Aufgabe 3

```
1.  Select cname from cocktail;
2.  Select * from lokal where PLZ = 39108;
3.  Select distinct plz from lokal;
4.  Select * from zutat where alkoholgehalt between 0 AND 50;
5.  Select cname from cocktail where cname like '%__i';
6.  Select cname from cocktail
    union
    Select gname from glas;
7.  Select cid from cocktail
    Minus
    Select cid from zutat_cocktail;
8.  select lname from LOKAL
    MINUS
    select distinct lname from cocktail_lokal, lokal, cocktail
    where cocktail.cid = cocktail_lokal.cid and lokal.lid = cocktail_lokal.lid and cname =
    'Zombie';
9.  select AVG(alkoholgehalt) from Zutat;

10. select cid, MAX(Menge) , MIN(Menge) , Sum(Menge) , count(Menge)
    from Zutat_Cocktail group by cid ;

11. select cid, (sum(zutat_cocktail.menge * zutat.alkoholgehalt)/
    sum(zutat_cocktail.menge))   from zutat_cocktail, zutat
    where zutat.zid = zutat_cocktail.zid
    group by cid;

12. select gname from glas, cocktail where glas.GID = cocktail.GID
    group by gname
    having count(gname) > 2;
```

Aufgabe 4

```
1.create table meine_cocktails as
  select * from cocktail;

  alter table meine_cocktails
  add primary key(cid);

  alter table meine_cocktails
  add foreign key (gid) references glas(gid);
```

```
2.insert into meine_cocktails
  values('18', 'Lila Kuh', 'y', '2');
```

```
3.update meine_cocktails
  set cname = 'Blaue Kuh'
  where cid = '18';
```

4.

```
delete from meine_cocktails where meine_cocktails.cid in (select meine_cocktails.cid
from meine_cocktails, zutat_cocktail, zutat where meine_cocktails.CID =
zutat_cocktail.cid and zutat_cocktail.zid = zutat.zid and zname='Campari');
```

5.

```
create view  Cocktail_Alkoholgehalt(cid, alkoholgehalt) as
select cid, (sum(zutat_cocktail.menge * zutat.alkoholgehalt)/
sum(zutat_cocktail.menge))
from zutat_cocktail, zutat
where zutat.zid = zutat_cocktail.zid
group by cid;
```

6.

```
grant all
on meine_cocktails
to STUD_DB_SS_2021_7
```

7.

```
revoke delete
on meine_cocktails
from STUD_DB_SS_2021_8;
```

Aufgabe 5

Glas(gid, gname)
Person(pid, Vorname, Nachname, Lieblingscocktail)
Cocktail(cid, cname, alkoholisch , gid -> Glas)
Lokal(Lid, Lname ,PLZ , Stadt)
Veranstaltung (Vid , Vtiltel,vdatum, lid -> Lokal)
Zutat (Zid, Alkoholgehalt , Zname)
Lieblingscocktail(pid -> Person, Lieblingscocktail -> Cocktail)

Kauf(pid -> Person , Cid -> Cocktail , Anzahl)
Besucht (Vid -> Veranstaltung , Personnummer -> Person)
Cocktailzutat (Cid-> Cocktail , Zid -> Zutat , Menge)
Cocktailangebot (Cid -> Cocktail , Lid -> Lokal)

DDL

```
create table GLAS (
   gid int primary key,
   gname varchar(50)
);
create table PERSON (
   pid int primary key,
   vorname varchar(50),
   nachname varchar(50)
);
create table COCKTAIL (
   cid int primary key,
   cname varchar(50),
   alkoholisch char(1),
   gid int,
   foreign key(gid) references GLAS(gid) ON DELETE CASCADE
);

create table LOKAL (
   lid int primary key,
   lname varchar(50),
   plz int,
   stadt varchar(50)
);

create table VERANSTALTUNG(
   vid int primary key,
   vtitel varchar(50),
   vdatum date,
   lid int,
   foreign key(lid) references LOKAL(lid) on delete cascade
);
```

```
create table LIEBLINGSCOCKTAIL(
    pid int primary key,
    lieblingscocktail int,
    foreign key(pid) references PERSON(pid) on delete cascade,
    foreign key(lieblingscocktail) references COCKTAIL(cid) on delete cascade
);


CREATE TABLE zutat (
 zid number PRIMARY KEY,
 zname varchar2(20) ,
 alkoholgehalt number
);

CREATE TABLE zutat_cocktail (
 zid number,
 cid number,
 menge number,
 PRIMARY KEY (zid, cid),
 FOREIGN KEY (zid) REFERENCES zutat (zid),
 FOREIGN KEY (cid) REFERENCES cocktail (cid)
);


create table Kauf(
    pid int,
    cid int,
    anzahl int,
    primary key (pid,cid),
    foreign key(pid) references PERSON(pid) on delete cascade,
    foreign key(cid) references COCKTAIL(cid) on delete cascade
)
```

```
create table besucht(
   vid int,
   pid int,
   primary key(vid, pid),
   foreign key(vid) references VERANSTALTUNG(vid) on delete cascade,
   foreign key(pid) references PERSON(pid) on delete cascade
);

CREATE TABLE COCKTAILANGEBOT (
 cid number,
 lid number,
 PRIMARY KEY (lid, cid),
 FOREIGN KEY (lid) REFERENCES lokal (lid) on delete cascade,
 FOREIGN KEY (cid) REFERENCES cocktail (cid) on delete cascade
);

CREATE TABLE COCKTAILZUTAT (
 zid number,
 cid number,
 menge number,
 PRIMARY KEY (zid, cid),
 FOREIGN KEY (zid) REFERENCES zutat (zid),
 FOREIGN KEY (cid) REFERENCES cocktail (cid)
);
```

Anfragen

1.
```
Select count(*) from person join lieblingscocktail on lieblingscocktail.pid = person.pid;
```

2.
```
select nachname from person left outer join besucht on person.pid = besucht.pid where vid is NULL;
```

3.
```
select person.pid, nachname, anzahl from person, (select pid, sum(anzahl) as anzahl from kauf group by pid) as Kaeufe where person.pid = Kaeufe.pid;
```

4.
```
select ('('||p3.nachname||', '||p4.nachname||')') as "(p1, p2)"
from besucht p1, besucht p2, person p3, person p4
where p1.vid = p2.vid and p1.pid < p2.pid and p1.pid = p3.pid and p2.pid = p4.pid
intersect
select ('('||p3.nachname||', '||p4.nachname||')') as "(p1, p2)"
from Lieblingscocktail p1, Lieblingscocktail p2, person p3, person p4
where p1.lieblingscocktail = p2.lieblingscocktail and p1.pid < p2.pid and p1.pid = p3.pid and p2.pid = p4.pid;
```