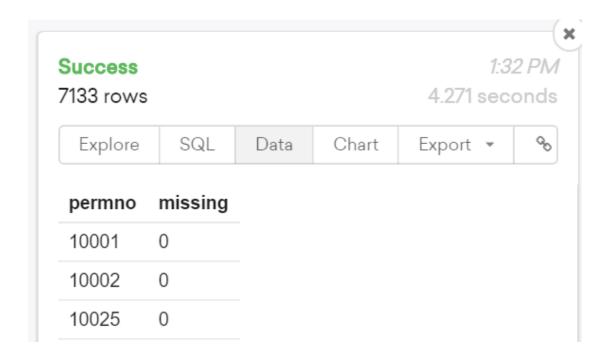
--question 5.1 #should answer why

select * FROM (select permno, max(prc) as max_2010 FROM stocks2016.d2010 group by permno) as df

inner join

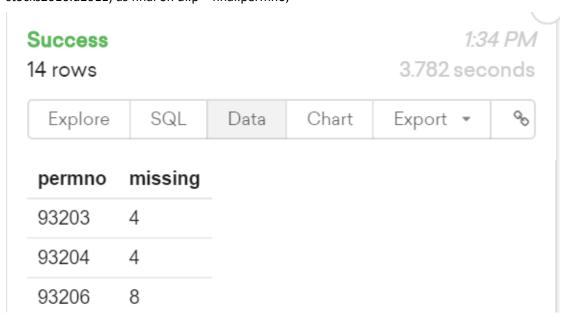
(select * FROM (select permno, max(prc) as max_2011 FROM stocks2016.d2011 group by permno) as diff) as final

on df.permno = final.permno;



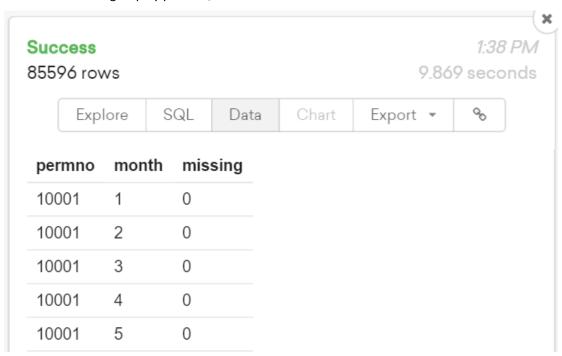
--question 5.2 #? ? ?

select * FROM (select permno as p FROM stocks2016.d2010) as df left join (select permno FROM stocks2016.d2011) as final on df.p = final.permno;



--question 5.3

select permno, max(retdate::timestamp) as last, min(retdate::timestamp) as first FROM stocks2016.d2010 group by permno;



--question 5B4 shrout * prc

select LHS.SIC, LHS.marketValue/RHS.SumOfValue as percentage FROM

(select sum(shrout*prc) as marketValue, trunc(hsic/100) as SIC

FROM stocks2016.d2010

where retdate = '2010-01-11'

and prc is not null

and shrout is not null

and hsic is not null

group by SIC) as LHS

cross join

(select sum(shrout * prc) as SumOfValue

FROM stocks2016.d2010

where retdate = '2010-01-11' and hsic is not null) as RHS

ORDER BY percentage desc;

-- the largest one is sic 28

73 rows

2:10 PM 1.08 seconds

/310	ows				1.0	o sec
	Explore	SQL	Data	Chart	Export •	00
sic	percenta	ge				
28	0.095413	52433937	761			
73	0.088356					
60	0.076928	73533279	987			
67	0.057707	43586216	628			
35	0.056909	19954542	23			
13	0.056570	2869967				

--question 5B5

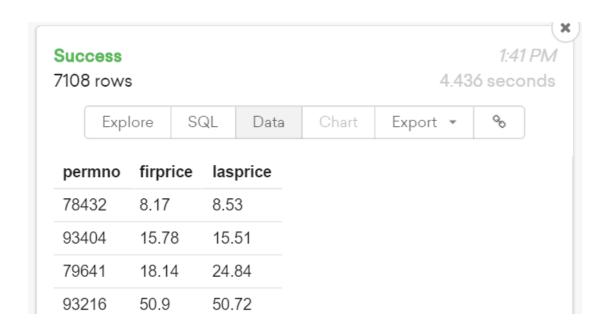
select LHS.permno, RHS.FirPrice, RHS2.LasPrice FROM (select permno, min(retdate) as FirstDay, max(retdate) as LastDay FROM

stocks2016.d2010 group by permno) as LHS

left join

(select permno, retdate, prc as FirPrice FROM stocks2016.d2010) as RHS on LHS.permno = RHS.permno and LHS.FirstDay = RHS.retdate left join

