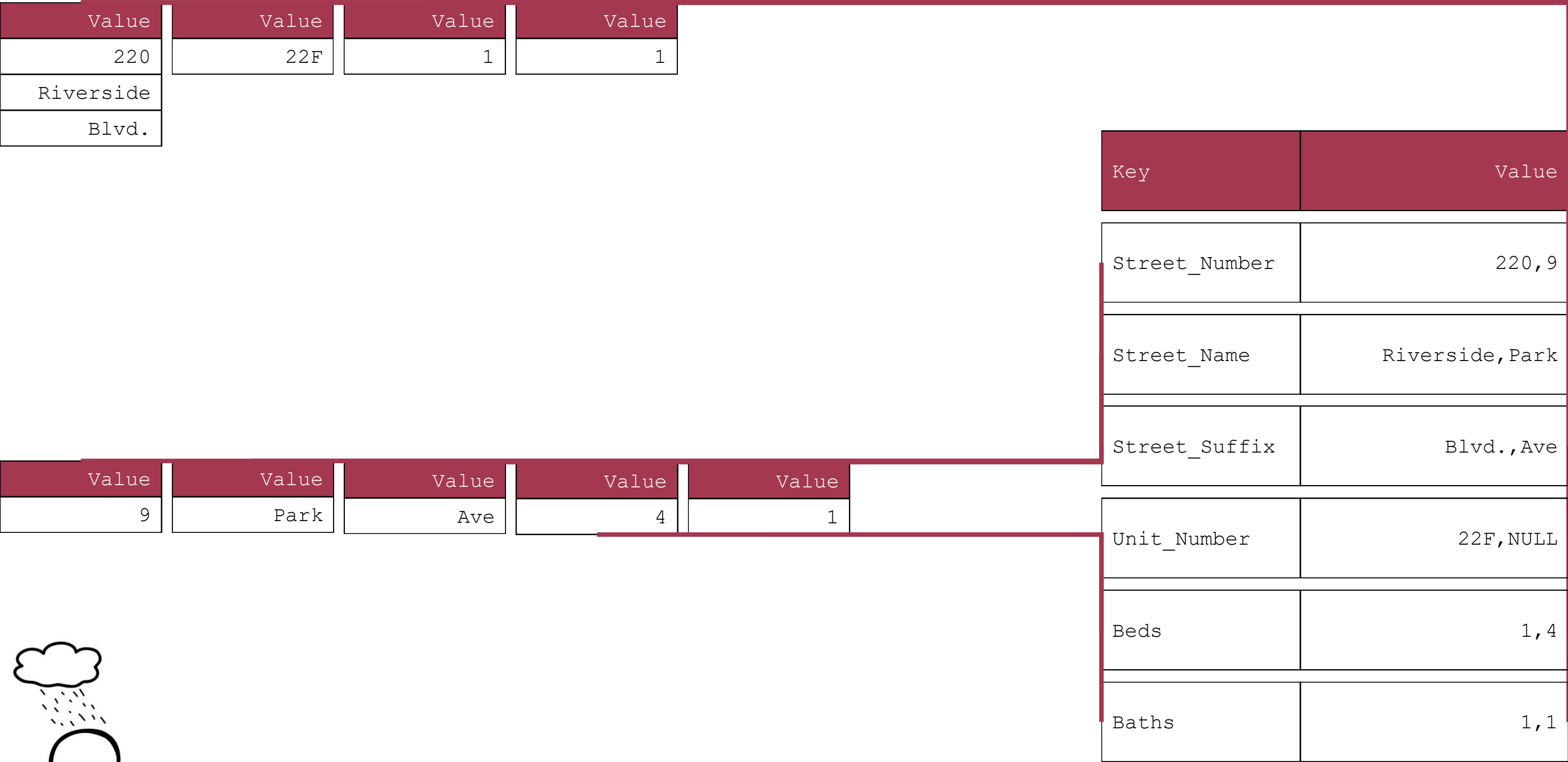
Key	Value
Building	220 Riverside Blvd.
Unit	22F
Bedrooms	1
Bathrooms	1



Key	Value
Street_Number	9
Street_Name	Park
Street_Suffix	Ave
Unit_Number	NULL
Beds	4
Baths	1



Key	Value
UNIT_NUMBER	619
UNIT_STREET	Beresford Ave
UNIT_NUMBER	HOUSE
UNIT_BEDS	3
UNIT_BATHS	5



