S20230010225 DBMS
LAB 5 SCREENSHOTS

Create tables for practice problems

```
1   -- create table small_customers(id smallint,name varchar(10),age smallint,address varchar(15),salary int);
2   -- create table small_customers2(id smallint,name varchar(10),age smallint,address varchar(15),salary int);
3   -- create table orders (oid int,date datetime,customer_id smallint,amount int);
4   -- create table datdemo(val datetime);
5
6
```

PG1 Q1

```
insert into datdemo values(current_date());
```

PG1 Q2

```
7
8   insert into datdemo values(current_time());
```

PG1 Q3

```
9
10  insert into datdemo values(current_timestamp());
```

PG1 Q4

```
11
12 •  select DATEDIFF("2017-06-25 09:34:21", "2017-06-15 15:25:35");
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

DATEDIFF("2017-06-25 09:34:21", "2017-06-15 15:25:35")
10

PG1 Q5

```
13
14 •  select ADDDATE("2017-06-15 09:34:21", INTERVAL 3 HOUR);
15
16
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

ADDDATE("2017-06-15 09:34:21", INTERVAL 3 HOUR)
2017-06-15 12:34:21

```
15
16 •  select ADDDATE("2017-06-15", INTERVAL -2 MONTH);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

ADDDATE("2017-06-15", INTERVAL -2 MONTH)
2017-04-15

PG 1 Q6

```
17
18 •  SELECT ADDTIME("2017-06-15 09:34:21.000001", "5 2:10:5.000003");
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

ADDTIME("2017-06-15 09:34:21.000001", "5 2:10:5.000003")
2017-06-20 11:44:26.000004

All questions on page 1 are finished

PG3 Q1

```
20
21 •  select * from small_customers where id in (select id from small_customers where salary>4500);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id	name	age	address	salary
4	Chaitali	25	Mumbai	6500
7	Muffy	24	Indore	10000

Pg3 q2

```
22
23 •  insert into small_customers2 select * from small_customers where id in (select id from small_customers);
24
25
```

PG3 q3

```
24
25 •  update small_customers set SALARY = SALARY * 0.25 where age in (select age from small_customers2 WHERE age >= 27);
26
```

PG3 Q4

```
26
27 •  delete from small_customers where age in (SELECT AGE FROM small_customers2 WHERE AGE >= 27);
28
29
```

PG4 Q1

```
28
29 •  alter table orders change column oid id smallint;
30 •  Select small_customers.id, name, orders.id
31    from small_customers, orders;
32
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id	name	id
2	Khilan	103
2	Khilan	101
2	Khilan	100
2	Khilan	102
3	kaushik	103
3	kaushik	101
3	kaushik	100
3	kaushik	102
4	Chaitali	103
4	Chaitali	101
4	Chaitali	100

Result 12

PG4 Q2

```
32
33 •  select s.id, name, o.id from small_customers as s, orders as o;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id	name	id
2	Khilan	103
2	Khilan	101
2	Khilan	100
2	Khilan	102
3	kaushik	103
3	kaushik	101
3	kaushik	100
3	kaushik	102
4	Chaitali	103
4	Chaitali	101
4	Chaitali	100

Result 13

PG4 Q3

```
35 •  SELECT id from small_customers WHERE id = ANY(Select customer_id from orders);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id
2
3
4

Test for empty relations:

```
37 •  small_customers where not exists(select * from orders where small_customers.id=orders.customer_
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name
Komal
Muffy

Joins:

```
37    -- select name from small_customers where not exists(select * from orders whe
38
39 •  select orders.id,name from small_customers natural join orders
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

id	name

```
40
41 •  select orders.id,name from small_customers inner join orders on small_customers.id=orders.id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

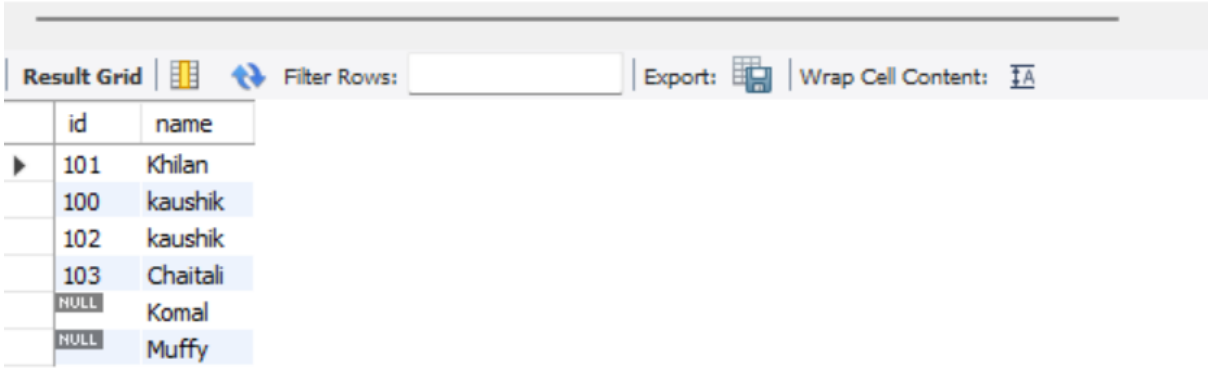
id	name

