Semi-structured data

-

exercises

Exercise 1

- Represent the relations below using the OEM data model.

r_id	name
r1	Hamlet
r2	Normandie
r3	McDonald's

Restaurants

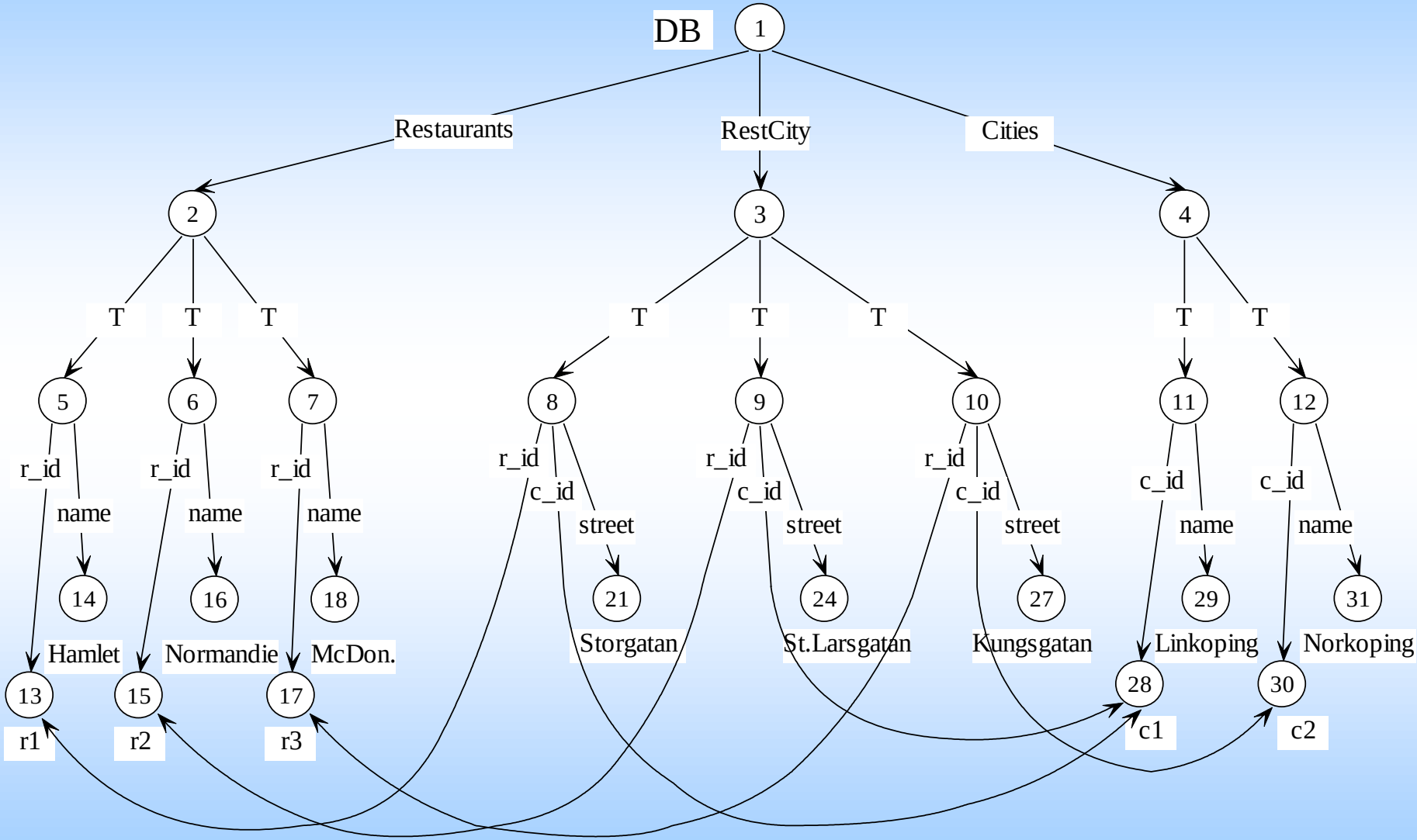
c_id	name
c1	Linkoping
c2	Norkoping

Cities

r_id	c_id	street
r1	c1	Storgatan
r2	c1	St.Larsgatan
r3	c2	Kungsgatan

Restaurants&Cities

Answer exercise 1 - the OEM model



Exercise 2

- Using the data model from the previous question, formulate the following queries using Lorel:
  - find all the restaurants that are located in Linkoping
  - find the address (city and street) of the “Hamlet” restaurant
  - list the restaurants by city (equivalent of GROUP BY)

