

ZILLOW DATA SET

VARIABLE SELECTION SHEET:

https://docs.google.com/spreadsheets/d/1oLDDoKWYvNprzDgTtj43-j_WWnlpNW0ykGm2uVlc59U/edit#gid=0

<https://docs.google.com/spreadsheets/d/1apOaQ3hH1AJPI0qk6RtKNI-i79ryEBYfJLeTz6LabHA/edit#gid=0>

DATA_CLEANING:

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CREATE TABLE data_cleaning.Zillow_County_MedianListingPricePerSqft_1Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPricePerSqft_1Bedroom.csv";
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CREATE TABLE data_cleaning.Zillow_County_MedianListingPricePerSqft_2Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPricePerSqft_2Bedroom.csv";
```

```
CREATE TABLE data_cleaning.Zillow_County_MedianListingPricePerSqft_3Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
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("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPricePerSqft_3Bedroom.csv";

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CREATE TABLE data_cleaning.Zillow_County_MedianListingPricePerSqft_4Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPricePerSqft_4Bedroom.csv";

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CREATE TABLE data_cleaning.Zillow_County_MedianListingPricePerSqft_5BedroomOrMore AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPricePerSqft_5BedroomOrMore.csv";

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CREATE TABLE data_cleaning.Zillow_County_MedianListingPricePerSqft_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",

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("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPricePerSqft_AllHomes.csv";

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CREATE TABLE data_cleaning.Zillow_County_MedianListingPrice_1Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPrice_1Bedroom.csv";

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CREATE TABLE data_cleaning.Zillow_County_MedianListingPrice_2Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPrice_2Bedroom.csv";

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CREATE TABLE data_cleaning.Zillow_County_MedianListingPrice_3Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",

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("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPrice_3Bedroom.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianListingPrice_4Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPrice_4Bedroom.csv";

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```

CREATE TABLE data_cleaning.Zillow_County_MedianListingPrice_5BedroomOrMore AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPrice_5BedroomOrMore.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianListingPrice_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",

```

```

("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianListingPrice_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPricePerSqft_1Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPricePerSqft_1Bedroom.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPricePerSqft_2Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPricePerSqft_2Bedroom.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPricePerSqft_3Bedroom AS

```

```

SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPricePerSqft_3Bedroom.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPricePerSqft_4Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPricePerSqft_4Bedroom.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPricePerSqft_5BedroomOrMore AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPricePerSqft_5BedroomOrMore.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPricePerSqft_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPricePerSqft_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPrice_1Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPrice_1Bedroom.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_MedianRentalPrice_2Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,

```

```
(
    "X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPrice_2Bedroom.csv";
```

```
CREATE TABLE data_cleaning.Zillow_County_MedianRentalPrice_3Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPrice_3Bedroom.csv";
```

```
CREATE TABLE IF NOT EXISTS data_cleaning.Zillow_County_MedianRentalPrice_4Bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPrice_4Bedroom.csv";
```

```
CREATE TABLE IF NOT EXISTS
data_cleaning.Zillow_County_MedianRentalPrice_5BedroomOrMore AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
```



```

("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPrice_5BedroomOrMore.csv";

```

```

CREATE TABLE IF NOT EXISTS data_cleaning.Zillow_County_MedianRentalPrice_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPrice_AllHomes.csv";

```

```

CREATE TABLE IF NOT EXISTS data_cleaning.Zillow_County_MedianRentalPrice_Studio AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.08"+"X2010.
09"+"X2010.10"+"X2010.11"+"X2010.12")/11 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_MedianRentalPrice_Studio.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_Zhvi_1bedroom AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,

```



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("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_Zhvi_BottomTier.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_Zhvi_MiddleTier AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_Zhvi_MiddleTier.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_Zhvi_TopTier AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_Zhvi_TopTier.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_Zri_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.11"+"X2010.12")/2 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,

```

```

("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_Zri_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_ZriPerSqft_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.11"+"X2010.12")/2 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_ZriPerSqft_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_Median_PriceCut_Dollar_AllHomes AS
SELECT "RegionID", "RegionName", "State",
("X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/4 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_Median_PriceCut_Dollar_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_PctOfHomesDecreasingInValues_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.06"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,

```

```

("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_PctOfHomesDecreasingInValues_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_PctOfHomesIncreasingInValues_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_PctOfHomesIncreasingInValues_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_County_PriceToRentRatio_AllHomes AS
SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
("X2010.10"+"X2010.11"+"X2010.12")/3 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "County_PriceToRentRatio_AllHomes.csv";

```

```

CREATE TABLE data_cleaning.Zillow_Sale_Counts_County AS
SELECT "RegionID", "RegionName", "StateName",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.05"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,

```

```

("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "Sale_Counts_County.csv";

```

```

CREATE TABLE data_cleaning.Zillow_Sale_Counts_Seas_Adj_County AS
SELECT "RegionID", "RegionName", "StateName",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.06"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "Sale_Counts_Seas_Adj_County.csv";