Rearchitect



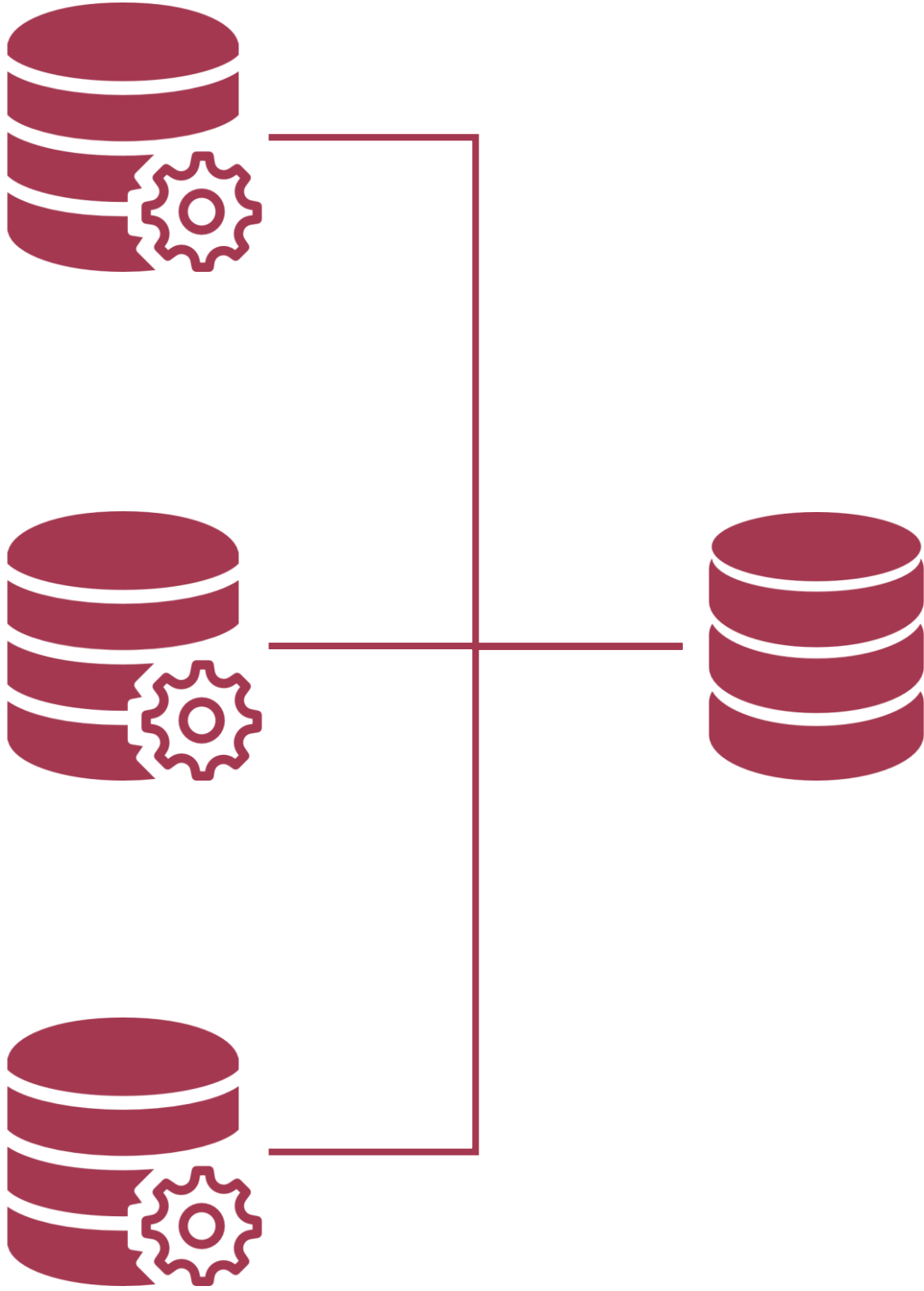




Key	Value
Building	220 Riverside Blvd.
Unit	22F
Bedrooms	1
Bathrooms	1

Key	Value
Street_Number	9
Street_Name	Park
Street_Suffix	Ave
Unit_Number	NULL
Beds	4
Baths	1

