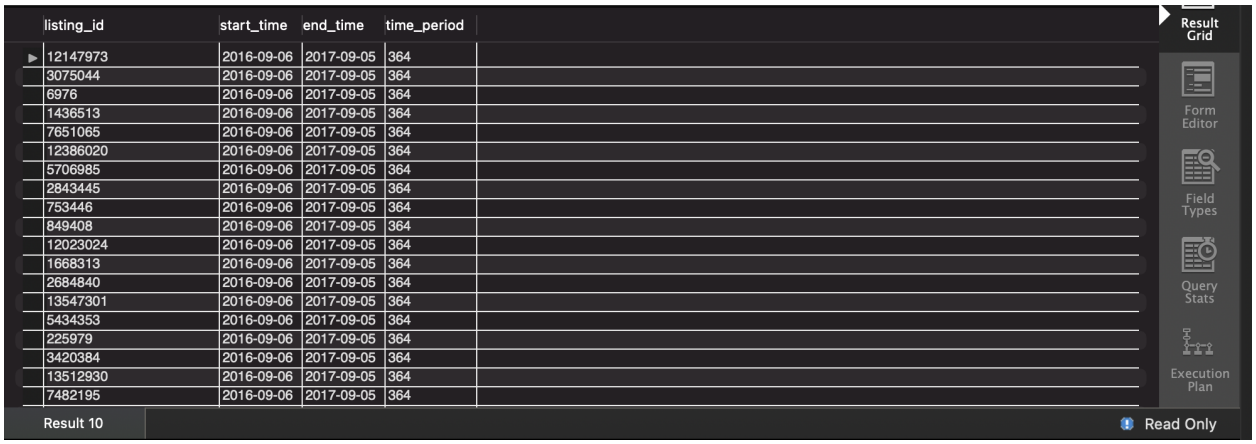
1. What is the time period used?

   Ans ->
   select listing_id,start_time,end_time,DATEDIFF(end_time,start_time) as time_period from (select listing_id,
   min(date) start_time,
   max(date) end_time
   from airbnb.airbnb_calendar
   group by listing_id) as temptable



listing_id	start_time	end_time	time_period
12147973	2016-09-06	2017-09-05	364
3075044	2016-09-06	2017-09-05	364
6976	2016-09-06	2017-09-05	364
1436513	2016-09-06	2017-09-05	364
7651065	2016-09-06	2017-09-05	364
12386020	2016-09-06	2017-09-05	364
5706985	2016-09-06	2017-09-05	364
2843445	2016-09-06	2017-09-05	364
753446	2016-09-06	2017-09-05	364
849408	2016-09-06	2017-09-05	364
12023024	2016-09-06	2017-09-05	364
1668313	2016-09-06	2017-09-05	364
2684840	2016-09-06	2017-09-05	364
13547301	2016-09-06	2017-09-05	364
5434353	2016-09-06	2017-09-05	364
225979	2016-09-06	2017-09-05	364
3420384	2016-09-06	2017-09-05	364
13512930	2016-09-06	2017-09-05	364
7482195	2016-09-06	2017-09-05	364

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

   Ans ->

   DELETE t1 from (select * , row_number() over (listing_id) as rownum from airbnb) t1
   INNER JOIN (select *, row_number() over (listing_id) as rownum from airbnb) temp2 where temp1.date = t2.date and temp1.listing_id = t2.listing_id and t1.rownum < t2.rownum

Duplicate Value

listing_id	date	count(*)
12898806	2016-09-06	2
12898806	2016-09-07	2
12898806	2016-09-08	2
12898806	2016-09-09	2
12898806	2016-09-10	2
12898806	2016-09-11	2
12898806	2016-09-12	2
12898806	2016-09-13	2
12898806	2016-09-14	2
12898806	2016-09-15	2
12898806	2016-09-16	2
12898806	2016-09-17	2
12898806	2016-09-18	2
12898806	2016-09-19	2
12898806	2016-09-20	2

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)

Ans ->

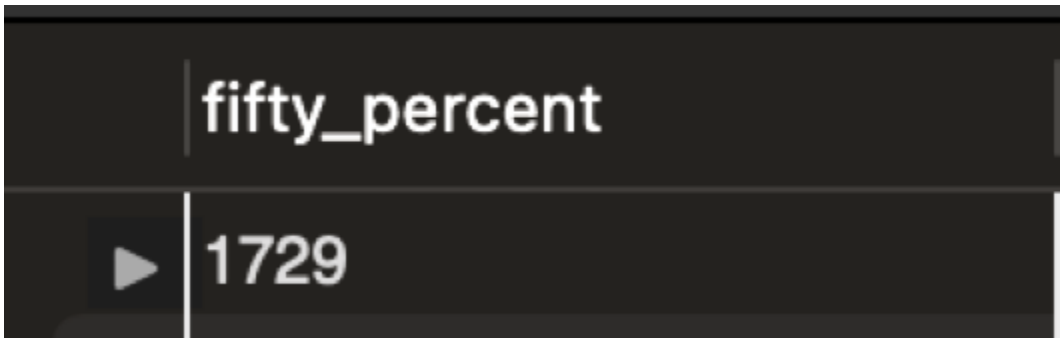
```
select listing_id ,SUM(CASE WHEN available = 'f' THEN 1 ELSE 0 END) AS Unavailable,
SUM(CASE WHEN available = 't' THEN 1 ELSE 0
END) AS Available
from airbnb_calendar
group by listing_id
```

listing_id	Unavailable	Available
3075044	6	359
6976	46	319
1436513	267	98
7651065	31	334
12386020	307	58
5706985	21	344
2843445	0	365
753446	18	347
849408	258	107
12023024	22	343
1668313	24	341
2684840	365	0
13547301	236	129

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?