```

```

CREATE TABLE data_cleaning.Zillow_Sale_Prices_County AS
SELECT "RegionID", "RegionName", "StateName",
("X2010.01"+"X2010.02"+"X2010.03"+"X2010.04"+"X2010.05"+"X2010.06"+"X2010.07"+"X2010.
08"+"X2010.09"+"X2010.10"+"X2010.11"+"X2010.12")/12 AS X2010,
("X2011.01"+"X2011.02"+"X2011.03"+"X2011.04"+"X2011.05"+"X2011.06"+"X2011.07"+"X2011.
08"+"X2011.09"+"X2011.10"+"X2011.11"+"X2011.12")/12 AS X2011,
("X2012.01"+"X2012.02"+"X2012.03"+"X2012.04"+"X2012.05"+"X2012.06"+"X2012.07"+"X2012.
08"+"X2012.09"+"X2012.10"+"X2012.11"+"X2012.12")/12 AS X2012,
("X2013.01"+"X2013.02"+"X2013.03"+"X2013.04"+"X2013.05"+"X2013.06"+"X2013.07"+"X2013.
08"+"X2013.09"+"X2013.10"+"X2013.11"+"X2013.12")/12 AS X2013,
("X2014.01"+"X2014.02"+"X2014.03"+"X2014.04"+"X2014.05"+"X2014.06"+"X2014.07"+"X2014.
08"+"X2014.09"+"X2014.10"+"X2014.11"+"X2014.12")/12 AS X2014,
("X2015.01"+"X2015.02"+"X2015.03"+"X2015.04"+"X2015.05"+"X2015.06"+"X2015.07"+"X2015.
08"+"X2015.09"+"X2015.10"+"X2015.11"+"X2015.12")/12 AS X2015,
("X2016.01"+"X2016.02"+"X2016.03"+"X2016.04"+"X2016.05"+"X2016.06"+"X2016.07"+"X2016.
08"+"X2016.09"+"X2016.10"+"X2016.11"+"X2016.12")/12 AS X2016,
("X2017.01"+"X2017.02"+"X2017.03"+"X2017.04"+"X2017.05"+"X2017.06"+"X2017.07"+"X2017.
08"+"X2017.09"+"X2017.10"+"X2017.11"+"X2017.12")/12 AS X2017
FROM "Sale_Prices_County.csv";

```

DELETE NULL :

```

CREATE OR REPLACE FUNCTION drop_null() RETURNS void AS $$
DECLARE
rec RECORD;
v_cnt numeric;
begin
for rec IN SELECT table_schema||'.'||table_name AS col1 FROM information_schema.tables
WHERE table_schema = 'data_cleaning' ORDER BY table_name
LOOP

```

```

EXECUTE 'DELETE from ' || rec.col1 || ' where x2010 IS NULL AND x2011 IS NULL AND
x2012 IS NULL AND x2013 IS NULL AND x2014 IS NULL AND x2015 IS NULL AND x2016 IS
NULL AND x2017 IS NULL';
GET DIAGNOSTICS v_cnt = ROW_COUNT;
RAISE NOTICE 'Printing tables %', rec.col1;
if v_cnt > 0
then
RAISE NOTICE 'rows deleted --> %', v_cnt;
else
RAISE NOTICE 'rows not deleted ---> %', v_cnt;
end if;
END LOOP;
END;
$$language plpgsql;

select drop_null()

```

```

CREATE OR REPLACE FUNCTION drop_clean() RETURNS void AS $$
DECLARE
rec RECORD;
v_cnt numeric;
begin
for rec IN SELECT table_schema||'.'||table_name AS col1 FROM information_schema.tables
WHERE table_schema = 'data_cleaning' ORDER BY table_name
LOOP
RAISE NOTICE 'Printing tables %', rec.col1;
IF rec.col1 LIKE '%_clean'
THEN EXECUTE 'DROP table ' || rec.col1 ;
END IF;
END LOOP;
END;
$$language plpgsql;

select drop_clean()

```

CLEAN AND TRANSFORM DATA:

```

CREATE OR REPLACE FUNCTION clean() RETURNS void AS $$
DECLARE
rec RECORD;
v_cnt numeric;
ext_char integer;
col_name text;
begin
for rec IN SELECT table_schema||'.'||table_name AS col1 FROM information_schema.tables
WHERE table_schema = 'data_cleaning' ORDER BY table_name
LOOP
ext_char := length(rec.col1)-30+2;
RAISE NOTICE 'Length %', ext_char;
col_name := substring(quote_literal(rec.col1), 30, ext_char);
RAISE NOTICE 'Printing tables %', rec.col1;
RAISE NOTICE 'col_name %', col_name;
IF rec.col1 LIKE 'data_cleaning.zillow_county_median_pricecut_dollar_allhomes'
THEN RAISE NOTICE 'do nothing';
ELSIF rec.col1 LIKE 'data_cleaning.zillow_county_%'
THEN
EXECUTE 'CREATE TABLE ' || rec.col1 || '_clean AS

```

```

((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2010 || '
AS YEAR, x2010 AS ' || col_name ||
' FROM '|| rec.col1|| ') UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2011 || '
AS YEAR, x2011 AS ' || col_name ||
' FROM '|| rec.col1|| ') UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2012 || '
AS YEAR, x2012 AS ' || col_name ||
' FROM '|| rec.col1|| ') UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2013 || '
AS YEAR, x2013 AS ' || col_name ||
' FROM '|| rec.col1|| ') UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2014 || '
AS YEAR, x2014 AS ' || col_name ||
' FROM '|| rec.col1|| ') UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2015 || '
AS YEAR, x2015 AS ' || col_name ||
' FROM '|| rec.col1|| ') UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2016 || '
AS YEAR, x2016 AS ' || col_name ||
' FROM '|| rec.col1|| ') UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", ' ||2017 || '
AS YEAR, x2017 AS ' || col_name ||
' FROM '|| rec.col1|| '));
    ELSE RAISE NOTICE 'do nothing';
    END IF;
    GET DIAGNOSTICS v_cnt = ROW_COUNT;
    if v_cnt > 0
    then
    RAISE NOTICE 'table created --> %', v_cnt;
    else
    RAISE NOTICE 'Creation failed ---> %', v_cnt;
    end if;
END LOOP;
END;
$$language plpgsql;

select clean()

