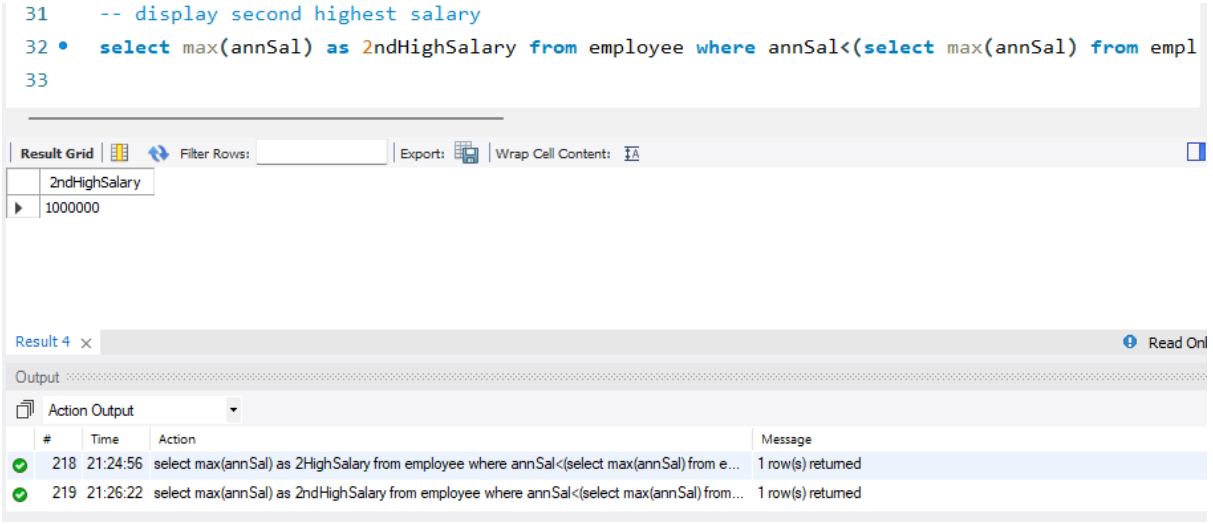
SQL CASE STUDY

Name: *Karella Rupa*

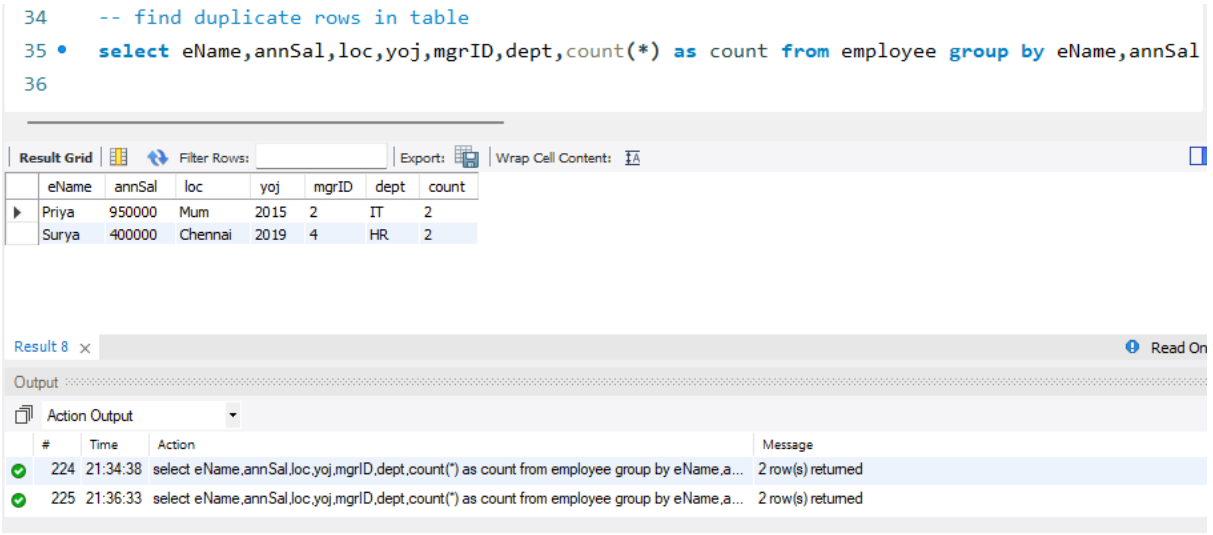
1. **Query to find Second Highest Salary of Employee**

   select max(annSal) as 2ndHighSalary from employee where annSal<(select max(annSal) from employee);