(select permno, retdate, prc as LasPrice FROM stocks2016.d2010) as RHS2 ON LHS.permno = RHS2.permno AND LHS.LastDay = RHS2.retdate;



--question 5B6

select LHS.PlazeID, (RHS.later - LHS.origin)/LHS.origin as percentage

FROM

(select PlazeID, avg(ez) as origin

FROM

MTA where date_part('year',date)=2015 and

date_part('dow', date) = 1

group by PlazeID) as LHS

left join

(select PlazeID, avg(ez) as later

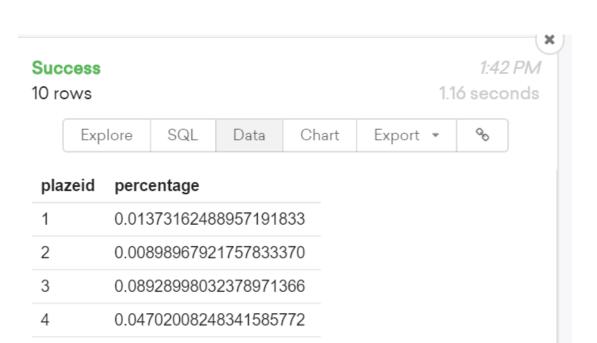
FROM

MTA where date_part('year', date) = 2016 and

date_part('dow',date)= 1

group by PlazeID) as RHS

on LHS.PlazeID = RHS.PlazeID;



--question 5B7

5

6

--question 5B7

select LHS.DOW, LHS.Ez2016 as avg2016,

RHS3.Ez2015 as avg2015 FROM

(select date_part('dow', date) as DOW,

avg(ez) as Ez2016 FROM MTA

where date_part('year',date) = 2016

and PlazeID = 1

group by DOW) as LHS

left join

(select date_part('dow',date) as DOW, avg(ez) as Ez2015 FROM MTA

0.00922967156476732245

U U3UE38U438314E6U03E4

where date_part('year',date) =2015

and PlazeID = 2

group by date_part('dow',date)) as RHS3 on LHS.DOW = RHS3.DOW;

Success 7 rows 2:21 PM 0.693 seconds Explore SQL Data Chart Export ▼ %

dow	avg2016	avg2015
0	1181.4619391025641026	1417.5132211538461538
1	1327.71875000000000000	1608.4595352564102564
2	1391.7960737179487179	1660.4527243589743590
3	1425.36458333333333333	1737.2832532051282051
4	1450.8569711538461538	1777.1202830188679245
5	1438.6931089743589744	1769.4194711538461538
6	1237.1375786163522013	1403.9627403846153846

--question 5B8

select hour, max(ez) FROM MTA where PlazeID = 1 and Direction = 'O' group by hour;

Success

1:43 PM

24 rows

0.451 seconds

hour	max
13	2520
14	2605
20	2556
9	2463
44	0400

--question 5B9

select concat(date_part('dow',date), hour) as DowHour, max(ez) FROM MTA where PlazeID =1 and Direction = 'O' group by DowHour;

Success 1:43 P 168 rows 1.217 second

Explore SQL	Data	Chart	Export •	8	
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dowhour	max
00	1430
01	1021
010	1802
011	2355
012	2417
013	2397

--question 5B10

select LHS.hour, LHS.MaxIn1, RHS.MinOut2, RHS2.Max3 FROM (select hour, max(ez) as MaxIn1 FROM MTA where PlazeID = 1 and Direction = 'I' group by hour) as LHS left join (select hour, min(ez) as MinOut2 FROM MTA where PlazeID = 2 and Direction = 'O' group by hour) as RHS on LHS.hour = RHS.hour left join (select hour, max(ez) as Max3 FROM MTA where PlazeID = 3 group by hour) as RHS2 on LHS.hour = RHS2.hour;

24 rows

2:22 PM

0.976 seconds

Explore SQL Da	ata Chart	Export ▼	∞
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hour	maxin1	minout2	max3
0	1860	0	2753
1	1274	0	1626
2	1085	0	1052
3	961	0	913
4	813	Λ	1223

--question5b11

select LHS.hour, LHS.PlazeID,LHS.dow, case when RHS.Out = 0 then 0 else LHS.In/RHS.Out end as ratio

FROM

(select hour, PlazeID, date_part('dow',date) as dow, sum(case when Direction = 'I' then ez+Cash else 0 end) as In

FROM MTA group by hour, PlazeID,dow) as LHS

left join

(select hour, PlazeID, date_part('dow',date) as dow, sum(case when Direction = 'O' then ez+Cash else 0 end) as Out

FROM MTA group by hour, PlazeID,dow) as RHS

on LHS.hour = RHS.hour and LHS.PlazeID = RHS.PlazeID and LHS.dow = RHS.dow;