```

```

CREATE TABLE data_cleaning.zillow_county_median_pricecut_dollar_allhomes_clean AS
((SELECT "RegionID", "RegionName", "State", '2010' AS YEAR, x2010 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes) UNION
(SELECT "RegionID", "RegionName", "State", '2011' AS YEAR, x2011 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes) UNION
(SELECT "RegionID", "RegionName", "State", '2012' AS YEAR, x2012 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes) UNION
(SELECT "RegionID", "RegionName", "State", '2013' AS YEAR, x2013 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes) UNION
(SELECT "RegionID", "RegionName", "State", '2014' AS YEAR, x2014 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes) UNION
(SELECT "RegionID", "RegionName", "State", '2015' AS YEAR, x2015 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes) UNION

```



```
(SELECT "RegionID", "RegionName", "State", '2016' AS YEAR, x2016 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes) UNION
(SELECT "RegionID", "RegionName", "State", '2017' AS YEAR, x2017 AS
median_pricecut_dollar_allhomes
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes));
```

```
CREATE TABLE data_cleaning.zillow_sale_counts_county_clean AS
((SELECT "RegionID", "RegionName", "StateName" AS State, '2010' AS YEAR, x2010 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2011' AS YEAR, x2011 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2012' AS YEAR, x2012 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2013' AS YEAR, x2013 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2014' AS YEAR, x2014 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2015' AS YEAR, x2015 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2016' AS YEAR, x2016 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2017' AS YEAR, x2017 AS
sale_counts_county
FROM data_cleaning.zillow_sale_counts_county));
```

```
CREATE TABLE data_cleaning.zillow_sale_counts_seas_adj_county_clean AS
((SELECT "RegionID", "RegionName", "StateName" AS State, '2010' AS YEAR, x2010 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2011' AS YEAR, x2011 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2012' AS YEAR, x2012 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2013' AS YEAR, x2013 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2014' AS YEAR, x2014 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2015' AS YEAR, x2015 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2016' AS YEAR, x2016 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2017' AS YEAR, x2017 AS
sale_counts_seas_adj_county
FROM data_cleaning.zillow_sale_counts_seas_adj_county));
```

```
FROM data_cleaning.zillow_sale_counts_seas_adj_county))
```

```
CREATE TABLE data_cleaning.zillow_sale_prices_county_clean AS
((SELECT "RegionID", "RegionName", "StateName" AS State, '2010' AS YEAR, x2010 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2011' AS YEAR, x2011 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2012' AS YEAR, x2012 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2013' AS YEAR, x2013 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2014' AS YEAR, x2014 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2015' AS YEAR, x2015 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2016' AS YEAR, x2016 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county) UNION
(SELECT "RegionID", "RegionName", "StateName" AS State, '2017' AS YEAR, x2017 AS
sale_prices_county
FROM data_cleaning.zillow_sale_prices_county))
```

DELETE NULL :

```
CREATE OR REPLACE FUNCTION delete_null() RETURNS void AS $$
DECLARE
rec RECORD;
v_cnt numeric;
ext_char integer;
tab_name text;
col_name RECORD;
schema_nm text;
begin
schema_nm := 'data_cleaning';
for rec IN SELECT table_schema||'.'||table_name AS col1 FROM information_schema.tables
WHERE table_schema = 'data_cleaning' ORDER BY table_name
LOOP
    ext_char := length(rec.col1)-16+2;
    tab_name := substring(quote_literal(rec.col1), 16, ext_char);
    RAISE NOTICE 'Length %', ext_char;
    RAISE NOTICE 'Printing tables %', rec.col1;
    RAISE NOTICE 'table_name %', tab_name;
    FOR col_name IN SELECT COLUMN_NAME AS col FROM
information_schema.COLUMNS WHERE TABLE_SCHEMA = 'data_cleaning' AND TABLE_NAME
= tab_name ORDER BY ORDINAL_POSITION DESC LIMIT 1
    LOOP
        END LOOP;
    IF rec.col1 LIKE '%_clean'
    THEN
```

```

EXECUTE 'delete from ' ||rec.col1||' where ' || col_name.col ||' IS NULL';
GET DIAGNOSTICS v_cnt = ROW_COUNT;
if v_cnt > 0
then
RAISE NOTICE 'deleted rows: --> %', v_cnt;
else
RAISE NOTICE 'No rows to delete ---> %', v_cnt;
end if;
END IF;
END LOOP;
END;
$$language plpgsql;

select delete_null()

```

VARIABLE SELECTION :

```

CREATE TABLE data_cleaning.zillow_vs_Rental_Listings AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year", medianrentalprice_1bedroom, medianrentalprice_2bedroom,
medianrentalprice_3bedroom, medianrentalprice_4bedroom,
medianrentalprice_5bedroomOrMore, medianrentalprice_allhomes, medianrentalprice_studio
FROM data_cleaning.zillow_county_medianrentalprice_1bedroom_clean b1
inner join data_cleaning.zillow_county_medianrentalprice_2bedroom_clean b2 on
b1."RegionName" = b2."RegionName" AND b1.year=b2.year
inner join data_cleaning.zillow_county_medianrentalprice_3bedroom_clean b3 on
b3."RegionName" = b2."RegionName" AND b3.year=b2.year
inner join data_cleaning.zillow_county_medianrentalprice_4bedroom_clean b4 on
b3."RegionName" = b4."RegionName" AND b3.year=b4.year
inner join data_cleaning.zillow_county_medianrentalprice_5bedroomormore_clean b5 on
b5."RegionName" = b4."RegionName" AND b5.year=b4.year
inner join data_cleaning.zillow_county_medianrentalprice_allhomes_clean al on al."RegionName"
= b5."RegionName" AND al.year=b5.year
inner join data_cleaning.zillow_county_medianrentalprice_studio_clean st on st."RegionName" =
b5."RegionName" AND st.year=b4.year);