Ans ->

```
select count(listing_id) as fifty_percent from(select listing_id,
SUM(CASE WHEN available = 't' THEN 1 ELSE 0 END) AS Available,
SUM(CASE WHEN available = 'f' THEN 1 ELSE 0 END) AS Unavailable from
airbnb_calendar
group by listing_id) as temp
```



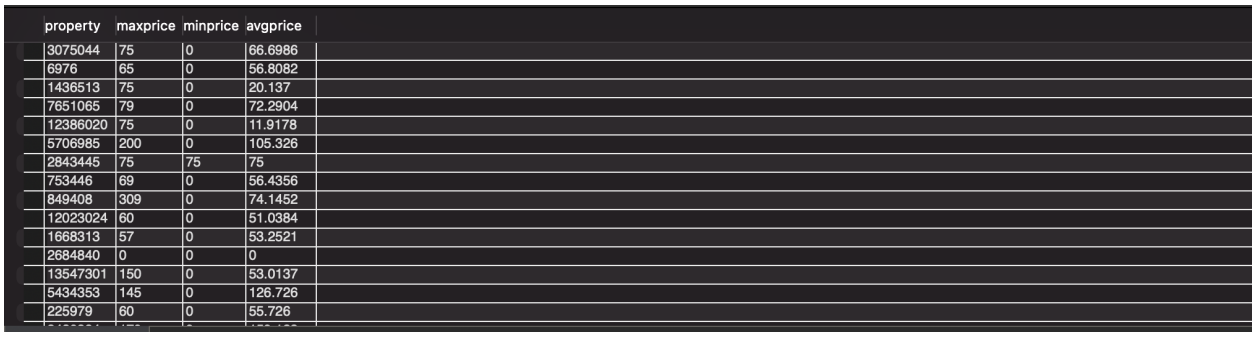
fifty_percent
1729

```
select count(listing_id) as seventy_five_percent from(select listing_id,
SUM(CASE WHEN available = 't' THEN 1 ELSE 0 END) AS Available,
SUM(CASE WHEN available = 'f' THEN 1 ELSE 0 END) AS Unavailable from
airbnb_calendar group by listing_id) as temp
where available>273
```

seventy_five_percent
1429

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

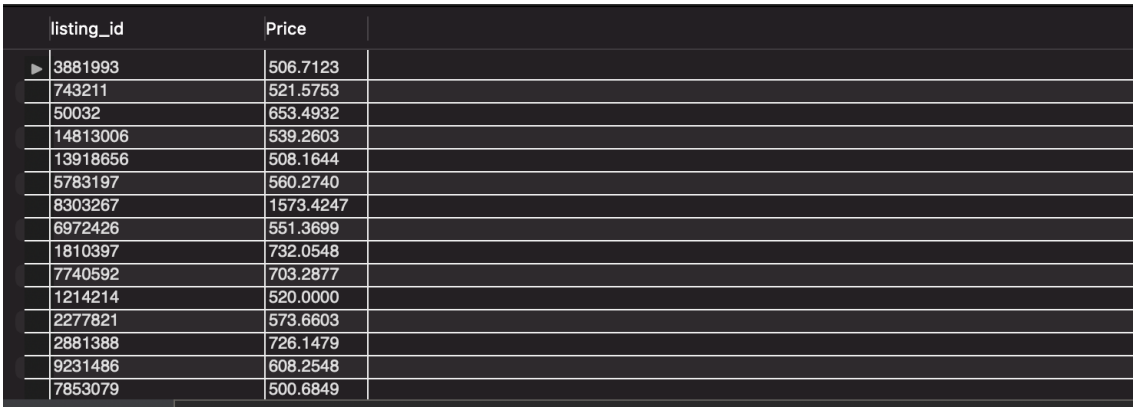
   Ans ->
   Create Table minmaxTable
   (property int,maxprice float,minprice float,avgprice float);
   INSERT INTO minmaxTable
   SELECT LISTING_ID AS PROPERTY,MAX(NEW_PRICE) AS MAXPRICE,
   MIN(NEW_PRICE) AS MINPRICE, AVG(NEW_PRICE) AS AVGPRICE
   FROM airbnb_calendar
   GROUP BY LISTING_ID



property	maxprice	minprice	avgprice
3075044	75	0	66.6986
6976	65	0	56.8082
1436513	75	0	20.137
7651065	79	0	72.2904
12386020	75	0	11.9178
5706985	200	0	105.326
2843445	75	75	75
753446	69	0	56.4356
849408	309	0	74.1452
12023024	60	0	51.0384
1668313	57	0	53.2521
2684840	0	0	0
13547301	150	0	53.0137
5434353	145	0	126.726
225979	60	0	55.726

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

   Ans ->
   SELECT listing_id ,avg(new_price) as Price FROM airbnb_calendar
   GROUP BY listing_id
   HAVING AVG(new_price)>500



listing_id	Price
3881993	506.7123
743211	521.5753
50032	653.4932
14813006	539.2603
13918656	508.1644
5783197	560.2740
8303267	1573.4247
6972426	551.3699
1810397	732.0548
7740592	703.2877
1214214	520.0000
2277821	573.6603
2881388	726.1479
9231486	608.2548
7853079	500.6849