Answer Exercise 2

find all the restaurants that are located in Linkoping

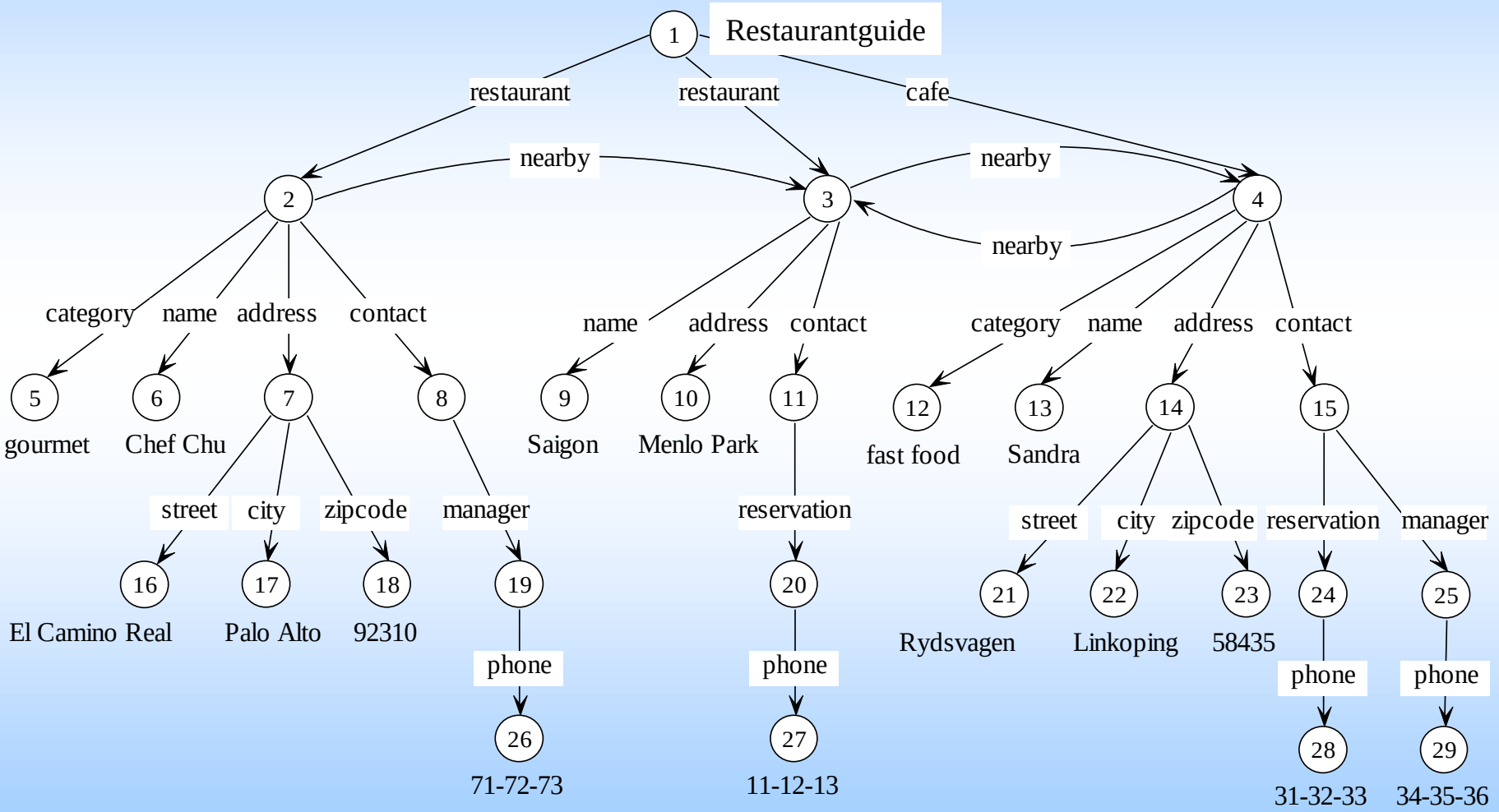
```
select R.name
from DB.Restaurants.T R, DB.RestCities.T RC, DB.Cities.T C
where R.r_id = RC.r_id
      and RC.c_id = C.c_id
      and C.name = “Linköping”
```

list the restaurants by city (equivalent of GROUP BY)