```

```

CREATE TABLE data_cleaning.zillow_vs_Rental_Listings_per_sqft AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year", medianrentalpricepersqft_1bedroom,
medianrentalpricepersqft_2bedroom, medianrentalpricepersqft_3bedroom,
medianrentalpricepersqft_4bedroom, medianrentalpricepersqft_5bedroomOrMore,
medianrentalpricepersqft_allhomes FROM
data_cleaning.zillow_county_medianrentalpricepersqft_1bedroom_clean b1
inner join data_cleaning.zillow_county_medianrentalpricepersqft_2bedroom_clean b2 on
b1."RegionName" = b2."RegionName" AND b1.year=b2.year
inner join data_cleaning.zillow_county_medianrentalpricepersqft_3bedroom_clean b3 on
b3."RegionName" = b2."RegionName" AND b3.year=b2.year
inner join data_cleaning.zillow_county_medianrentalpricepersqft_4bedroom_clean b4 on
b3."RegionName" = b4."RegionName" AND b3.year=b4.year
inner join data_cleaning.zillow_county_medianrentalpricepersqft_5bedroomormore_clean b5 on
b5."RegionName" = b4."RegionName" AND b5.year=b4.year
inner join data_cleaning.zillow_county_medianrentalpricepersqft_allhomes_clean al on
al."RegionName" = b5."RegionName" AND al.year=b5.year);

```

```

CREATE TABLE data_cleaning.zillow_vs_Sale_Listings AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year", medianlistingprice_1bedroom, medianlistingprice_2bedroom,
medianlistingprice_3bedroom, medianlistingprice_4bedroom,
medianlistingprice_5bedroomOrMore, medianlistingprice_allhomes FROM
data_cleaning.zillow_county_medianlistingprice_1bedroom_clean b1
inner join data_cleaning.zillow_county_medianlistingprice_2bedroom_clean b2 on
b1."RegionName" = b2."RegionName" AND b1.year=b2.year
inner join data_cleaning.zillow_county_medianlistingprice_3bedroom_clean b3 on
b3."RegionName" = b2."RegionName" AND b3.year=b2.year
inner join data_cleaning.zillow_county_medianlistingprice_4bedroom_clean b4 on
b3."RegionName" = b4."RegionName" AND b3.year=b4.year
inner join data_cleaning.zillow_county_medianlistingprice_5bedroomormore_clean b5 on
b5."RegionName" = b4."RegionName" AND b5.year=b4.year
inner join data_cleaning.zillow_county_medianlistingprice_allhomes_clean a1 on a1."RegionName"
= b5."RegionName" AND a1.year=b5.year);

```

```

CREATE TABLE data_cleaning.zillow_vs_Sale_Listings_per_sqft AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year", medianlistingpricepersqft_1bedroom,
medianlistingpricepersqft_2bedroom, medianlistingpricepersqft_3bedroom,
medianlistingpricepersqft_4bedroom, medianlistingpricepersqft_5bedroomOrMore,
medianlistingpricepersqft_allhomes FROM
data_cleaning.zillow_county_medianlistingpricepersqft_1bedroom_clean b1
inner join data_cleaning.zillow_county_medianlistingpricepersqft_2bedroom_clean b2 on
b1."RegionName" = b2."RegionName" AND b1.year=b2.year
inner join data_cleaning.zillow_county_medianlistingpricepersqft_3bedroom_clean b3 on
b3."RegionName" = b2."RegionName" AND b3.year=b2.year
inner join data_cleaning.zillow_county_medianlistingpricepersqft_4bedroom_clean b4 on
b3."RegionName" = b4."RegionName" AND b3.year=b4.year
inner join data_cleaning.zillow_county_medianlistingpricepersqft_5bedroomormore_clean b5 on
b5."RegionName" = b4."RegionName" AND b5.year=b4.year
inner join data_cleaning.zillow_county_medianlistingpricepersqft_allhomes_clean a1 on
a1."RegionName" = b5."RegionName" AND a1.year=b5.year);

```

```

CREATE TABLE data_cleaning.Zillow_vs_Home_Value_Index_bd AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year", zhvi_1bedroom, zhvi_2bedroom, zhvi_3bedroom
FROM data_cleaning.zillow_county_zhvi_1bedroom_clean b1
inner join data_cleaning.zillow_county_zhvi_2bedroom_clean b2 on b1."RegionName" =
b2."RegionName" AND b1.year=b2.year
inner join data_cleaning.zillow_county_zhvi_3bedroom_clean b3 on b3."RegionName" =
b2."RegionName" AND b3.year=b2.year);

```

```

CREATE TABLE data_cleaning.Zillow_vs_Home_Value_Index_tier AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year",
zhvi_bottomtier, zhvi_middletier, zhvi_toptier
FROM data_cleaning.zillow_county_zhvi_bottomtier_clean b1
inner join data_cleaning.zillow_county_zhvi_middletier_clean b5 on b5."RegionName" =
b1."RegionName" AND b5.year=b1.year
inner join data_cleaning.zillow_county_zhvi_toptier_clean a1 on a1."RegionName" =
b5."RegionName" AND a1.year=b5.year);

