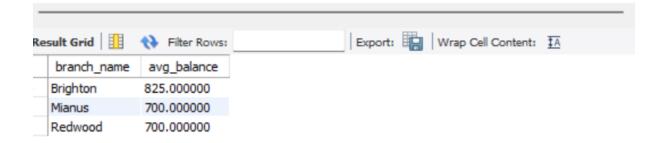
# S20230010225 LAB6(DBMS)

#### Scerenshots and queries

#### Derived tables 1

```
select branch_name,avg_balance
from (
select branch_name,avg(balance) as avg_balance
from account
group by branch_name
) as derived_table
Where avg_balance >=700;
```



Derived tables 2

```
• select avg(balance1)

of from (
select sum(balance) as balance1
from account group by branch_name
) as t1;

ult Grid  Filter Rows:

avg(balance1)

716.666667
```

#### Views cretaion

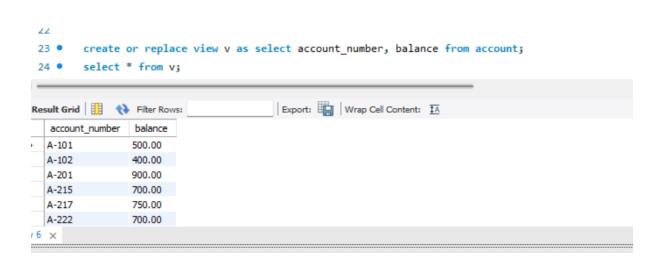
```
-- create view v as select branch_name, amount from loan;
 15
 17 • select * from v
                                   Export: Wrap Cell Content: IA
branch name amount
 Round Hill
            900
  Downtown 1500
  Perryridge
            1500
  Perryridge
          1300
  Downtown
  Redwood
            2000
 Mianus
```

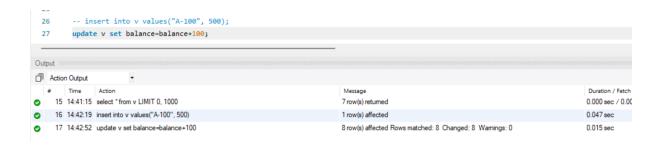
#### Views deletion, updation

```
19
          -- drop view v;
 20
         create view v as select * from loan;
  21 •
  22
Output :::
Action Output
  # Time Action
6 14:33:55 select v LIMIT 0, 1000
                                                                                        Error Code: 1054. Unknown column 'v' in 'field list'
      7 14:34:05 select * from v LIMIT 0, 1000

    8 14:36:44 drop view v

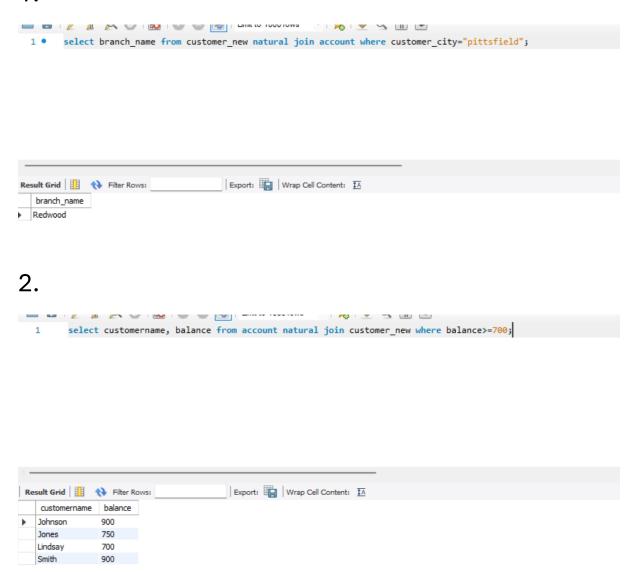
                                                                                        0 row(s) affected
                                                                                        Error Code: 1051. Unknown table 's20230010225_lab4_2.v'
9 14:37:40 drop view v
10 14:37:57 create view v as select * from loan
```





## Practice questions (ungraded ones)

1.



3.

