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Programming Part

For the following exercises, you have to use your SCHEMA *db_ws_24*!

1. Try to DELETE a dataset of your zip table on …

   a. … which you have a reference out of your table person.
   b. … which you haven't got a reference out of your table person.

   What is happening and why?

2. Table gender
   a. CREATE a new Table gender with the following settings:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
gender	varchar(20)	NO		NULL	

   b. Add in your table gender the following two attributes:

ID	gender
0	Mr.
1	Mrs.

   c. Add now a constraint with the name fk_person2gender and
      set the *gender* as a FOREIGN KEY from the table person which REFERENCES to
      the *id* from gender. Please use RESTRICT for UPDATE & DELETE!

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Theoretical Part

3. We have the following two quantities:
    $M_1 := \{3, 9, 12\}$, $M_2 := \{drei, neun\}$

    a. Show all elements from $M_1 \times M_2$

    b. $R := \{(a, b) \in M_1 \times M_2 \mid b$ is the name for $a\}$
        Represents R a relation, if yes why?

    c. Show the relation R in a table

    d. How are the elements of $M_1 \times M_2$ called?

    e. Show the Symmetry class [R] of the relation R.

4. Describe two differences between tables and relations? Discuss the impacts.

5. Calculate …

    a. … the **cardinality** of the following tables
    b. … the **grade** of the following tables

Tabelle: person

ID	anrede_id	nnam	vnam	plz	ort
1	1	Sabba	Salvatore	63128	Dietzenbach
2	1	Ivanov	Plamen	63512	Hainburg
3	2	Floresta	Giusy	63263	Neu-Isenburg
4	1	Hrga	Denis	63263	Neu-Isenburg
5	2	Gigante	Rosa	63128	Dietzenbach

Tabelle: gender

ID	gender
1	Herr
2	Frau