```

```
CREATE TABLE data_cleaning.Zillow_vs_Rental_Values AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year", zri_allhomes, zripersqft_allhomes
FROM data_cleaning.zillow_county_zri_allhomes_clean b1
inner join data_cleaning.zillow_county_zripersqft_allhomes_clean b2 on b1."RegionName" =
b2."RegionName" AND b1.year=b2.year);
```

```
CREATE TABLE data_cleaning.Zillow_vs_Sale_Values AS (
SELECT b1."RegionName", b1."year", median_pricecut_dollar_allhomes, sale_counts_county,
sale_counts_seas_adj_county, sale_prices_county
FROM data_cleaning.zillow_county_median_pricecut_dollar_allhomes_clean b1
inner join data_cleaning.zillow_sale_counts_county_clean b2 on b1."RegionName" =
b2."RegionName" AND b1.year=b2.year
inner join data_cleaning.zillow_sale_counts_seas_adj_county_clean b3 on b3."RegionName" =
b2."RegionName" AND b3.year=b2.year
inner join data_cleaning.zillow_sale_prices_county_clean b4 on b3."RegionName" =
b4."RegionName" AND b3.year=b4.year);
```

```
CREATE TABLE data_cleaning.Zillow_vs_Other_Values AS (
SELECT b1."RegionName", b1."State", b1."Metro", b1."StateCodeFIPS",
b1."MunicipalCodeFIPS", b1."year", pctofhomesdecreasinginvalues_allhomes,
pctofhomesincreasinginvalues_allhomes, pricetorentratio_allhomes
FROM data_cleaning.zillow_county_pctofhomesdecreasinginvalues_allhomes_clean b1
inner join data_cleaning.zillow_county_pctofhomesincreasinginvalues_allhomes_clean b2 on
b1."RegionName" = b2."RegionName" AND b1.year=b2.year
inner join data_cleaning.zillow_county_pricetorentratio_allhomes_clean b3 on b3."RegionName" =
b2."RegionName" AND b3.year=b2.year);
```

```
SELECT count(*) FROM dimensional_model.zillow_dim_home_value_index_bd      --32235
SELECT count(*) FROM dimensional_model.zillow_dim_home_value_index_tier    --303270
SELECT count(*) FROM dimensional_model.zillow_dim_other_values              --165226
SELECT count(*) FROM dimensional_model.zillow_dim_rental_listings           --11108
SELECT count(*) FROM dimensional_model.zillow_dim_rental_listings_per_sqft --8454
select count(*) FROM dimensional_model.zillow_dim_sale_listings             --2101297
select count(*) FROM dimensional_model.zillow_dim_sale_listings_per_sqft   --4064604
select count(*) FROM dimensional_model.zillow_dim_sale_values               --26694
```

ER MODEL :

```
create table ER_model.state AS ((select distinct("StateCodeFIPS"), "State" from
data_cleaning.zillow_vs_sale_listings)
UNION (select distinct("StateCodeFIPS"), "State" from
data_cleaning.zillow_vs_sale_listings_per_sqft)
UNION (select distinct("StateCodeFIPS"), "State" from data_cleaning.zillow_vs_other_values)
UNION (select distinct("StateCodeFIPS"), "State" from
data_cleaning.zillow_vs_home_value_index_tier)
```

```

UNION (select distinct("StateCodeFIPS"), "State" from
data_cleaning.zillow_vs_home_value_index_bd)
UNION (select distinct("StateCodeFIPS"), "State" from data_cleaning.zillow_vs_rental_listings)
UNION (select distinct("StateCodeFIPS"), "State" from
data_cleaning.zillow_vs_rental_listings_per_sqft));
ALTER TABLE er_model.state
ADD PRIMARY KEY ("StateCodeFIPS");

```

```

create table ER_model.county AS ((select distinct("MunicipalCodeFIPS"), "Metro", "RegionName",
"StateCodeFIPS" from data_cleaning.zillow_vs_sale_listings)
UNION (select distinct("MunicipalCodeFIPS"), "Metro", "RegionName", "StateCodeFIPS" from
data_cleaning.zillow_vs_sale_listings_per_sqft)
UNION (select distinct("MunicipalCodeFIPS"), "Metro", "RegionName", "StateCodeFIPS" from
data_cleaning.zillow_vs_other_values)
UNION (select distinct("MunicipalCodeFIPS"), "Metro", "RegionName", "StateCodeFIPS" from
data_cleaning.zillow_vs_home_value_index_tier)
UNION (select distinct("MunicipalCodeFIPS"), "Metro", "RegionName", "StateCodeFIPS" from
data_cleaning.zillow_vs_home_value_index_bd)
UNION (select distinct("MunicipalCodeFIPS"), "Metro", "RegionName", "StateCodeFIPS" from
data_cleaning.zillow_vs_rental_listings)
UNION (select distinct("MunicipalCodeFIPS"), "Metro", "RegionName", "StateCodeFIPS" from
data_cleaning.zillow_vs_rental_listings_per_sqft));
ALTER TABLE er_model.county ADD c_id SERIAL;
ALTER TABLE er_model.county
ADD PRIMARY KEY (c_id);
ALTER TABLE er_model.county
ADD CONSTRAINT fk_state FOREIGN KEY ("StateCodeFIPS")
REFERENCES er_model.state ("StateCodeFIPS") MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
CREATE UNIQUE INDEX idx_county1
ON er_model.county ("MunicipalCodeFIPS", "Metro", "RegionName", "StateCodeFIPS");

```

```

create table ER_model.year AS (select distinct("year") from data_cleaning.zillow_vs_sale_listings
ORDER BY "year" ASC)
ALTER TABLE ER_model.year ADD year_id SERIAL;

```

```

create table ER_model.home_value_index_type AS
(SELECT c_id, zhvi_type, zhvi_type_value, "year" from (select c_id, "RegionName", "Metro",
"StateCodeFIPS", "MunicipalCodeFIPS" from ER_Model.county ) co INNER JOIN
((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'zhvi_1bedroom' AS zhvi_type, zhvi_1bedroom AS zhvi_type_value
FROM data_cleaning.zillow_vs_home_value_index_bd) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'zhvi_2bedroom' AS zhvi_type, zhvi_2bedroom AS zhvi_type_value
FROM data_cleaning.zillow_vs_home_value_index_bd) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'zhvi_3bedroom' AS zhvi_type, zhvi_3bedroom AS zhvi_type_value
FROM data_cleaning.zillow_vs_home_value_index_bd)) fc on fc."RegionName" =
co."RegionName" AND fc."Metro" = co."Metro" AND fc."StateCodeFIPS" = co."StateCodeFIPS"
AND fc."MunicipalCodeFIPS"=co."MunicipalCodeFIPS")