3 • select sum(amount) from borrower natural join loan where customer\_name="Smith";

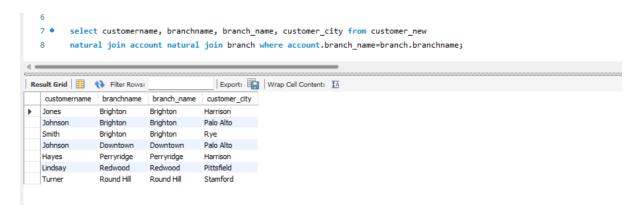


#### 4.

select branch\_city, count(branch\_city) as c from branch group by branch\_city having c>1;



#### 5.



```
select customer_city, sum(amount) as total_loan from
10 •
         customer_new left join borrower on customer_name=customername
11
         left join loan on borrower.loan_number=loan.loan_number
12
13
         group by customer_city;
                                            Export: Wrap Cell Content: IA
Result Grid | | No. Filter Rows:
  customer_city
                total_loan
               NULL
  Palo Alto
  Harrison
               2500
               NULL
  Stamford
               NULL
  Pittsfield
  Rye
                2900
```

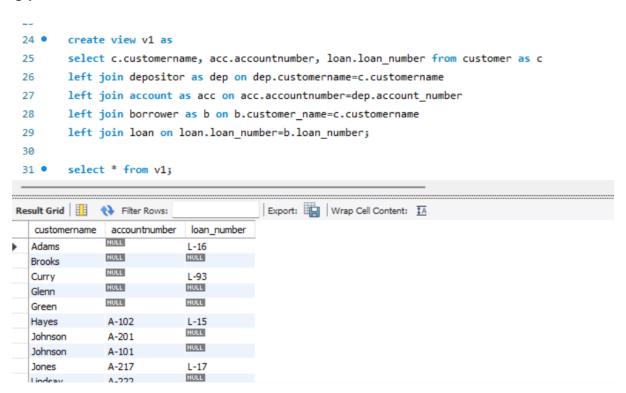
### 7.

```
select customer.customername, sum(balance) as total from account natural join depositor right join customer
        on customer.customername=depositor.customername
17
        group by customername
18
Export: Wrap Cell Content: TA
  customername total
              HULL
  Brooks
              NULL
  Curry
              NULL
  Glenn
              NULL
  Green
              4300
  Hayes
  Johnson
              8600
  Jones
              4300
              4300
  Lindsay
              4300
  Smith
              4300
NULL
  Turner
  Williams
```

8.

```
19 •
        select c.customername, sum(amount) as total from loan
        inner join borrower on loan.loan number=borrower.loan number
 20
        right join customer as c on customername=borrower.customer_name
 21
 22
        group by c.customername;
Export: Wrap Cell Content: IA
   customername
                total
  Adams
               1300
               NULL
  Brooks
  Curry
               500
               NULL
  Glenn
               NULL
  Green
               1500
  Hayes
               NULL
  Johnson
               1000
  Jones
               NULL
  Lindsay
  Smith
               2000
```

9.

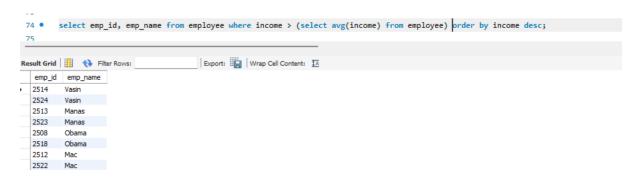


### 10. Question is unclear.

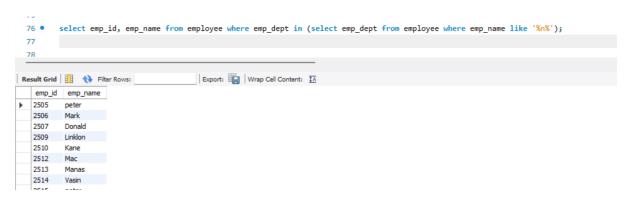
### Assignment questions part 1:

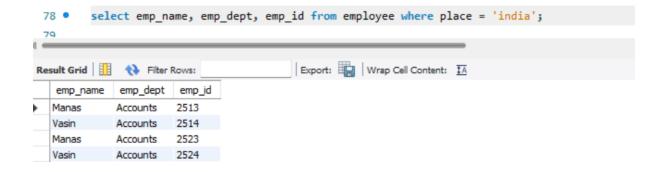
## Q1;

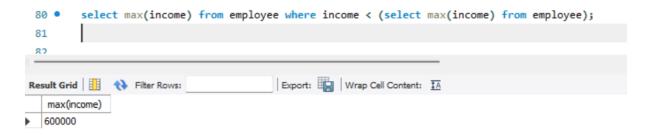
## Q2



## Q3







## Assignment questions part 2(1-10)

### Create table:

```
-- create table boats(
          -- bid int,
          -- bname varchar(50),
          -- color varchar(20));
 13 • ⊖ create table reserves(
 14
          sid int,
          bid int,
          day date);
Output ::
Action Output
     1 16:15:20 create table sailors (sid int, sname varchar(50), rating int, age float )
                                                                                           0 row(s) affected
                                                                                                                                                                    0.031 sec
2 16:16:48 create table boats(bid int, bname varchar(50), color varchar(20))
                                                                                           0 row(s) affected
                                                                                                                                                                    0.015 sec
      3 16:17:28 create table reserves( sid int, bid int, day date)
                                                                                           0 row(s) affected
                                                                                                                                                                    0.016 sec
```