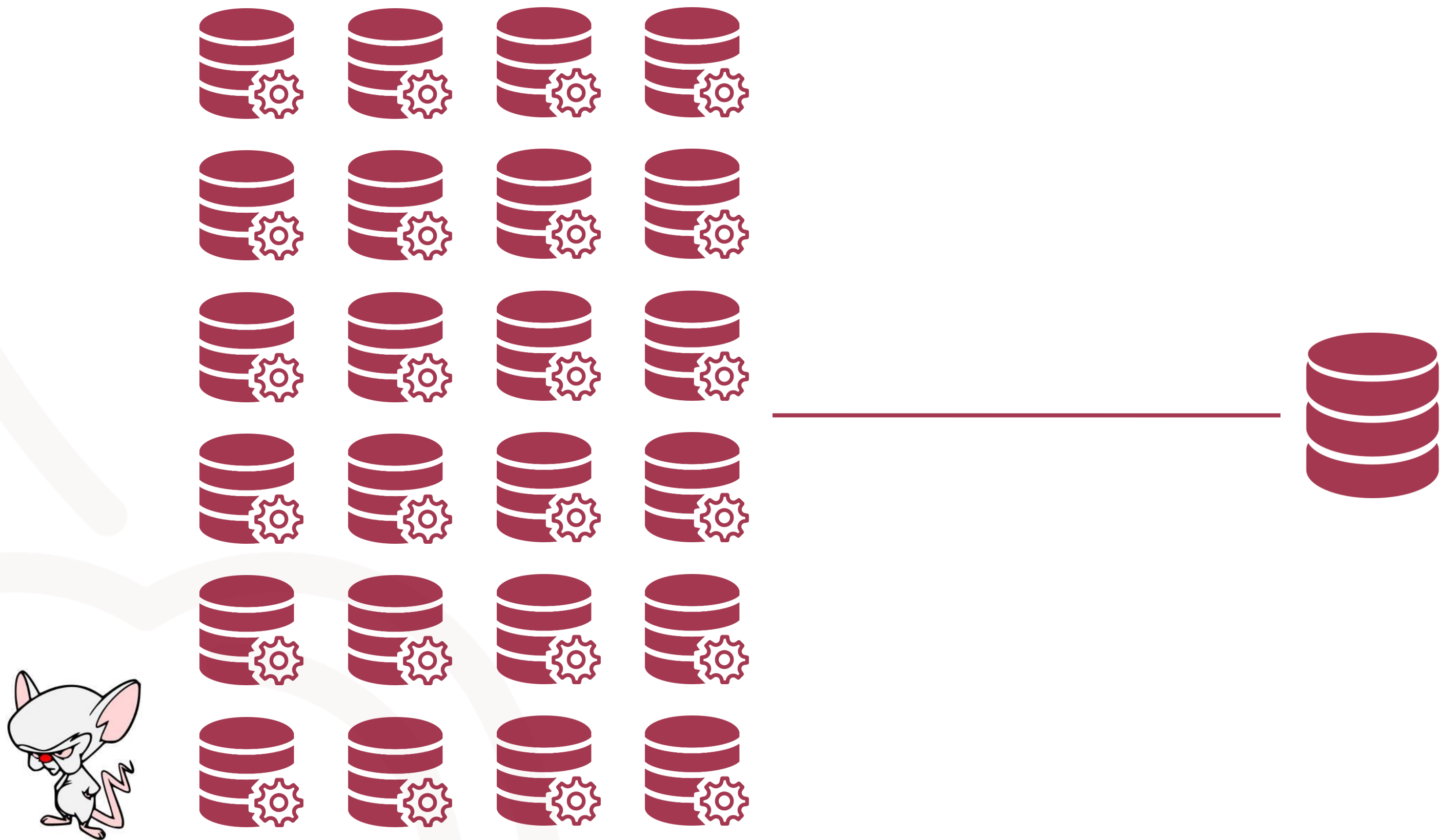
Key	Value
UNIT_NUMBER	619
UNIT_STREET	Beresford Ave
UNIT_NUMBER	HOUSE
UNIT_BEDS	3
UNIT_BATHS	5



Key	Value
STREET_NUMBER	220,9,619
STREET_NAME	Riverside,Park,Beresford
STREET_SUFFIX	Blvd.,Park,Ave
UNIT_TYPE	Apt,House,House
UNIT_SIGNATURE	{22,F},NULL,NULL
FULL_BEDROOMS	1,4,3
FULL_BATHROOMS	1,4,3
HALF_BATHROOMS	0,0,0



Throw anything you want at me! (I can manually scale)