```

```

ALTER TABLE er_model.home_value_index_type

```

```
ADD CONSTRAINT fk_hvit_county FOREIGN KEY (c_id)
REFERENCES er_model.county (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
```

```
ALTER TABLE ER_model.home_value_index_type ADD hvi_type_id SERIAL;
```

```
ALTER TABLE er_model.home_value_index_type
ADD PRIMARY KEY (hvi_type_id);
```

```
create table ER_model.home_value_index_tier AS
(SELECT c_id, zhvi_tier, zhvi_tier_value, "year" from (select c_id, "RegionName", "Metro",
"StateCodeFIPS", "MunicipalCodeFIPS" from ER_Model.county ) co INNER JOIN
((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'zhvi_bottomtier' AS zhvi_tier, zhvi_bottomtier AS zhvi_tier_value
FROM data_cleaning.zillow_vs_home_value_index_tier) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'zhvi_middletier' AS zhvi_tier, zhvi_middletier AS zhvi_tier_value
FROM data_cleaning.zillow_vs_home_value_index_tier) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'zhvi_toptier' AS zhvi_tier, zhvi_toptier AS zhvi_tier_value
FROM data_cleaning.zillow_vs_home_value_index_tier)) fc on fc."RegionName" =
co."RegionName" AND fc."Metro" = co."Metro" AND fc."StateCodeFIPS" = co."StateCodeFIPS"
AND fc."MunicipalCodeFIPS"=co."MunicipalCodeFIPS")
```

```
ALTER TABLE er_model.home_value_index_tier
ADD CONSTRAINT fk_hvitiertier_county FOREIGN KEY (c_id)
REFERENCES er_model.county (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
```

```
ALTER TABLE ER_model.home_value_index_tier ADD hvi_tier_id SERIAL;
```

```
ALTER TABLE er_model.home_value_index_tier
ADD PRIMARY KEY (hvi_tier_id);
```

```
create table ER_model.rental_listings AS
(SELECT c_id, medianrentalprice_type, medianrentalprice_value,
medianrentalprice_type_per_sqft, medianrentalpricepersqft_value, "year" from (select c_id,
"RegionName", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS" from ER_Model.county ) co
INNER JOIN
( SELECT a1."RegionName", a1."State", a1."Metro", a1."StateCodeFIPS",
a1."MunicipalCodeFIPS", a1."year", medianrentalprice_type, medianrentalprice_value,
medianrentalprice_type_per_sqft, medianrentalpricepersqft_value
FROM ((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
"year", '1bedroom' AS medianrentalprice_type, medianrentalprice_1bedroom AS
medianrentalprice_value
FROM data_cleaning.zillow_vs_rental_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'2bedroom' AS medianrentalprice_type, medianrentalprice_2bedroom AS
medianrentalprice_value
FROM data_cleaning.zillow_vs_rental_listings) UNION
```

```

(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'3bedroom' AS medianrentalprice_type, medianrentalprice_3bedroom AS
medianrentalprice_value
FROM data_cleaning.zillow_vs_rental_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'4bedroom' AS medianrentalprice_type, medianrentalprice_4bedroom AS
medianrentalprice_value
FROM data_cleaning.zillow_vs_rental_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'5bedroomOrMore' AS medianrentalprice_type, medianrentalprice_5bedroomOrMore AS
medianrentalprice_value
FROM data_cleaning.zillow_vs_rental_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'studio' AS medianrentalprice_type, medianrentalprice_studio AS medianrentalprice_value
FROM data_cleaning.zillow_vs_rental_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'allhomes' AS medianrentalprice_type, medianrentalprice_allhomes AS medianrentalprice_value
FROM data_cleaning.zillow_vs_rental_listings)) a1 INNER JOIN
((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'1bedroom' AS medianrentalprice_type_per_sqft, medianrentalpricepersqft_1bedroom AS
medianrentalpricepersqft_value
FROM data_cleaning.zillow_vs_rental_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'2bedroom' AS medianrentalprice_type_per_sqft, medianrentalpricepersqft_2bedroom AS
medianrentalpricepersqft_value
FROM data_cleaning.zillow_vs_rental_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'3bedroom' AS medianrentalprice_type_per_sqft, medianrentalpricepersqft_3bedroom AS
medianrentalpricepersqft_value
FROM data_cleaning.zillow_vs_rental_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'4bedroom' AS medianrentalprice_type_per_sqft, medianrentalpricepersqft_4bedroom AS
medianrentalpricepersqft_value
FROM data_cleaning.zillow_vs_rental_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'5bedroomOrMore' AS medianrentalprice_type_per_sqft,
medianrentalpricepersqft_5bedroomOrMore AS medianrentalpricepersqft_value
FROM data_cleaning.zillow_vs_rental_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'allhomes' AS medianrentalprice_type_per_sqft, medianrentalpricepersqft_allhomes AS
medianrentalpricepersqft_value
FROM data_cleaning.zillow_vs_rental_listings_per_sqft)) a2
on a1."RegionName" = a2."RegionName" AND a1."State"=a2."State" AND a1."Metro" =
a2."Metro" AND a1."StateCodeFIPS" = a2."StateCodeFIPS" AND
a1."MunicipalCodeFIPS"=a2."MunicipalCodeFIPS" AND a1."year" = a2."year")fc
on fc."RegionName" = co."RegionName" AND fc."Metro" = co."Metro" AND fc."StateCodeFIPS"
= co."StateCodeFIPS" AND fc."MunicipalCodeFIPS"=co."MunicipalCodeFIPS")