2. **Query to find duplicate rows in table**

   select eName, annSal, loc, yoj, mgrID, dept, count(*) as count from employee group by eName, annSal, loc, yoj, mgrID, dept having count(*)> 1;



3. Query to fetch monthly Salary of Employee if annual salary is given

select *, annSal/12 as monSal from employee;

```
37    -- to fetch  monthly Salary of Employee if annual salary is given
38 •  select *, annSal/12 as monSal from employee;
```

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

eID	eName	loc	dept	annSal	yoj	mgrID	monSal
1	Anil	Hyd	IT	700000	2017	6	58333.3333
2	Kavya	Mum	HR	500000	2016	1	41666.6667
3	Arjun	Bnglr	NULL	450000	2016	2	37500.0000
4	Rohit	Chennai	Sales	550000	2015	3	45833.3333
5	Janvi	Pune	Sales	400000	2019	5	33333.3333
6	Meera	Pune	IT	750000	2016	3	62500.0000

Result 9 | Read On

Output

Action Output

#	Time	Action	Message
225	21:36:33	select eName,annSal,loc,yoj,mgrID,dept,count(*) as count from employee group by eName,a...	2 row(s) returned
226	21:43:28	select *, annSal/12 as monSal from employee LIMIT 0, 1000	20 row(s) returned

4. Query to fetch first record from Employee table

select * from employee limit 1;

```
40    -- to fetch first record from Employee table
41 •  select * from employee limit 1;
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
1	Anil	Hyd	IT	700000	2017	6

employee 10 | Read O

Output

Action Output

#	Time	Action	Message
226	21:43:28	select *, annSal/12 as monSal from employee LIMIT 0, 1000	20 row(s) returned
227	22:01:32	select * from employee limit 1	1 row(s) returned

5. Query to fetch last record from Employee table

select * from employee order by eID desc limit 1;

```
43    -- to fetch last record from Employee table
44 •  select * from employee order by eID desc limit 1;
45
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
20	Sai	Pune	NULL	1000000	2016	1

employee 11 | Read Only

Output

Action Output

#	Time	Action	Message
227	22:01:32	select * from employee limit 1	1 row(s) returned
228	22:06:37	select * from employee order by eID desc limit 1	1 row(s) returned

6. Query to fetch first five records from Employee table

select * from employee limit 5;

```
46    -- display first 5 Records from Employee table
47 •  select * from employee limit 5;
48
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
1	Anil	Hyd	IT	700000	2017	6
2	Kavya	Mum	HR	500000	2016	1
3	Arjun	Bnglr	NULL	450000	2016	2
4	Rohit	Chennai	Sales	550000	2015	3
5	Janvi	Pune	Sales	400000	2019	5

employee 16 | Read Only

Output

Action Output

#	Time	Action	Message
234	22:14:31	select * from employee limit 5	5 row(s) returned

7. Query to display Nth Record from Employee table

select * from employee limit 1 offset (n-1);
→ OFFSET keyword is often used with LIMIT to control the number of rows returned by a query and to specify the starting point for fetching the results

```
49    -- display Nth Record from Employee table(say n=12)
50    -- select * from employee limit 1 offset (n-1);
51 •  select * from employee limit 1 offset 11;
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
12	Mahesh	Pune	HR	650000	2016	6

employee 21 × Read Onl

Output

Action Output

#	Time	Action	Message
240	22:29:37	select * from employee limit 5	5 row(s) returned
241	22:29:43	select * from employee limit 1 offset 11	1 row(s) returned

8. Query to display 3 Highest salaries records from Employee table

select * from employee order by annSal desc limit 3;

```
53    -- display 3 Highest salaries records from Employee table
54 •  select * from employee order by annSal desc limit 3;
55
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
9	Praveen	Mum	IT	1200000	2017	2
20	Sai	Pune	NULL	1000000	2016	1
13	Priya	Mum	IT	950000	2015	2

employee 22 × Read Onl

Output

Action Output

#	Time	Action	Message
242	22:39:08	select * from employee order by monSal desc limit 3	Error Code: 1054. Unknown column 'monSal' in 'order clause'
243	22:39:24	select * from employee order by annSal desc limit 3	3 row(s) returned

9. How to Display Odd rows in Employee table

```
56    -- Display Odd rows in the Employee table
57 •  select * from employee where eID%2!=0;
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
1	Anil	Hyd	IT	700000	2017	6
3	Arjun	Bnglr	NULL	450000	2016	2
5	Janvi	Pune	Sales	400000	2019	5
7	Priya	Mum	IT	950000	2015	2
9	Praveen	Mum	IT	1200000	2017	2
11	Mohan	Bnglr	IT	700000	2018	1

employee 23

Output

Action Output

#	Time	Action	Message
243	22:39:24	select * from employee order by annSal desc limit 3	3 row(s) returned
244	22:46:18	select * from employee where eID%2!=0 LIMIT 0, 1000	10 row(s) returned