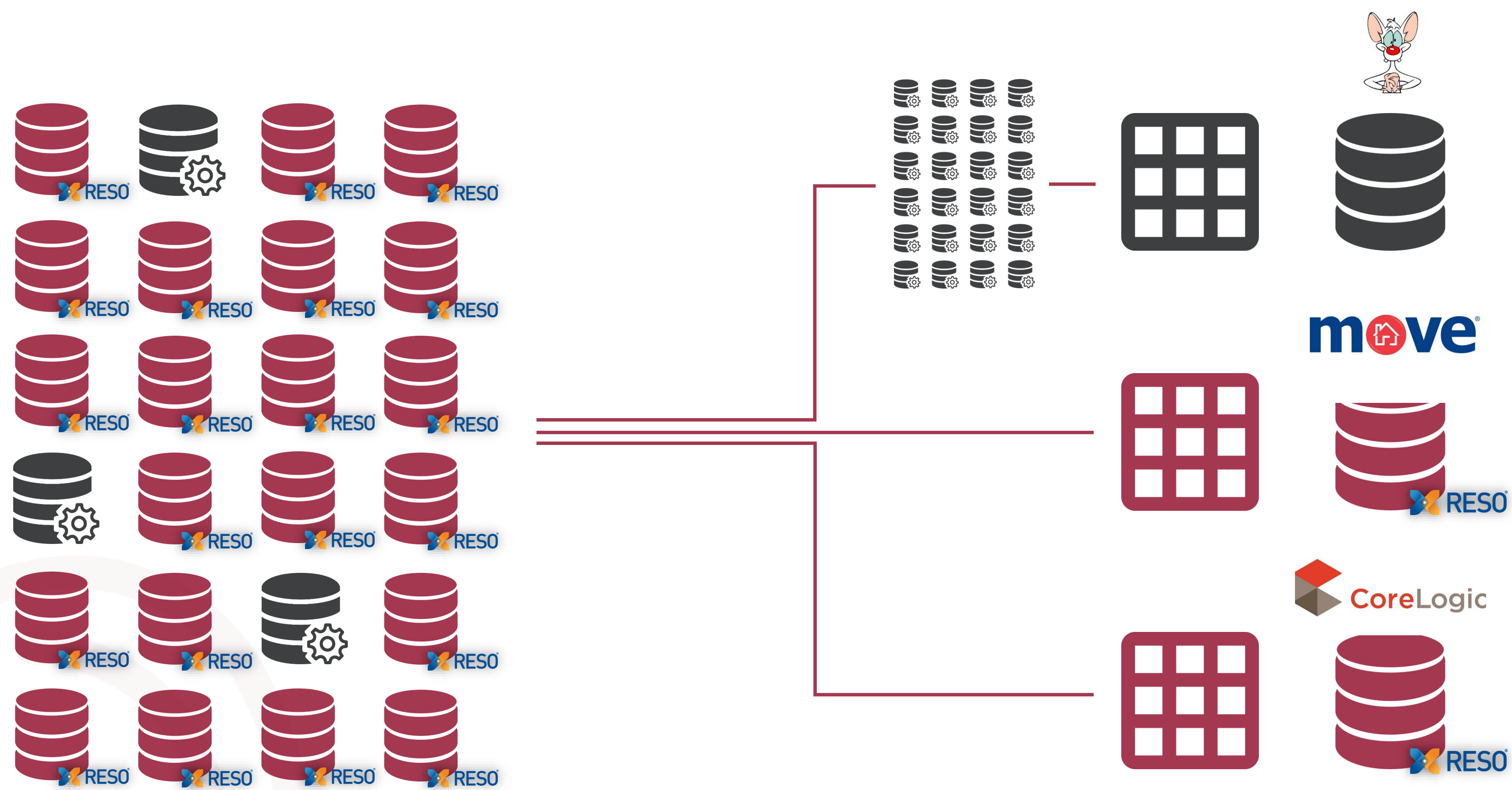


Key	Value
STREET_NUMBER	220,9,619
STREET_NAME	Riverside,Park,Beresford
STREET_SUFFIX	Blvd.,Park,Ave
UNIT_TYPE	Apt,House,House
UNIT_SIGNATURE	{22,F},NULL,NULL
FULL_BEDROOMS	1,4,3
FULL_BATHROOMS	1,4,3
HALF_BATHROOMS	0,0,0



