

1. What is the time period used?

```
select DateDiff(MAX(date),Min(date)) as time_period,max(date),min(date) from  
calender;
```

	time_period	max(date)	min(date)	
▶	364	2017-09-05	2016-09-06	

2. How many properties have duplicate entries? Remove duplicate rows (say a row appears 3 times, remove 2 and keep 1)

```
select count(k.listing_id) as property_have_duplicate_entries from (select listing_id  
from calender group by listing_id,date having count(listing_id)>1) as k;
```

	property_have_duplicate_entries
▶	365

3. For each property, find out the number of days the property was available and not available (create a table with listing\_id, available days, unavailable days and available days as a fraction of total days)

```
select listing_id,SUM(CASE WHEN available = 't' THEN 1 ELSE 0 END) AS  
available_days,SUM(CASE WHEN available = 'f' THEN 1 ELSE 0 END) AS  
not_available_days, SUM(CASE WHEN available = 't' THEN 1 ELSE 0  
END)/count(available) as fraction from calender group by listing_id;
```

	listing_id	available_days	not_available_days	fraction	
▶	12147973	0	365	0.0000	
	3075044	359	6	0.9836	
	6976	319	46	0.8740	
	1436513	98	267	0.2685	
	7651065	334	31	0.9151	
	12386020	58	307	0.1589	
	5706985	344	21	0.9425	
	2843445	365	0	1.0000	
	753446	347	18	0.9507	
	849408	107	258	0.2932	
	12023024	343	22	0.9397	
	1668313	341	24	0.9342	
	2684840	0	365	0.0000	
	13547301	129	236	0.3534	
	5434353	319	46	0.8740	
	225979	339	26	0.9288	
	3420384	349	16	0.9562	
	13512930	0	365	0.0000	
	7482195	295	70	0.8082	
	7252607	262	103	0.7178	
	2583074	332	33	0.9096	
	13251243	207	158	0.5671	
	225834	299	66	0.8192	
	6400432	0	365	0.0000	
	5498472	0	365	0.0000	
	894539	1	364	0.0027	
	879929	122	243	0.3342	

4. How many properties were available on more than 50% of the days? How many properties were available on more than 75% of the days?

```
select sum(if(p.percent>50,1,0)) as ">50%",sum(if(p.percent>75,1,0)) as ">75%" from
(select listing_id,(sum(if(available='f',1,0))/count(*))*100 as "percent" from calender
group by listing_id) as p;
```

	>50%	>75%	
▶	1857	1394	

5. Create a table with max, min and average price of each property

```
select listing_id, Max(price) as maximum_price, Min(price) as minimum_price, AVG(price) as average_price from calender group by listing_id;
```

	listing_id	maximum_price	minimum_price	average_price	
▶	12147973	0.00	0.00	0.000000	
●	3075044	75.00	0.00	66.698630	
●	6976	65.00	0.00	56.808219	
●	1436513	75.00	0.00	20.136986	
●	7651065	79.00	0.00	72.290411	
●	12386020	75.00	0.00	11.917808	
●	5706985	200.00	0.00	105.326027	
●	2843445	75.00	75.00	75.000000	
●	753446	69.00	0.00	56.435616	
●	849408	309.00	0.00	74.145205	
●	12023024	60.00	0.00	51.038356	
●	1668313	57.00	0.00	53.252055	
●	2684840	0.00	0.00	0.000000	
●	13547301	150.00	0.00	53.013699	
●	5434353	145.00	0.00	126.726027	
●	225979	60.00	0.00	55.726027	
●	3420384	170.00	0.00	159.123288	
●	13512930	0.00	0.00	0.000000	
●	7482195	49.00	0.00	39.602740	
●	7252607	49.00	0.00	35.172603	
●	2583074	45.00	0.00	36.452055	
●	13251243	145.00	0.00	71.712329	
●	225834	70.00	0.00	57.342466	
●	6400432	0.00	0.00	0.000000	
●	5498472	0.00	0.00	0.000000	
●	894539	95.00	0.00	0.260274	
●	879929	90.00	0.00	30.082192	
Result 74					

6. Extract properties with an average price of more than \$500

```
select listing_id, Avg(price) as average_price from calender group by listing_id having Avg(price)>500;
```

	listing_id	average_price	
▶	3881993	506.712329	
	743211	521.575342	
	50032	653.493151	
	14813006	539.260274	
	13918656	508.164384	
	5783197	560.273973	
	6972426	551.369863	
	1810397	732.054795	
	7740592	703.287671	
	1214214	520.000000	
	2277821	573.660274	
	2881388	671.082569	
	9231486	544.627389	
	3673688	699.000000	
	7109689	557.260274	
	11521541	650.191781	
	14035936	563.835616	
Result 75			