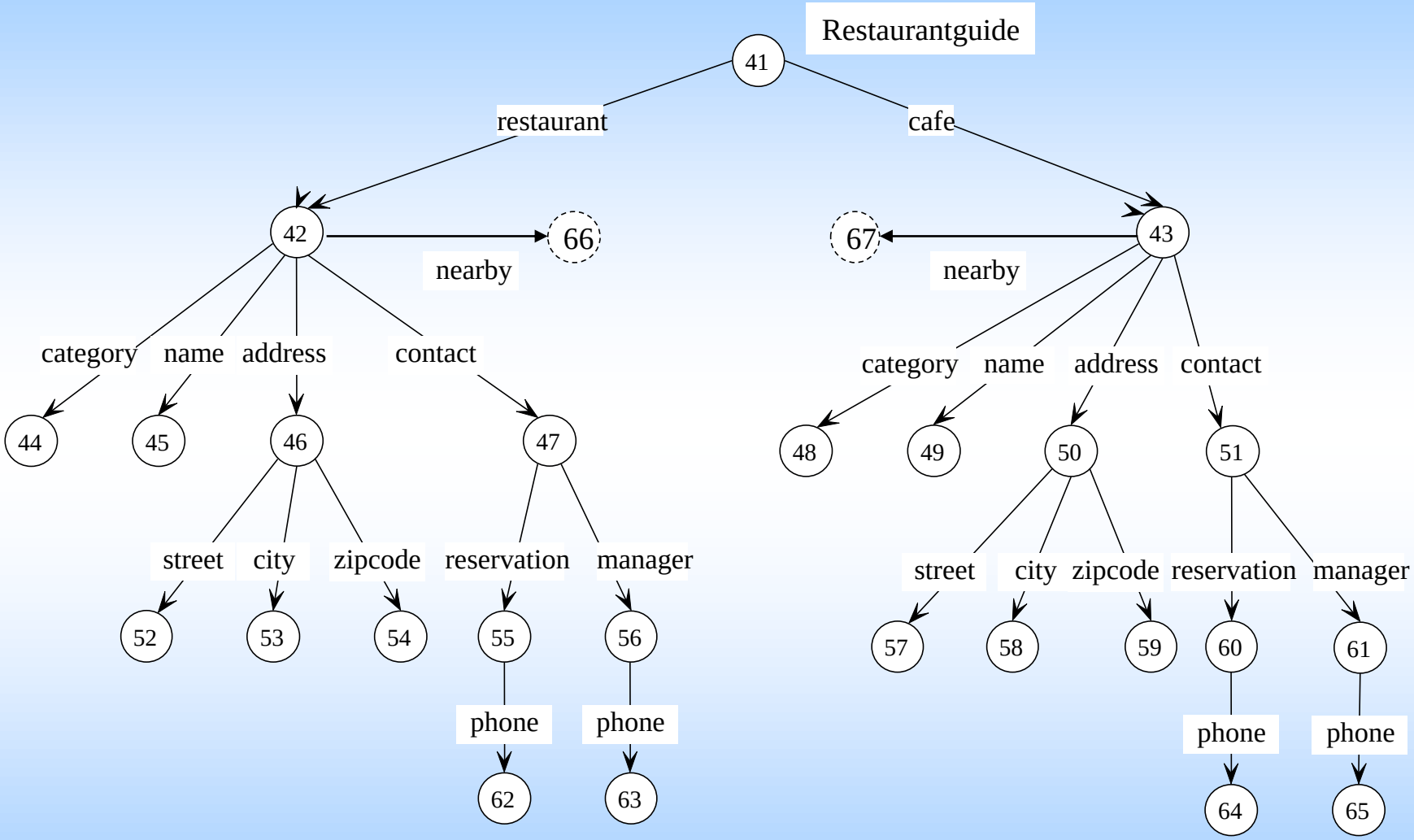
```
select C.name, (select R.name
                      from DB.Restaurants .T R, DB.RestCities.T RC
                      where R.r_id = RC.r_id
                         and RC.c_id = C.c_id)
from DB.Cities.T C
```