```
43 •  select orders.id,name from small_customers right join orders on
44    small_customers.id=orders.id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id	name
102	NULL
100	NULL
101	NULL
103	NULL

```
46 •  select orders.id,name from small_customers left join orders on
47    small_customers.id=orders.customer_id;
```



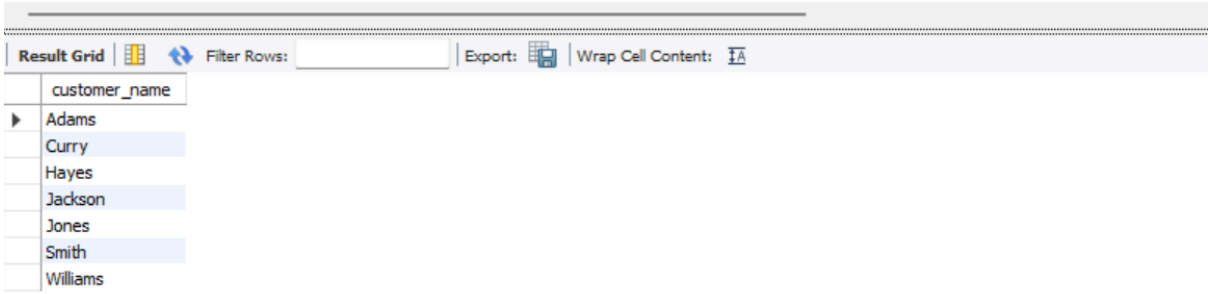
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id	name
101	Khilan
100	kaushik
102	kaushik
103	Chaitali
NULL	Komal
NULL	Muffy

Questions:

Q1

```
49 •  select customer_name from borrower union select customer_name from depositor
50
51
52
```

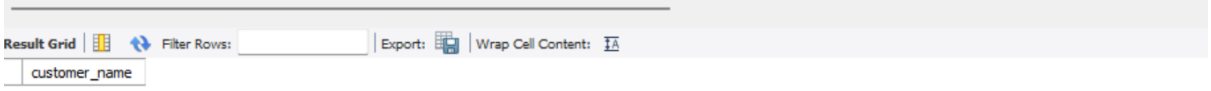


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_name
Adams
Curry
Hayes
Jackson
Jones
Smith
Williams

Q2

```
51 •  select customer_name from borrower where customer_name in (select customer_name from depositor)
52
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_name

Q3

```
53
54 • select distinct b.branch_name from branch as b join branch as s on b.assets>s.assets where b.branch_city="Brooklyn"
55
56
57
58
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

branch_name
Downtown
Brighton

Q4

```
56 • select distinct borrower.customer_name from borrower join loan on borrower.loan_number=loan.loan_number
57   left join depositor on borrower.customer_name=depositor.customer_name where depositor.customer_name is null
58
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_name

Q5

```
58
59 • select branch_name from branch where assets >
60   any(select assets from branch where branch_city="Brooklyn")
61
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

branch_name
Downtown
Round Hill
NULL

Q6

```
61
62 • select branch_name, avg(balance) from account group by branch_name order by avg(balance) desc limit 1;
63
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

branch_name	avg(balance)
Brighton	825.000000

Q7

```
63
64 • select distinct customer_name from borrower where exists(select * from depositor where depositor.customer_name=borrower.customer_name)
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_name
Smith
Hayes
Jones

Q8

```
66
67 • select * from loan natural join borrower
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

loan_number	branch_name	amount	customer_name
L-11	Round Hill	900	Smith
L-15	Perryridge	1500	Hayes
L-16	Perryridge	1300	Adams
L-17	Downtown	1000	Jones
L-17	Downtown	1000	Williams
L-23	Redwood	2000	Smith

Q9

```
68
69 • select * from loan inner join borrower on loan.loan_number=borrower.loan_number
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

loan_number	branch_name	amount	customer_name	loan_number
L-11	Round Hill	900	Smith	L-11
L-15	Perryridge	1500	Hayes	L-15
L-16	Perryridge	1300	Adams	L-16
L-17	Downtown	1000	Jones	L-17
L-17	Downtown	1000	Williams	L-17
L-23	Redwood	2000	Smith	L-23

Q10

```
70
71 • select * from loan right join borrower on loan.loan_number=borrower.loan_number
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

loan_number	branch_name	amount	customer_name	loan_number
L-11	Round Hill	900	Smith	L-11
L-15	Perryridge	1500	Hayes	L-15
L-16	Perryridge	1300	Adams	L-16
L-17	Downtown	1000	Jones	L-17
L-17	Downtown	1000	Williams	L-17
L-23	Redwood	2000	Smith	L-23

Q11

