

## Non-spatial SQL queries

Compose the SQL queries necessary to find the required information. Think carefully which join operation (INNER JOIN or OUTER JOIN) leads to the correct result. The schema containing the necessary tables is userdemo.

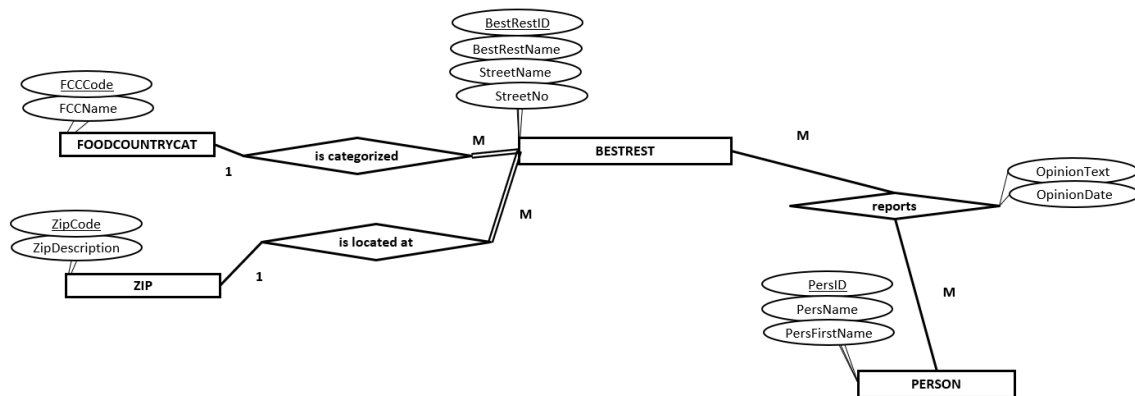
The database example covers a situation where persons can report their best restaurants and the necessary information gets recorded. Have a look at the entity relationship model (ER) and the table printout at the end of this document.

### Exercise 1

- a) What are the first names (Vorname) and surnames (Nachname) of all persons?  
Get an ordered list first names descending.
- b) In which town(s) we can find restaurant Castello?
- c) Which 'best' restaurants are there in the city of Zurich?
- d) How many restaurants do we have in the 'best' restaurant list? Apply a COUNT() expression/function to get a result.
- e) Which Italian restaurants do we find among our restaurants and where are they?
- f) How many reports on restaurants are recorded?
- g) Create a list of all the reports and their details (including opinion, opinion date, personid, name and address of the restaurant)
- h) Which restaurants are listed although there is no report about it? How can this happen? Hint: use OUTER JOIN.
- i) How many persons are listed in the Person table but do not provide any report?

## Entity relationship (ER) model

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### Tables implemented in the database according to the ER model

**userdemo.zip:** zipcode, zipname

**userdemo.foodcountrycat** (food country categories): fcccode, fccdescription

**userdemo.person:** persid, persname, persfirstname

**userdemo.bestrest** (list of best restaurants): bestrestid, bestrestname, streetname, streetno, zipcode, fcccode

**userdemo.report** (report and opinion for a best restaurant): bestrestid, persid, opiniontext, opiniondate

**Beware: Not all records (data) are shown in the following visualizations.**

```
SELECT z.zipcode, z.zipname FROM userdemo.zip z ORDER BY z.zipcode ASC;
```

zip 1

```
SELECT z.zipcode, z.zipname FROM userdemo.zip z ORC
```

	zipcode	zipname
1	1000	Lausanne
2	1003	Lausanne
3	1004	Lausanne
4	1005	Lausanne
5	1006	Lausanne
6	1007	Lausanne
7	1008	Jouxkens-Mézery
8	1009	Pully
9	1010	Lausanne
10	1011	Lausanne
11	1012	Lausanne

```
SELECT fcc.fcccode, fcc.fccdescription  
FROM userdemo.foodcountrycat fcc ORDER BY fcc.fcccode;
```

foodcountrycat 1

```
SELECT fcc.fcccode, fcc.fccdescription FROM userdemo.f
```

	fcccode	fccdescription
1	1	Italian
2	2	Chinese
3	3	Swiss
4	4	Indian
5	5	Japanese
6	6	German
7	7	Iranian

```
SELECT p.persid, p.persname, p.persfirstname
FROM userdemo.person p ORDER BY p.persname ASC, p.persfirstname ASC;
```

person 1

SELECT p.persid, p.persname, p.persfirstname FROM use Enter a SQL expression to filter results (use Ctrl+S)

	persid	persname	persfirstname
1	10	Aliakbarian	Meysam
2	11	Allahbakhshi	Hoda
3	9	Burghardt	Dirk
4	13	Fu	Cheng
5	3	Haosheng	Huang
6	8	Laube	Patrick
7	1	Meier	Christian
8	2	Meier	Silvia
9	4	Meile	Rolf
10	14	Michael	Balmer
11	7	Tomko	Martin
12	6	Weibel	Robert
13	12	Zhou	Zhiyong

```
SELECT be.bestrestid, be.bestrestname, be.streetname, be.streetno, be.zipcode, be.fccode
FROM userdemo.bestrest be ORDER BY be.bestrestname ASC;
```

bestrest 1

SELECT be.bestrestid, be.bestrestname, be.streetname, b Enter a SQL expression to filter results (use Ctrl+Space)

	bestrestid	bestrestname	streetname	streetno	zipcode	fccode
1	3	Alpenrose	Fabrikstrasse	12	8005	3
2	5	Bauschänzli	Stadthausquai	2	8001	6
3	6	Castello	Klosterstrasse	50	8406	1
4	2	Cucina	Kasernenstrasse	77	8004	1
5	1	Cucina	Luisenstrasse	40	8005	1
6	7	Damas	Josefstrasse	151	8005	7
7	4	Guei Bin	Albisstrasse	29	8038	2
8	8	Santa Lucia	Luisenstrasse	31	8005	1
9	9	Santa Lucia	Birmensdorferstrasse	320	8055	1

```
SELECT rp.bestrestid, rp.persid, rp.opiniontext, rp.opiniondate  
FROM userdemo.report rp ORDER BY rp.opiniondate DESC;
```

bestrest 1 report 2

SELECT rp.bestrestid, rp.persid, rp.opiniontext, rp.opiniondate *Enter a SQL expression to filter results (use Ctrl+Space)*

	bestrestid	persid	opiniontext	opiniondate
1	9	14	In this Santalucia the pizza is superb	30.09.2021
2	7	10	Nice, also food from other countries of the near east	25.09.2016
3	3	2	Gute Suppen. Wird vom Limmathof übernommen.	06.05.2016
4	3	1	Very good, but owners will soon change.	03.01.2015
5	4	3	Was the best.	03.03.2015
6	1	4	Siempre for 25 years.	24.12.2014
7	4	4	Miss it.	22.09.1994