1680 rows

1:44 PM 11.332 seconds

	Explore	SQL	Data	Chart	Export •	90
hour	plazeid	dow	ratio			
0	1	0	1.057878	386963764	12	
0	1	1	1.128340	98716470	43	
0	1	2	1.360880	26062096	94	
0	1	3	1.349537	27299552	03	
0	1	4	1.363518	393432903	60	
0	1	5	1.326034	105279903	69	

--question5b12

select LHS.hour, LHS.PlazeID,LHS.dow, case when RHS.Out = 0 then null else LHS.In/RHS.Out end as ratio2014,

case when RHS3.Out = 0 then null else RHS2.In/RHS3.Out end as ratio2013 FROM

(select hour, PlazeID, date_part('dow',date) as dow, sum(case when Direction = 'I' then ez+Cash else 0 end) as In

FROM MTA where date_part('year',date) = 2014 group by hour, PlazeID,dow) as LHS left join

(select hour, PlazeID, date_part('dow',date) as dow, sum(case when Direction = 'O' then ez+Cash else 0 end) as Out

FROM MTA where date_part('year', date)=2014 group by hour, PlazeID,dow) as RHS on LHS.hour = RHS.hour and LHS.PlazeID = RHS.PlazeID and LHS.dow = RHS.dow left join

(select hour, PlazeID, date_part('dow',date) as dow, sum(case when Direction = 'I' then ez+Cash else 0 end) as In

FROM MTA where date_part('year',date) = 2013 group by hour, PlazeID,dow) as RHS2 on LHS.hour = RHS2.hour and LHS.PlazeID = RHS2.PlazeID and LHS.dow = RHS2.dow left join

(select hour, PlazeID, date_part('dow',date) as dow, sum(case when Direction = 'O' then ez+Cash else 0 end) as Out

FROM MTA where date_part('year', date)=2013 group by hour, PlazeID,dow) as RHS3 on LHS.hour = RHS3.hour and LHS.PlazeID = RHS3.PlazeID and LHS.dow = RHS3.dow;

2:24 PN 2:391 second

Success 1680 rows

Explore	SQL	Data	Chart	Export 💌	00

hour	plazeid	dow	ratio2014	ratio2013
0	1	0	1.0758785256905461	1.0796386354761989
0	1	1	1.13872191421067989495	1.15661661905051364659
0	1	2	1.3572879735489782	1.4680505189446042
0	1	3	1.2906317595286045	1.4378057882079774
0	1	4	1.3199436985708099	1.4493218152679514

--question5b13

select LHS.hour, LHS.dow, case when RHS.Out = 0 then 0 else LHS.In/RHS.Out end as ratio

FROM

(select hour, date_part('dow',date) as dow, sum(ez) + sum(cash) as In

FROM MTA where date in (select date

FROM

(select date, sum(ez)+sum(cash) as total FROM MTA group by date) as a

where total in

(select max(total)

FROM (select date, sum(ez)+sum(cash) as total

FROM MTA

group by date) as b)) and Direction = 'I'

group by hour, dow) as LHS

left join

(select hour, date_part('dow',date) as dow, sum(ez) + sum(cash) as Out

FROM MTA

where date in (select date

FROM

(select date, sum(ez)+sum(cash) as total FROM MTA group by date) as a

where total in

(select max(total)

FROM (select date, sum(ez)+sum(cash) as total

FROM MTA

group by date) as b)) and Direction = 'O'

group by hour, dow) as RHS

on LHS.hour = RHS.hour and LHS.dow = RHS.dow;

24 rows

1:48 PM 3.563 seconds

Explore	SQL	Data	Chart	Export •	00
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hour	dow	ratio
0	5	1.2135191637630662
1	5	1.3367202268431002
2	5	1.2027215631542219
3	5	1.0860759493670886
4	5	1.0811113600717006
5	5	1.4489927825056555
6	5	1.7360456627065773

--question5b14

select permno, sum(index)-sum(exist) as missing FROM (select LHS.permno, case when RHS3.data is null then 0 else 1 end as exist, case when RHS.fullDay < RHS2.FirstDay then 0 else 1 end as index FROM

(select distinct permno FROM stocks2016.d2010) as LHS cross join

(select distinct retdate as fullDay FROM stocks2016.d2010) as RHS left join

(select permno as stockName, retdate as data FROM stocks2016.d2010) as RHS3 on LHS.permno = RHS3.stockName and RHS.fullDay = RHS3.data left join

(select permno, min(retdate) as FirstDay FROM stocks2016.d2010 group by permno) as RHS2 on LHS.permno = RHS2.permno) as whole group by permno;

7108 rows

1:48 PM 5.981 seconds

Explore S	SQL Data	Chart	Export •	8
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permno	missing
10001	0
10002	0
10025	0
10026	0
10028	0
10032	0
10044	0
10051	0
10065	0
10078	236