Aditya Jani
Cs336 Databases Project Part 2

-- Part 1 --

Select distinct 'True' as 'nonempty'
from Bills
where EXISTS(select * from Bills bills
inner join Operates oper1 on bills.bar_name = oper1.BarName
        where bills.day = oper1.OperateDay and (bills.bill_time > oper1.OperateEnd or bills.bill_time <
oper1.OperateStart))
UNION
select distinct 'False' as 'nonempty'
from Bills
where NOT EXISTS(select * from Bills bills
inner join Operates oper1 on bills.bar_name = oper1.BarName
        where bills.day = oper1.OperateDay and (bills.bill_time > oper1.OperateEnd or bills.bill_time <
oper1.OperateStart));

-- Part 2 --
select distinct 'True' as 'nonempty'
from Frequents
where EXISTS(select distinct *
from ((frequents freq2
inner join Drinker drink1 on freq2.DrinkerName = drink1.DrinkerName)
inner join Bar bar on freq2.BarName= bar.BarName)
   where bar.BarState != drink1.DrinkerState)
UNION
select distinct 'False' as 'nonempty'
from Frequents
where NOT EXISTS(select distinct *
from ((frequents freq2
inner join Drinker drink1 on freq2.DrinkerName = drink1.DrinkerName)
inner join Bar bar on freq2.BarName= bar.BarName)
   where bar.BarState != drink1.DrinkerState);

-- Part 3 --
select distinct 'True' as 'nonempty'
from sellsbeer
where EXISTS(SELECT * FROM sellsbeer sell1, sellsbeer sell2
        WHERE sell2.price > sell1.price AND EXISTS (

```
            select * FROM sellsbeer sell3
    WHERE sell3.BeerName = sell2.BeerName AND sell3.price < sell1.price))
Union
select distinct 'False' as 'nonempty'
from sellsbeer
where NOT EXISTS(SELECT * FROM sellsbeer sell1, sellsbeer sell2
        WHERE sell2.price > sell1.price AND EXISTS (
                select * FROM sellsbeer sell3
    WHERE sell3.BeerName = sell2.BeerName AND sell3.price < sell1.price));
```