Assignment 1

Simple Query

Question 1

Using the table **stations**, find the stations with indicated direction(such as Huaqiang North, Shenda West, Shenzhen West Railway Station,etc. Xili, Nanshan such proper nouns are not included), finish the query in the following format .

在stations表格中找到带有指示地点方位的车站（如华强北，深大西，深圳西站等；西丽、南山这种固有名词则不在此列），按如下格式输出内容

station_id	english_name	chinese_name	district
13	Qiaocheng East	侨城东	Futian
30	Airport East	机场东	Bao'an
39	Airport North	机场北	Bao'an
45	Hongshuwan South	红树湾南	Nanshan

Question 2

Given that a latitude is equivalent to 111km, use table **stations** to estimate the north-south span of each district(you can round off number just use round)

已知一纬度相当于111km，按照stations表格内容估计各区的南北跨度约多少公里（结果请四舍五入取整）

district	南北跨度km
Bao'an	27
Luohu	6
Futian	6
Longgang	15

Question 3

Using table **stations**, finish the query to output the information from the second station to the tenth station as following format

在stations表格中，按照如下格式输出第二个到十个站的信息

station_information

Station 2 Guomao(国贸) in Luohu

Station 3 Laojie(老街) in Luohu

Station 4 Grand Theater(大剧院) in Luohu

Question 4

Using the table **bus_lines**, find all the stations that bus 103 and bus 104 pass through and output their ids in descending order

在表格bus_lines中，找到103和104路公交车经过的所有的车站，并输出车站id,按降序排列

station_id

174

150

149

Question 5

Using the table **bus_lines**, find the stations that bus 103 and bus 104 both pass through and output their ids in descending order

在表格bus_lines中，找到103和104路公交车经过的相同的车站，并输出车站id

station_id

3

4

Question 6

Using the table **bus_lines**, calculate the percentage of the common stations of bus lines 103 and 104 in all stations that on bus line 103 percentage of 103 bus stops that are jointly owned by 103 and 104 buses (The result should be expressed percentage and approximated to 2 decimal places.)

在表格bus_lines中，计算103路公交车和104路公交车共同拥有的车站占103路公交车车站的百分比（答案请保留两位小数）

$$Answer = \frac{\#stations \quad on \quad bus \quad line \quad 103 \quad and \quad 104}{\#stations \quad on \quad bus \quad line \quad 103}$$

$$答案 = \frac{103号公交车和104号公交车共有的站点数量}{103号公交车的站点数量}$$

round
0.33

Question 7

Using the table **bus_lines**, which bus lines have more than 10 stations, and how many stations they have, please output results in descending order
在bus_lines表中，拥有站数大于等于10站的线路有哪些，他们的车站数分别是多少站，按照降序排列输出结果

bus_line	cnt
N4	21
366	20
309	20

Question 8

Using the **bus_lines** table, which bus station has the most bus line stops and how many these bus lines? If there are multiple stations, output all of them, no limit order
在bus_line表格中，最多线路停靠的公交站是哪站，有多少条公交线停靠此站？如果有多个站，请全部输出，不限顺序

station_id	cnt
126	45

Question 9

In the new name of the bus, the night bus is named in the form of the letter N connected with the number. Using the table **bus_lines**, output the number of bus stops per night bus line

公交车新的命名规范中，夜班公交的命名为字母N连接数字的形式。在表格bus_lines中，输出每班夜班公交的站数

bus_line	count
N2	8
N6	15
N4	21

Question 10

In the new name of the bus, the night bus named for the letter N connected with the form of numbers, the main line bus is the letter M connected with the form of numbers. Using the table **bus_lines** please mark the night bus and main line bus on the bus lines with more than 10 stops in question 7 in the following format

公交车新的命名规范中，夜班公交的命名为字母N连接数字的形式，主干线公交则为字母M连接数字形式构成。请对第七问中大于10站的公交线路中的夜班公交和主干线公交进行如下格式的标注

bus_line	cnt	备注
N4	21	夜班公交
366	20	
M268	18	主干线公交
113	17	