#### Insert into sailors

```
18 • insert into sailors (sid, sname, rating, age) values
19
        (22, 'Dustin', 7, 45),
       (29, 'Brutus', 1, 33),
 20
        (31, 'Lubber', 8, 55.5),
22
        (32, 'Andy', 8, 25.5),
        (58, 'Rusty', 10, 35),
 23
 24
       (64, 'Horatio', 7, 35),
        (71, 'Zorba', 10, 16),
 25
        (74, 'Horatio', 9, 40),
 27
        (85, 'Art', 3, 25.5),
        (95, 'Bob', 3, 63.5);
)utput :
Action Output
 # Time
                Action
                                                                                     Message
1 16:15:20 create table sailors (sid int, sname varchar (50), rating int, age float )
                                                                                     0 row(s) affected
                                                                                                                                                         0.031
2 16:16:48 create table boats (bid int, bname varchar(50), color varchar(20))
                                                                                     0 row(s) affected
                                                                                                                                                         0.015
   3 16:17:28 create table reserves( sid int, bid int, day date)
                                                                                     0 row(s) affected
                                                                                                                                                         0.016
1 16:19:37 insert into sailors (sid, sname, rating, age) values (22, "Dustin', 7, 45), (29, "Brutus', 1... 10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0
                                                                                                                                                         0.016
```

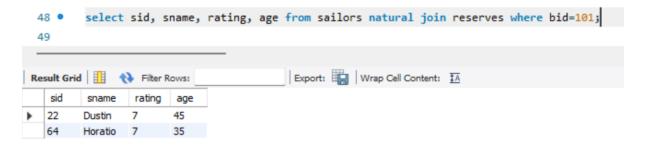
#### Insert into boats

```
insert into boats (bid, bname, color)values
30 •
         (101, 'Interlake', 'blue'),
31
         (102, 'Interlake', 'red'),
32
         (103, 'Clipper', 'green'),
34
         (104, 'Marine', 'red');
35
utput ::
Action Output
# Time
                                                                                               Message
    1 16:15:20 create table sailors( sid int, sname varchar(50), rating int, age float )
                                                                                              0 row(s) affected
2 16:16:48 create table boats(bid int, bname varchar(50), color varchar(20))
                                                                                              0 row(s) affected
     3 16:17:28 create table reserves( sid int, bid int, day date)
                                                                                              0 row(s) affected
4 16:19:37 insert into sailors (sid, sname, rating, age) values (22, 'Dustin', 7, 45), (29, 'Brutus', 1... 10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0
     5 16:20:40 insert into boats (bid, bname, color)values (101, 'Interlake', 'blue'), (102, 'Interlake', '... 4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0
```

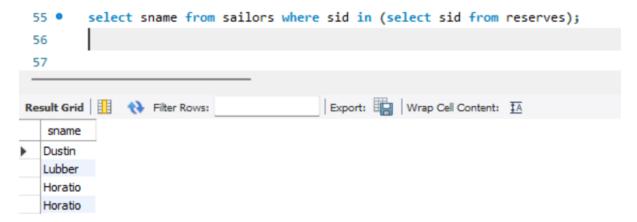
#### Insert into reserves

insert into reserves (sid, bid, day) values
(22, 101, '1998-10-10'),
(22, 102, '1998-10-00'),
(22, 103, '1998-10-08'),
(22, 104, '1998-10-07'),
(31, 102, '1998-11-10'),
(31, 103, '1998-11-06'),
(31, 104, '1998-11-12'),
(64, 101, '1998-09-05'),
(64, 102, '1998-09-08'),
(74, 103, '1998-09-08');

### Q1







```
select distinct s.sid, s.sname from sailors s, reserves r1, reserves r2

where s.sid = r1.sid and s.sid = r2.sid and r1.day = r2.day and r1.bid <> r2.bid;

sid sname

22 Dustin
```

```
select distinct r.sid from reserves r join boats b on r.bid = b.bid

where b.color = 'red' or b.color = 'green';

Result Grid Filter Rows:

| Export: | Wrap Cell Content: | A
```