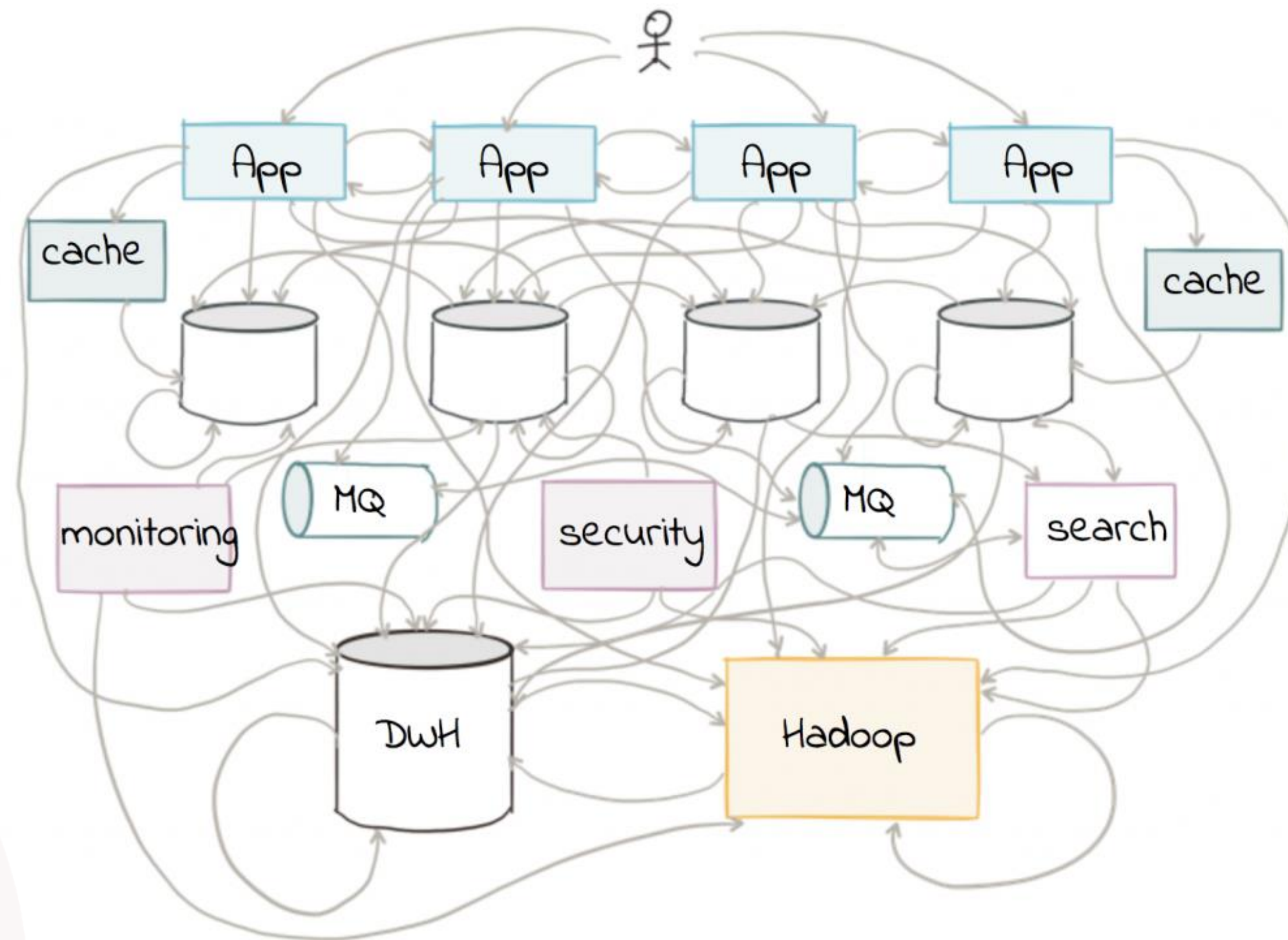
Along comes Jeremy...

All the cool kids are doing it (and saving time and money)



So now what?

