

# Assignment 3

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1

```
select case
    when s.latitude is null
    then 'No latitude information for ' || s.english_name || '
station.'
    else 'The latitude of ' || s.english_name || ' station is: ' ||
s.latitude
end
from (select *
      from line_detail
      where line_id = '4') l4
      join (select station_id,
                  english_name,
                  latitude
            from stations) s
      on s.station_id = l4.station_id;
```

1	The latitude of Convention and Exhibition Center Station station is: 22.5375
2	The latitude of Civic Center station is: 22.54444
3	The latitude of Children's Palace station is: 22.550278
4	The latitude of Futian Checkpoint station is: 22.5182
5	The latitude of Fumin station is: 22.5258
6	The latitude of Lianhua North station is: 22.56083
7	The latitude of Shangmeilin station is: 22.57028
8	The latitude of Minle station is: 22.59389
9	The latitude of Baishilong station is: 22.60139
10	The latitude of Shenzhen North Station station is: 22.61194

2

```
select line_id,
       b2.station_id,
       chinese_name
from (select *
      from bus_lines
      where bus_line = '2') b2
      join (select line_id,
                  station_id
            from line_detail) l
      on b2.station_id = l.station_id
      join (select station_id,
                  chinese_name
            from stations) s
```

```

        on l.station_id = s.station_id
order by line_id, station_id;

```

	line_id	station_id	chinese_name
1	1	1	罗湖
2	1	2	国贸
3	2	70	湖贝
4	3	81	翠竹
5	3	82	田贝
6	5	140	太安
7	7	82	田贝
8	7	140	太安

3

```

select line_id,
       chinese_name
from stations as sta
     join (select max(cnt) over () max_cnt,
                  cnt,
                  line_id,
                  station_id,
                  num
            from (select line_id,
                          station_id,
                          num,
                          count(*) over (partition by line_id) cnt
                  from line_detail) tmp
            ) t
     on t.station_id = sta.station_id
    and max_cnt = cnt
    and num = 1;

```

	line_id	chinese_name
1	9	航海路

4

```

select year,
       events
from (select opening as year, 'The line ' || line_id || ' opened' as events
      from lines
      where opening between 2008 and 2021
      union all
      select latest_extension as year, 'The line ' || line_id || ' extended' as
events
      from lines
      where latest_extension between 2008 and 2021) t
order by year;

```

	year	events
1	2010	The line 3 opened
2	2010	The line 2 opened
3	2011	The line 4 extended
4	2011	The line 5 opened
5	2011	The line 1 extended
6	2011	The line 2 extended
7	2011	The line 3 extended
8	2016	The line 7 opened
9	2016	The line 9 opened
10	2016	The line 11 opened
11	2018	The line 20 opened
12	2019	The line 6 opened
13	2019	The line 10 opened
14	2020	The line 8 opened

5

```
select station_id
  from line_detail
 where line_id = '1'
except
(select station_id
  from line_detail
 where line_id = '2')
order by station_id;
```

	station_id
1	1
2	2
3	3
4	5
5	6
6	7
7	8
8	9
9	10
10	11