```
72
73 • select * from loan right outer join borrower on loan.loan_number=borrower.loan_number
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

loan_number	branch_name	amount	customer_name	loan_number
L-11	Round Hill	900	Smith	L-11
L-15	Perryridge	1500	Hayes	L-15
L-16	Perryridge	1300	Adams	L-16
L-17	Downtown	1000	Jones	L-17
L-17	Downtown	1000	Williams	L-17
L-23	Redwood	2000	Smith	L-23

Q12

```
74
75 • select * from loan left outer join borrower on loan.loan_number=borrower.loan_number
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

loan_number	branch_name	amount	customer_name	loan_number
L-15	Perryridge	1500	Hayes	L-15
L-16	Perryridge	1300	Adams	L-16
L-17	Downtown	1000	Jones	L-17
L-17	Downtown	1000	Williams	L-17
L-23	Redwood	2000	Smith	L-23
L-93	Mianus	500	Curry	L-93

Q13

```
76
77 • select * from loan left outer join borrower on loan.loan_number=borrower.loan_number
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

loan_number	branch_name	amount	customer_name	loan_number
L-11	Round Hill	900	Smith	L-11
L-14	Downtown	1500	NULL	NULL
L-15	Perryridge	1500	Hayes	L-15
L-16	Perryridge	1300	Adams	L-16
L-17	Downtown	1000	Jones	L-17
L-17	Downtown	1000	Williams	L-17

Q14

```
79 • select * from loan left outer join borrower on loan.loan_number=borrower.loan_number
80   union
81   select * from loan right outer join borrower on loan.loan_number=borrower.loan_number
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

loan_number	branch_name	amount	customer_name	loan_number
L-11	Round Hill	900	Smith	L-11
L-14	Downtown	1500	NULL	NULL
L-15	Perryridge	1500	Hayes	L-15
L-16	Perryridge	1300	Adams	L-16
L-17	Downtown	1000	Jones	L-17
L-17	Downtown	1000	Williams	L-17

Result 43

SQL QUERY: Please uncomment each query before running:

-- create table small_customers(id smallint,name varchar(10),age smallint,address varchar(15),salary int);

-- create table small_customers2(id smallint,name varchar(10),age smallint,address varchar(15),salary int);

-- create table orders (oid int,date datetime,customer_id smallint,amount int);

-- create table datdemo(val datetime);

-- insert into datdemo values(current_date());

-- insert into datdemo values(current_time());

-- insert into datdemo values(current_timestamp());

-- select DATEDIFF("2017-06-25 09:34:21", "2017-06-15 15:25:35");

-- select ADDDATE("2017-06-15 09:34:21", INTERVAL 3 HOUR);

```
-- select ADDDATE("2017-06-15", INTERVAL -2 MONTH);

-- SELECT ADDTIME("2017-06-15 09:34:21.000001", "5 2:10:5.000003");


-- select * from small_customers where id in (select id from small_customers where salary>4500);

-- insert into small_customers2 select * from small_customers where id in (select id from small_customers);

-- update small_customers set SALARY = SALARY * 0.25 where age in (select age from small_customers2 WHERE age >= 27);

-- delete from small_customers where age in (SELECT AGE FROM small_customers2 WHERE AGE >= 27);

-- alter table orders change column oid id smallint;

-- Select small_customers.id, name, orders.id

-- from small_customers, orders;

-- select s.id, name, o.id from small_customers as s, orders as o;

-- SELECT id from small_customers WHERE id = ANY(Select customer_id from orders);

-- select name from small_customers where not exists(select * from orders where small_customers.id=orders.customer_id)
```

```
-- select orders.id,name from small_customers natural join orders

-- select orders.id,name from small_customers inner join orders on
small_customers.id=orders.id;

-- select orders.id,name from small_customers right join orders on

-- small_customers.id=orders.id;

-- select orders.id,name from small_customers left join orders on

-- small_customers.id=orders.customer_id;

-- select customer_name from borrower union select customer_name from depositor

-- select customer_name from borrower where customer_name in (select
customer_name from depositor)

-- select distinct b.branch_name from branch as b join branch as s on b.assets>s.assets
where b.branch_city="Brooklyn"

-- select distinct borrower.customer_name from borrower join loan on
borrower.loan_number=loan.loan_number

-- left join depositor on borrower.customer_name=depositor.customer_name where
depositor.customer_name is null

-- select branch_name from branch where assets >

-- any(select assets from branch where branch_city="Brooklyn")

-- select branch_name, avg(balance) from account group by branch_name order by
avg(balance) desc limit 1;
```

-- select distinct customer_name from borrower where exists(select * from depositor where depositor.customer_name=borrower.customer_name)

-- select * from loan natural join borrower

-- select * from loan inner join borrower on loan.loan_number=borrower.loan_number

-- select * from loan right join borrower on loan.loan_number=borrower.loan_number

-- select * from loan right outer join borrower on loan.loan_number=borrower.loan_number

-- select * from loan left outer join borrower on loan.loan_number=borrower.loan_number

-- select * from loan left outer join borrower on loan.loan_number=borrower.loan_number

-- select * from loan left outer join borrower on loan.loan_number=borrower.loan_number

-- union

-- select * from loan right outer join borrower on loan.loan_number=borrower.loan_number