Full rearchitecture is not a viable option



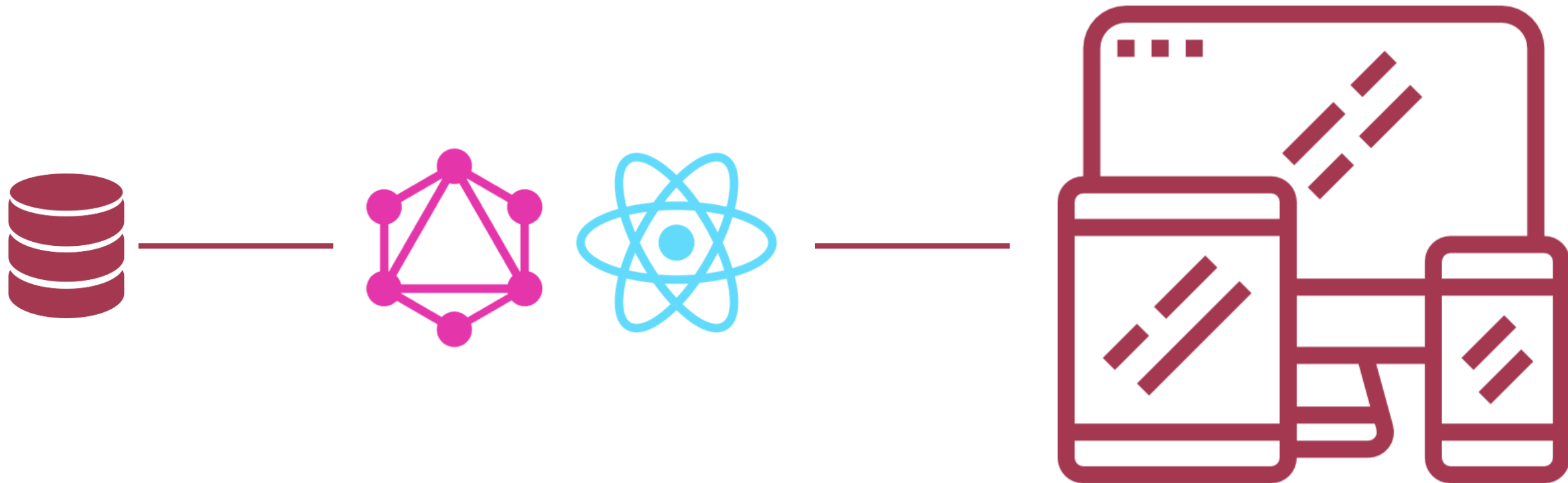
Start with the easy stuff first



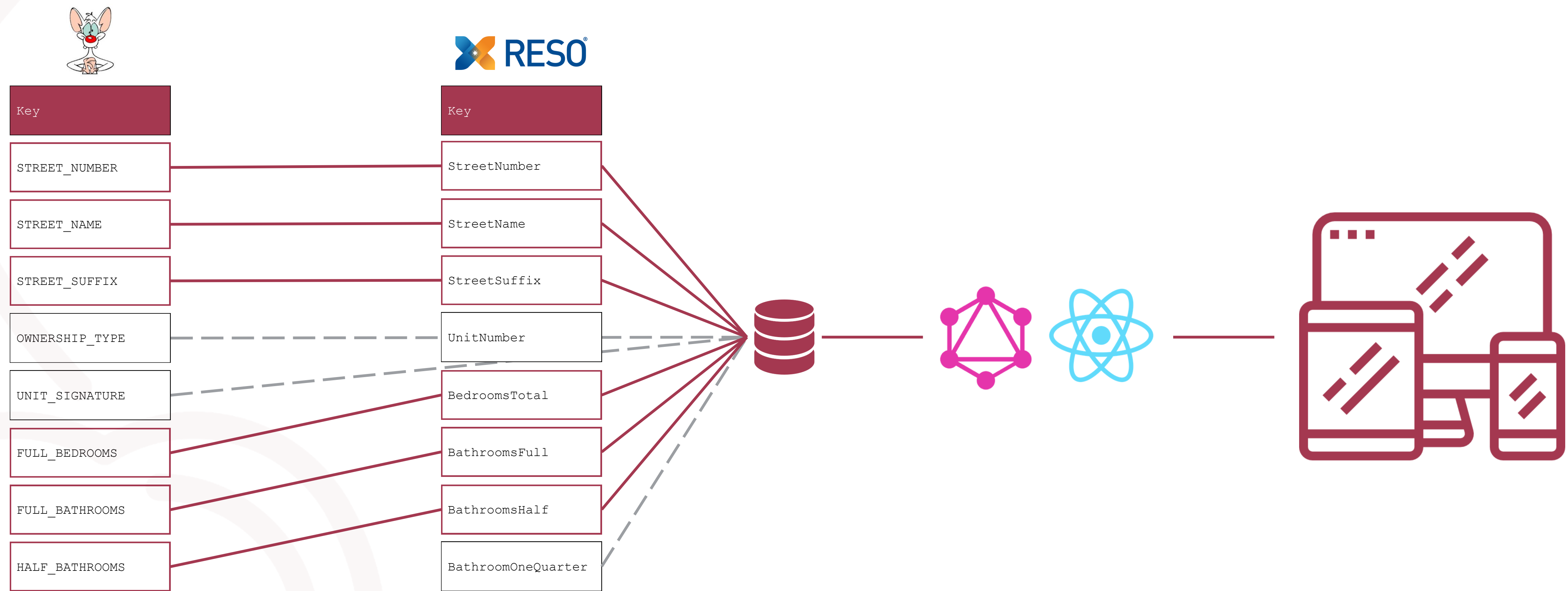
Key
STREET_NUMBER
STREET_NAME
STREET_SUFFIX
OWNERSHIP_TYPE
UNIT_SIGNATURE
FULL_BEDROOMS
FULL_BATHROOMS
HALF_BATHROOMS



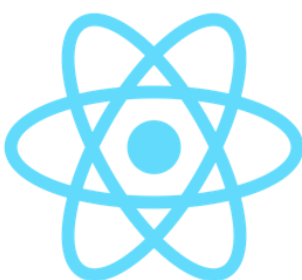
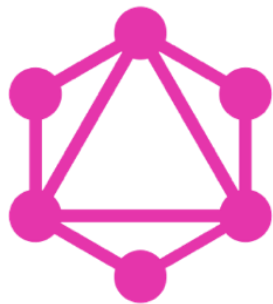
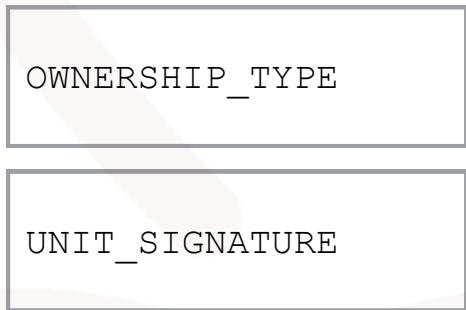
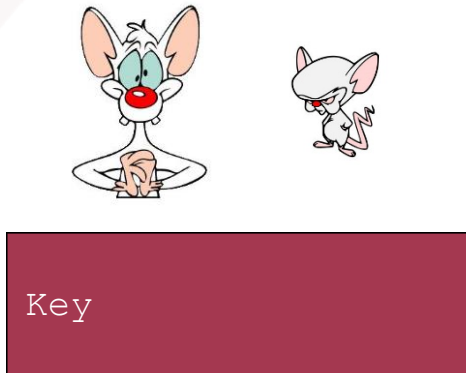
Key
StreetNumber
StreetName
StreetSuffix
UnitNumber
BedroomsTotal
BathroomsFull
BathroomsHalf
BathroomOneQuarter