```

```

ALTER TABLE er_model.rental_listings
ADD CONSTRAINT fk_rl_county FOREIGN KEY (c_id)
REFERENCES er_model.county (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;

```

```

ALTER TABLE ER_model.rental_listings ADD rl_id SERIAL;

```

```

ALTER TABLE er_model.rental_listings
ADD PRIMARY KEY (rl_id);

```



```

create table ER_model.sale_listings AS
(SELECT c_id, medianlistingprice_type, medianlistingprice_value,
medianlistingprice_type_per_sqft, medianlistingpricepersqft_value, "year" from (select c_id,
"RegionName", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS" from ER_Model.county ) co
INNER JOIN
( SELECT a1."RegionName", a1."State", a1."Metro", a1."StateCodeFIPS",
a1."MunicipalCodeFIPS", a1."year", medianlistingprice_type, medianlistingprice_value,
medianlistingprice_type_per_sqft, medianlistingpricepersqft_value
FROM ((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS",
"year", '1bedroom' AS medianlistingprice_type, medianlistingprice_1bedroom AS
medianlistingprice_value
FROM data_cleaning.zillow_vs_sale_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'2bedroom' AS medianlistingprice_type, medianlistingprice_2bedroom AS
medianlistingprice_value
FROM data_cleaning.zillow_vs_sale_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'3bedroom' AS medianlistingprice_type, medianlistingprice_3bedroom AS
medianlistingprice_value
FROM data_cleaning.zillow_vs_sale_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'4bedroom' AS medianlistingprice_type, medianlistingprice_4bedroom AS
medianlistingprice_value
FROM data_cleaning.zillow_vs_sale_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'5bedroomOrMore' AS medianlistingprice_type, medianlistingprice_5bedroomOrMore AS
medianlistingprice_value
FROM data_cleaning.zillow_vs_sale_listings) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'allhomes' AS medianlistingprice_type, medianlistingprice_allhomes AS medianlistingprice_value
FROM data_cleaning.zillow_vs_sale_listings)) a1 INNER JOIN
((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'1bedroom' AS medianlistingprice_type_per_sqft, medianlistingpricepersqft_1bedroom AS
medianlistingpricepersqft_value
FROM data_cleaning.zillow_vs_sale_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'2bedroom' AS medianlistingprice_type_per_sqft, medianlistingpricepersqft_2bedroom AS
medianlistingpricepersqft_value
FROM data_cleaning.zillow_vs_sale_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'3bedroom' AS medianlistingprice_type_per_sqft, medianlistingpricepersqft_3bedroom AS
medianlistingpricepersqft_value
FROM data_cleaning.zillow_vs_sale_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'4bedroom' AS medianlistingprice_type_per_sqft, medianlistingpricepersqft_4bedroom AS
medianlistingpricepersqft_value
FROM data_cleaning.zillow_vs_sale_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'5bedroomOrMore' AS medianlistingprice_type_per_sqft,
medianlistingpricepersqft_5bedroomOrMore AS medianlistingpricepersqft_value
FROM data_cleaning.zillow_vs_sale_listings_per_sqft) UNION
(SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
'allhomes' AS medianlistingprice_type_per_sqft, medianlistingpricepersqft_allhomes AS
medianlistingpricepersqft_value
FROM data_cleaning.zillow_vs_sale_listings_per_sqft)) a2

```

```
on a1."RegionName" = a2."RegionName" AND a1."State"=a2."State" AND a1."Metro" =
a2."Metro" AND a1."StateCodeFIPS" = a2."StateCodeFIPS" AND
a1."MunicipalCodeFIPS"=a2."MunicipalCodeFIPS" AND a1."year" = a2."year")fc
on fc."RegionName" = co."RegionName" AND fc."Metro" = co."Metro" AND fc."StateCodeFIPS"
= co."StateCodeFIPS" AND fc."MunicipalCodeFIPS"=co."MunicipalCodeFIPS")
```

```
ALTER TABLE er_model.sale_listings
ADD CONSTRAINT fk_rl_county FOREIGN KEY (c_id)
REFERENCES er_model.county (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
```

```
ALTER TABLE ER_model.sale_listings ADD sl_id SERIAL;
```

```
ALTER TABLE er_model.sale_listings
ADD PRIMARY KEY (sl_id);
```

```
create table ER_model.other_values AS
(SELECT c_id, pctofhomesdecreasinginvalues_allhomes,
pctofhomesincreasinginvalues_allhomes, pricetorentratio_allhomes, "year" from (select c_id,
"RegionName", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS" from ER_Model.county ) co
INNER JOIN
((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
pctofhomesdecreasinginvalues_allhomes, pctofhomesincreasinginvalues_allhomes,
pricetorentratio_allhomes
FROM data_cleaning.zillow_vs_other_values)) fc on fc."RegionName" = co."RegionName" AND
fc."Metro" = co."Metro" AND fc."StateCodeFIPS" = co."StateCodeFIPS" AND
fc."MunicipalCodeFIPS"=co."MunicipalCodeFIPS")
```

```
ALTER TABLE er_model.other_values
ADD CONSTRAINT fk_ov_county FOREIGN KEY (c_id)
REFERENCES er_model.county (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
```

```
ALTER TABLE ER_model.other_values ADD ov_id SERIAL;
```

```
ALTER TABLE er_model.other_values
ADD PRIMARY KEY (ov_id);
```

```
create table ER_model.rental_values AS
(SELECT c_id, zri_allhomes, zripersqft_allhomes, "year" from (select c_id, "RegionName",
"Metro", "StateCodeFIPS", "MunicipalCodeFIPS" from ER_Model.county ) co INNER JOIN
((SELECT "RegionName", "State", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS", "year",
zri_allhomes, zripersqft_allhomes
FROM data_cleaning.zillow_vs_rental_values)) fc on fc."RegionName" = co."RegionName" AND
fc."Metro" = co."Metro" AND fc."StateCodeFIPS" = co."StateCodeFIPS" AND
fc."MunicipalCodeFIPS"=co."MunicipalCodeFIPS")
```

```
ALTER TABLE er_model.rental_values
ADD CONSTRAINT fk_rv_county FOREIGN KEY (c_id)
```

```
REFERENCES er_model.county (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
```

```
ALTER TABLE ER_model.rental_values ADD rv_id SERIAL;
```

```
ALTER TABLE er_model.rental_values
ADD PRIMARY KEY (rv_id);
```

```
create table ER_model.sale_values AS
(SELECT c_id, median_price_dollar_allhomes, sale_counts_county,
sale_counts_seas_adj_county, sale_prices_county, "year" from
(select c_id, "RegionName", "Metro", "StateCodeFIPS", "MunicipalCodeFIPS" from
ER_Model.county ) co INNER JOIN
((SELECT "RegionName", "year", median_price_dollar_allhomes, sale_counts_county,
sale_counts_seas_adj_county, sale_prices_county
FROM data_cleaning.zillow_vs_sale_values)) fc on fc."RegionName" = co."RegionName" )
```

```
ALTER TABLE er_model.sale_values
ADD CONSTRAINT fk_rv_county FOREIGN KEY (c_id)
REFERENCES er_model.county (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
```

```
ALTER TABLE ER_model.sale_values ADD sl_id SERIAL;
```

```
ALTER TABLE er_model.sale_values
ADD PRIMARY KEY (sl_id);
```