10. How to Display Even rows in the Employee table

```
59    -- Display even rows in the Employee table
60 •  select * from employee where eID%2=0;
61
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
2	Kavya	Mum	HR	500000	2016	1
4	Rohit	Chennai	Sales	550000	2015	3
6	Meera	Pune	IT	750000	2016	3
8	Anjali	Hyd	NULL	600000	2015	4
10	Surya	Chennai	HR	400000	2019	4
12	Mahesh	Pune	HR	650000	2016	6

employee 24

Read O

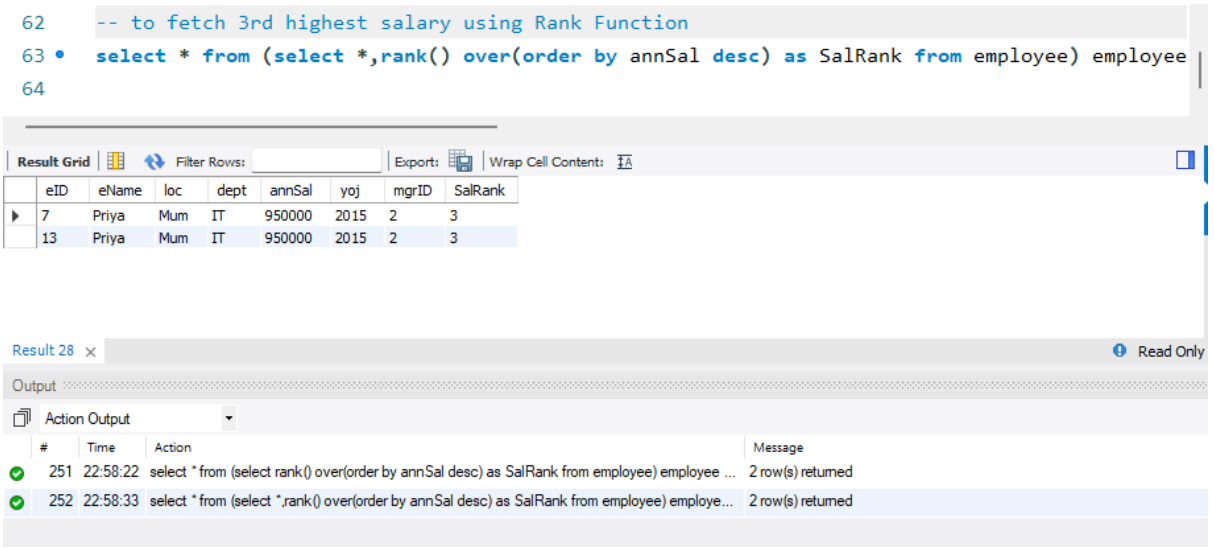
Output

Action Output

#	Time	Action	Message
244	22:46:18	select * from employee where eID%2!=0 LIMIT 0, 1000	10 row(s) returned
245	22:47:42	select * from employee where eID%2=0 LIMIT 0, 1000	10 row(s) returned

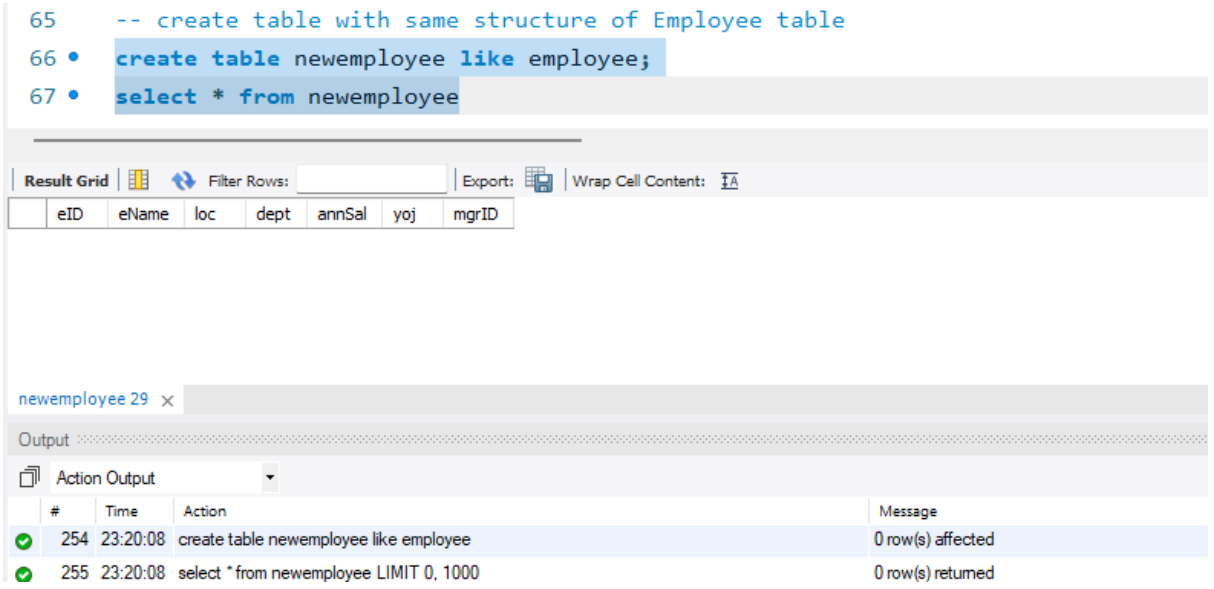
11. How to fetch 3rd highest salary using Rank Function

select * from (select *,rank() over(order by annSal desc) as SalRank from employee) employee where SalRank=3 ;



12. How Can i create table with same structure of Employee table

create table newemployee like employee;
select * from newemployee



13. Display first 50% records from the Employee table?