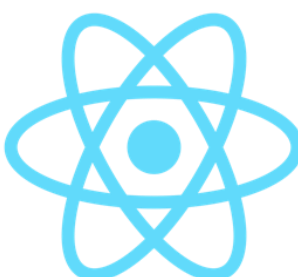
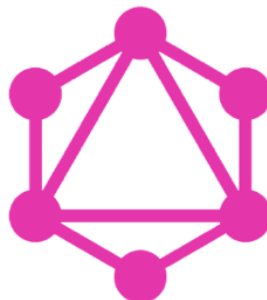
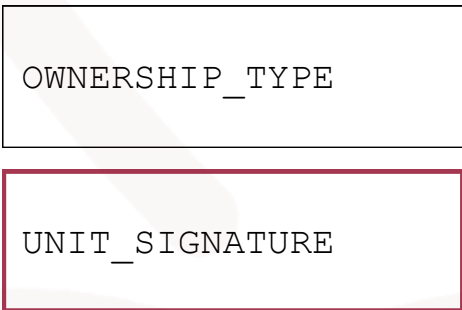
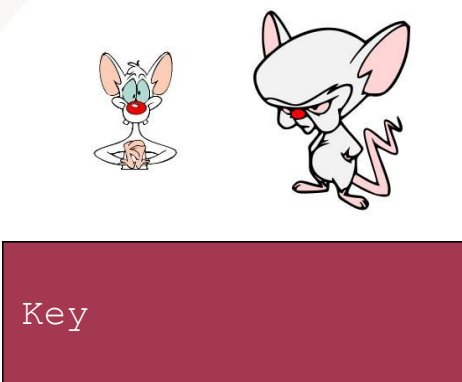
Start with the easy stuff first



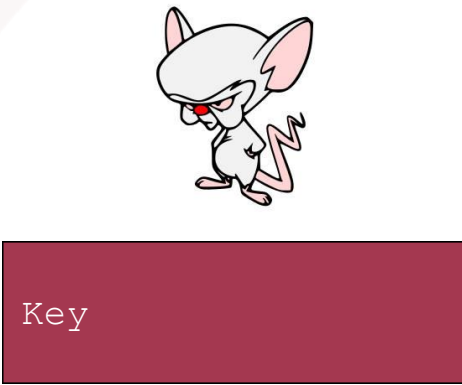
Move to where your schema is lacking



Then to conflict resolution



Then to standard problems (and fix them)



OWNERSHIP_TYPE

Workgroups

Data Dictionary
The RESO Data Dictionary serves as a national standard guideline for all information pertaining to MLS, Brokers and their Technology Partners. The Data Dictionary workgroup's purpose is to keep current and maintain the Data Dictionary such that it is always relevant for those parties in need of such a tool. More information about the Data Dictionary and the Data Dictionary workgroup can be found [here](#).

Internet Tracking
Internet Tracking data is a key component for any modern day data set. No longer is having the data secure and readily available enough. True analytics that show value are now expected and commonplace in the software industry. This workgroup would propose a recommended standard for tracking RETS vendor activity, including the MLS listing. More information about Internet Tracking and the Internet Tracking workgroup can be found [here](#).

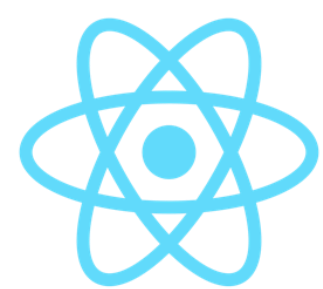
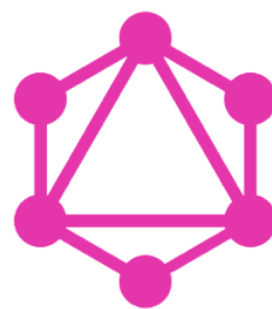
Payloads
Real Estate Data is typically delivered as a package comprised of a set of data for a specific business need. The RESO Data Dictionary defines all the fields (and their specific characteristics) available to be included in a payload. The Payloads Workgroup purpose is to define Payload Categories based upon Real Estate Industry business need and which fields are to be included in each Payload Category as specified within the RESO Data Dictionary. More information about Payloads and the Payloads workgroup can be found [here](#).

Research and Development
The purpose of the RESO Research & Development Workgroup is to solicit and review submitted business cases from the real estate community and identify how RESO can contribute to the benefit of that business process. More information about UPI and the UPI workgroup can be found [here](#).