DIMENSIONAL MODEL:

```
create table dimensional_model.zfact_county_state_level AS (select "MunicipalCodeFIPS",
"Metro", "RegionName", a1."StateCodeFIPS", "State", c_id from er_model.county a1 INNER JOIN
er_model.state a2 ON a1."StateCodeFIPS"=a2."StateCodeFIPS");
ALTER TABLE dimensional_model.zfact_county_state_level
ADD PRIMARY KEY (c_id);
```

```
create table dimensional_model.zdim_home_value_index AS
( SELECT zhvi_tier, zhvi_tier_value, zhvi_type_value, zhvi_type, tier."year", tier.c_id
from er_model.home_value_index_tier tier INNER JOIN er_model.home_value_index_type type1
on tier.c_id = type1.c_id AND tier."year" = type1."year" );
ALTER TABLE dimensional_model.zdim_home_value_index
ADD CONSTRAINT fk_zhvi FOREIGN KEY (c_id)
REFERENCES dimensional_model.zfact_county_state_level (c_id) MATCH SIMPLE
ON UPDATE NO ACTION
ON DELETE NO ACTION;
```

```
create table dimensional_model.zdim_sale_listing AS
( SELECT medianlistingprice_type, medianlistingprice_value, medianlistingprice_type_per_sqft,
medianlistingpricepersqft_value, "year", c_id
```

```

from er_model.sale_listings );
ALTER TABLE dimensional_model.zdim_sale_listing
  ADD CONSTRAINT fk_sale FOREIGN KEY (c_id)
  REFERENCES dimensional_model.zfact_county_state_level (c_id) MATCH SIMPLE
  ON UPDATE NO ACTION
  ON DELETE NO ACTION;

create table dimensional_model.zdim_rental_listing AS
( SELECT medianrentalprice_type,medianrentalprice_value, medianrentalprice_type_per_sqft,
medianrentalpricepersqft_value, "year", c_id
from er_model.rental_listings );
ALTER TABLE dimensional_model.zdim_rental_listing
  ADD CONSTRAINT fk_rental FOREIGN KEY (c_id)
  REFERENCES dimensional_model.zfact_county_state_level (c_id) MATCH SIMPLE
  ON UPDATE NO ACTION
  ON DELETE NO ACTION;

create table dimensional_model.zdim_other_metrics AS
( SELECT c_id, pctofhomesdecreasinginvalues_allhomes,
pctofhomesincreasinginvalues_allhomes, pricetorentratio_allhomes, "year"
from er_model.other_values );
ALTER TABLE dimensional_model.zdim_other_metrics
  ADD CONSTRAINT fk_om FOREIGN KEY (c_id)
  REFERENCES dimensional_model.zfact_county_state_level (c_id) MATCH SIMPLE
  ON UPDATE NO ACTION
  ON DELETE NO ACTION;

create table dimensional_model.zdim_sale_values AS
( SELECT c_id, median_pricecut_dollar_allhomes, sale_counts_county,
sale_counts_seas_adj_county, sale_prices_county, "year"
from er_model.sale_values );
ALTER TABLE dimensional_model.zdim_sale_values
  ADD CONSTRAINT fk_sv FOREIGN KEY (c_id)
  REFERENCES dimensional_model.zfact_county_state_level (c_id) MATCH SIMPLE
  ON UPDATE NO ACTION
  ON DELETE NO ACTION;

create table dimensional_model.zdim_rental_values AS
( SELECT c_id, zri_allhomes, zripersqft_allhomes, "year"
from er_model.rental_values );
ALTER TABLE dimensional_model.zdim_rental_values
  ADD CONSTRAINT fk_rv FOREIGN KEY (c_id)
  REFERENCES dimensional_model.zfact_county_state_level (c_id) MATCH SIMPLE
  ON UPDATE NO ACTION
  ON DELETE NO ACTION;

```