1. The tables are as defined in our ncp database:

city(city\_name, population, number\_of\_hospital, province

ncp\_report(city\_name, day, confirmed, suspected, recovered, dead)

flight(city\_s, city\_d)

ncp\_accamulated(city\_name, confirmed\_a, suspected\_a, recovered\_a, dead\_a).

Provide SQL statement for each of the queries.

1. Find city name and the population for the cities in Guangdong province.

Ans: SELECT city\_name, population

FROM city

WHERE province = ‘Guangdong’;

1. Find the city name if the city has 20 confirmed cases on one day, only keeping one copy if the name is duplicated in the result.

Ans: SELECT DISTINCT city\_name

FROM ncp\_report

WHERE confirmed = 20;

1. Find the city name and the percentage of its confirmed case number over the number of hospitals of the city.

Ans: SELECT city\_name, confirmed / number\_of\_hospital AS confirmed\_percentage

FROM ncp\_accumulated, city;

WHERE ncp\_accumulated.city\_name = city.city\_name;

1. Find the city name if its accumulated number of confirmed cases is more than that of some city in Hubei province.

Ans: SELECT city\_name,

FROM ncp\_accumulated as NH,

WHERE NH.confirmed\_a > SOME (

SELECT confirmed\_a

FROM ncp\_accumulated as H

WHERE H.city\_name IN (

SELECT city\_name

FROM city as H2

WHERE H2.province = ‘Hubei’))

AND city\_name NOT IN (SELECT city\_name,

FROM city as NH2

WHERE NH2.province = ‘Hubei’)

1. Find the city name if a passenger can take airplane from Zhuhai to this city through only one stop in the middle.

Ans: SELECT DISTINCT B.city\_d

FROM flight AS B, flight AS A

WHERE B.city\_s = A.city\_d and A.city\_s = ‘Zhuhai’;

1. Find the city name and its population if its name contains a substring ‘ang’.

Ans: SELECT city\_name, population

FROM city

WHERE city\_name like ‘%ang%’;

1. Show the city name if its province is unknown.

Ans: SELECT city\_name

FROM city

WHERE province IS NULL;

1. Find the city name and the average number of its daily confirmed cases in the period from ‘2020-02-13’ to today.

Ans: SELECT city-name, avg(confirmed)

FROM ncp\_report

WHERE day = ‘2020-02-13’;

1. Find the province if it has more than 20 cities.

Ans: SELECT province, count(city\_name)

FROM city

GROUP BY province

HAVING count(city\_name) > 20;

1. Please populate table ncp\_accamulated by querying the table ncp\_report.

Ans: SELECT city\_name, SUM( confirmed ) AS confirmed\_a, SUM( suspected ) AS suspected\_a, SUM( recovered ) as recovered\_a, SUM( dead ) as dead\_a

FROM ncp\_report

Group by city\_name;