Transport/Web API
The mission of the Transport Workgroup is to provide technical processes for analyzing extensions to transport methods in current and future versions of the RETS specification. The current focus is to provide an up to date industry standard RESTful Web API interface for real estate transactions. More information about UPI and the UPI workgroup can be found [here](#).

Universal Property Identification (UPI) Workgroup
The Universal Property Identification (UPI) Workgroup, formerly the Property Unique ID Workgroup will review and build from efforts from the U.S. government, public records industry and other data standards organizations to build the "definitive" standard for the Universal Property Identifier to be used by the real estate industry. The benefits of a Universal Property Identifier include: easier identification of parcels across market boundaries, unification of public records from multiple sources in one display, faster updates to physical property characteristics. More information about UPI and the UPI workgroup can be found [here](#).

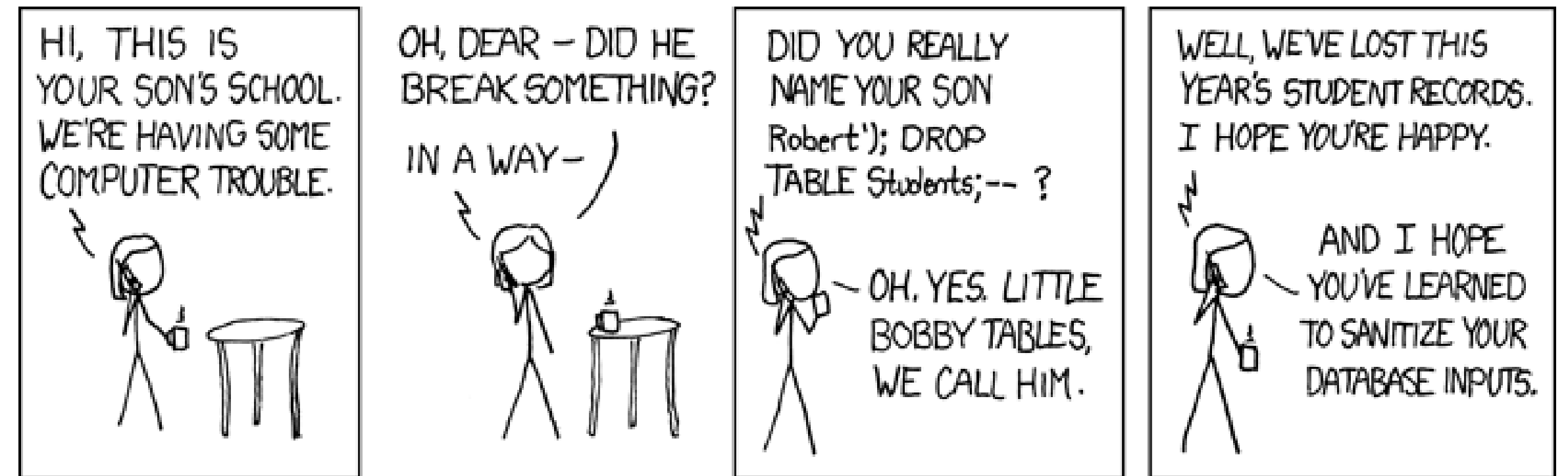
OWNERSHIP_TYPE

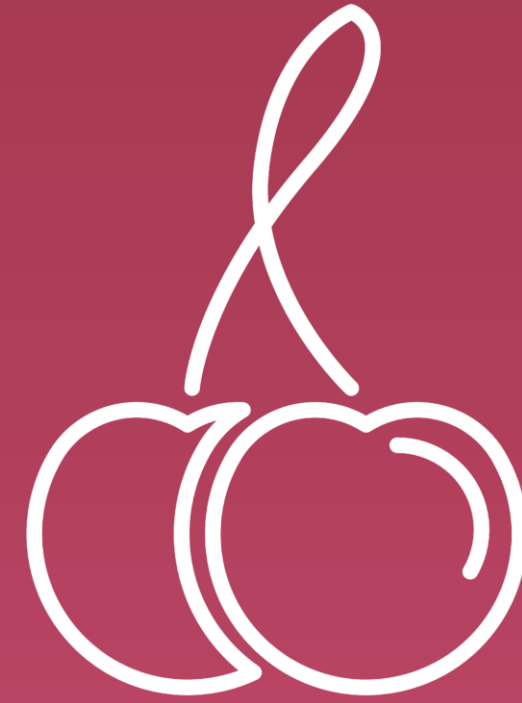


That wasn't so bad...

No standard is perfect...

1. It's worth it (not just because the cool kids are doing it)
2. It can be done gradually
3. If the standard is not working for you – come help fix it





Cherre

Democratizing Real Estate Data

Email: LD@cherre.com

Website: www.cherre.com

Twitter: [@cherrecore](https://twitter.com/cherrecore)