Exercise 3

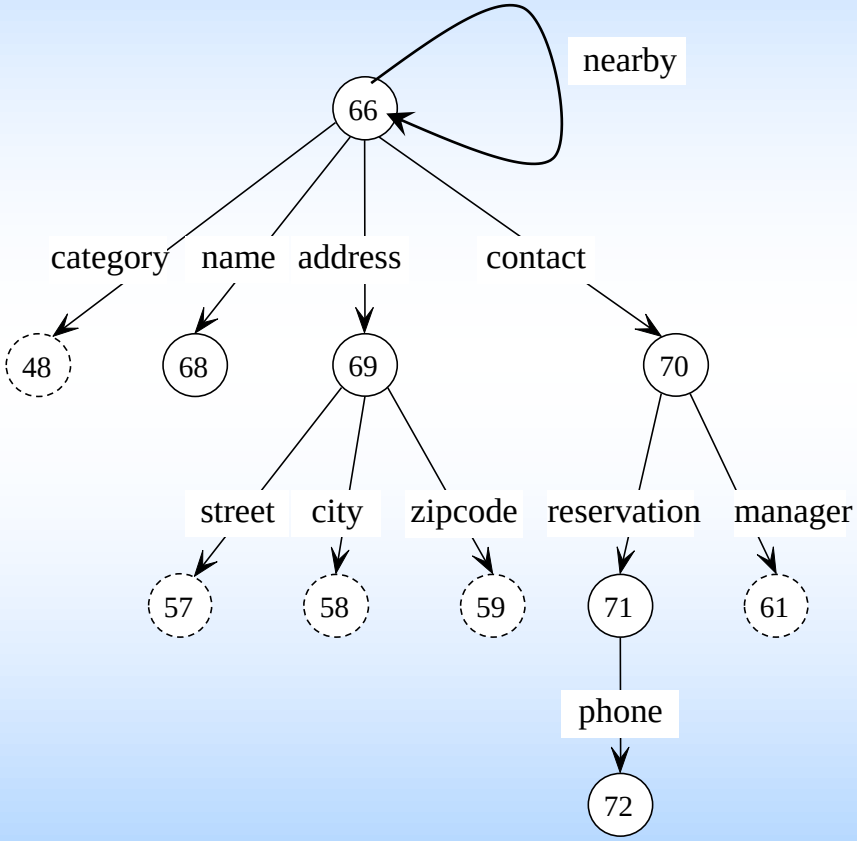
- Draw strong and the minimal Data Guides for the restaurant guide data model below.

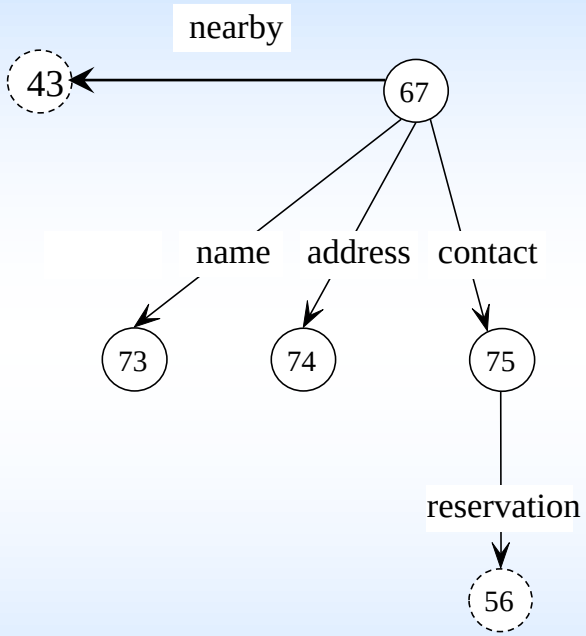


Answer Exercise 3 - Strong Data Guide



Answer Exercise 3 - Strong Data Guide - continued





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55: 19

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64: 28
65: 29
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69: 10,14
70: 11,15

71: 20,24
72: 27,28
73: 9
74: 10
75: 11