

Assignment 2

November 12, 2021

Using database shenzhen_metro.sql on the Blackboard, please copy your sql as **text** and append the screen shot of the query result which contains the **number of query records** and **all of your query records** to the submit **pdf file**.

1 (10pt)

List all stations whose names start with the Chinese character "南". And please output the id and the chinese name of those stations in ascending order. (Ordered by "station_id" and no duplicate records).

请列举所有站名以“南”字开头的车站（去重），结果请输出“station_id”和车站的中文名。输出结果请按照“station_id”从小到大排序。

2 (10pt)

Please order all colors in ascending order and output the name and hex number of the 10 to 14 color in order (There will be 5 colors in the output: 10, 11, 12, 13, 14).

请按照颜色的 hex 码从小到大排序，第五个到第九个颜色的名称和 hex 码是多少？（输出一共 5 个，排序为 10, 11, 12, 13, 14 的颜色。请按序输出）

3 (35pt)

Please complete the following questions 1-3 in order:

请按照顺序完成下列 1-3 题

3.1 (10pt)

Please calculate how many stations on each bus line. Please output the name of each bus line and the number of the stations (query result screen shot should cover the first 10 records and include the total records numbers).

每个公交线路有几个站，请输出公交线路名称以及它所拥有的站点数？（结果截图中应包含前十条结果以及查询结果条数）

3.2 (10pt)

Which is the max station count of all bus lines? Please output the max station number.

站点最多的一条线上有几个站点？

3.3 (15pt)

Which bus line has the maximum number of stations? Please output the max station number. Please output the number of the bus line and the max station number. If there is more than one bus line that has the max station number, please output them all in ascending order.

站点最多的一条线的名称是什么？如果有多条线路，请按升序的顺序输出它们。

4 (45pt)

Please complete the following questions 1-3 in order:

请按照顺序完成下列 1-3 问题：

4.1 (15pt)

Please output all bus stations that on bus line 2 or bus line 7. (No duplicate records)

2 路公交车和 7 路公交车的车站有哪些？（去重）

4.2 (15pt)

Please output all bus stations that on bus line 2 and bus line 7.

2 路公交车和 7 路公交车共同拥有的车站是哪几个？

4.3 (15pt)

What is the percentage of the common stations of bus lines 2 and 7 in all stations that on bus line 7. (The result should be expressed percentage and approximated to 2 decimal places.)

2 路公交车和 7 路公交车共同拥有的车站占 7 路公交车车站的百分比（答案请保留两位小数）

$$Answer = \frac{\#stations\ on\ bus\ line\ 2\ and\ 7}{\#stations\ on\ bus\ line\ 7}$$