## Q7

## Q8

```
66
       select rating, avg(age) from sailors group by rating;
67 •
68
 69
                                   Export: Wrap Cell Content: IA
rating avg(age)
       33
  1
        40.5
       25.5
  10
  9
        40
  3
       44.5
```



## SQL code:

```
-- create table sailors(
-- sid int,
-- sname varchar(50),
-- rating int,
-- age float
--);
-- create table boats(
-- bid int,
-- bname varchar(50),
-- color varchar(20));
-- create table reserves(
-- sid int,
-- bid int,
-- day date);
-- insert into sailors (sid, sname, rating, age) values
-- (22, 'Dustin', 7, 45),
-- (29, 'Brutus', 1, 33),
-- (31, 'Lubber', 8, 55.5),
-- (32, 'Andy', 8, 25.5),
-- (58, 'Rusty', 10, 35),
-- (64, 'Horatio', 7, 35),
-- (71, 'Zorba', 10, 16),
-- (74, 'Horatio', 9, 40),
```

```
-- (85, 'Art', 3, 25.5),
-- (95, 'Bob', 3, 63.5);
-- insert into boats (bid, bname, color)values
-- (101, 'Interlake', 'blue'),
-- (102, 'Interlake', 'red'),
-- (103, 'Clipper', 'green'),
-- (104, 'Marine', 'red');
-- insert into reserves (sid, bid, day) values
-- (22, 101, '1998-10-10'),
-- (22, 102, '1998-10-10'),
-- (22, 103, '1998-10-08'),
-- (22, 104, '1998-10-07'),
-- (31, 102, '1998-11-10'),
-- (31, 103, '1998-11-06'),
-- (31, 104, '1998-11-12'),
-- (64, 101, '1998-09-05'),
-- (64, 102, '1998-09-08'),
-- (74, 103, '1998-09-08');
-- select sid, sname, rating, age from sailors natural join reserves where bid=101;
-- select * from boats natural join sailors natural join reserves where sname='bob';
-- select sname from sailors natural join reserves natural join boats
-- where color='red' order by age;
```

```
-- select sname from sailors where sid in (select sid from reserves);
-- select distinct s.sid, s.sname from sailors s, reserves r1, reserves r2
-- where s.sid = r1.sid and s.sid = r2.sid and r1.day = r2.day and r1.bid <> r2.bid;
-- select distinct r.sid from reserves r join boats b on r.bid = b.bid
-- where b.color = 'red' or b.color = 'green';
-- select sname, age from sailors where age = (select min(age) from sailors);
-- select count(distinct(sname)) from sailors;
-- select rating, avg(age) from sailors group by rating;
-- select rating, avg(age) from sailors group by rating having count(rating) >= 2;
-- select emp_name, doj from employee where emp_dept=(select distinct emp_dept
from employee where emp_name='mark')
-- and emp_name<>'mark'
-- select emp_id, emp_name from employee where income > (select avg(income) from
employee) order by income desc;
-- select emp_id, emp_name from employee where emp_dept in (select emp_dept from
employee where emp_name like '%n%');
-- select emp_name, emp_dept, emp_id from employee where place = 'india';
```

select max(income) from employee where income < (select max(income) from employee);
Ungraded queires:
select customername, balance from account natural join customer_new where balance>=700;
select sum(amount) from borrower natural join loan where customer_name="Smith";
select branch_city, count(branch_city) as c from branch group by branch_city having c>1;
select customername, branchname, branch_name, customer_city from customer_new
natural join account natural join branch where account.branch_name=branch.branchname;
select customer_city, sum(amount) as total_loan from
customer_new left join borrower on customer_name=customername
left join loan on borrower.loan_number=loan.loan_number
group by customer_city;
select customer.customername, sum(balance) as total from account natural join depositor right join customer
on customer.customername=depositor.customername
group by customername
select c.customername, sum(amount) as total from loan

- -- inner join borrower on loan.loan\_number=borrower.loan\_number
- -- right join customer as c on customername=borrower.customer\_name
- -- group by c.customername;
- -- create view v1 as
- -- select c.customername, acc.accountnumber, loan.loan\_number from customer as c
- -- left join depositor as dep on dep.customername=c.customername
- -- left join account as acc on acc.accountnumber=dep.account\_number
- -- left join borrower as b on b.customer\_name=c.customername
- -- left join loan on loan.loan\_number=b.loan\_number;
- -- select \* from v1;