```
69    -- Display first 50% records from Employee table
70 •  select * from employee where eid<=(select count(eid)/2 from employee);
71
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
1	Anil	Hyd	IT	700000	2017	6
2	Kavya	Mum	HR	500000	2016	1
3	Arjun	Bnglr	NULL	450000	2016	2
4	Rohit	Chennai	Sales	550000	2015	3
5	Janvi	Pune	Sales	400000	2019	5
6	Meera	Pune	IT	750000	2016	3
7	Priya	Mum	IT	950000	2015	2
8	Anjali	Hyd	NULL	600000	2015	4
9	Praveen	Mum	IT	1200000	2017	2
10	Surya	Chennai	HR	400000	2019	4

employee 46 × Read Only

Output

Action Output

#	Time	Action	Message
73	10:52:54	select * from employee where eid>(select count(eid)/2 from employee) LIMIT 0, 1000	10 row(s) returned
74	10:53:44	select * from employee where eid<=(select count(eid)/2 from employee) LIMIT 0, 1000	10 row(s) returned

14. Display the last 50% records from the Employee table?

```
72    -- Display last 50% records from Employee table
73 •  select * from employee where eid>(select count(eid)/2 from employee);
74
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
11	Mohan	Bnglr	IT	700000	2018	1
12	Mahesh	Pune	HR	650000	2016	6
13	Priya	Mum	IT	950000	2015	2
14	Ajay	Hyd	Mrkt	400000	2021	3
15	Vamsi	Chennai	Mrkt	550000	2018	5
16	Anand	Mum	Sales	400000	2022	4
17	Rupa	Bnglr	IT	550000	2019	1
18	Sri	Pune	Sales	350000	2023	6
19	Surya	Chennai	HR	400000	2019	4
20	Sai	Pune	NULL	1000000	2016	1

employee 47 × Read Only

Output

Action Output

#	Time	Action	Message
74	10:53:44	select * from employee where eid<=(select count(eid)/2 from employee) LIMIT 0, 1000	10 row(s) returned
75	10:54:35	select * from employee where eid>(select count(eid)/2 from employee) LIMIT 0, 1000	10 row(s) returned

15. How Can I create a table with the same structure with data from the Employee table?

create table newemployee1 as select * from employee;
select * from newemployee1;

```
75    -- create a table with the same structure with data from the Employee table
76 •  create table newemployee1 as select * from employee;
77 •  select * from newemployee1;
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
1	Anil	Hyd	IT	700000	2017	6
2	Kavya	Mum	HR	500000	2016	1
3	Arjun	Bnglr	NULL	450000	2016	2
4	Rohit	Chennai	Sales	550000	2015	3
5	Janvi	Pune	Sales	400000	2019	5
6	Meera	Pune	IT	750000	2016	3
7	Priya	Mum	IT	950000	2015	2
8	Anjali	Hyd	NULL	600000	2015	4
9	Praveen	Mum	IT	1200000	2017	2
10	Surya	Chennai	HR	400000	2019	4
11	Mohan	Bnglr	IT	700000	2018	1
12	Mahesh	Pune	HR	650000	2016	6
13	Priya	Mum	IT	950000	2015	2

newemployee1 30 × Read Only

Output

Action Output

#	Time	Action	Message
262	23:48:19	CREATE TABLE NewEmployee1 AS SELECT * FROM Employee	20 row(s) affected Records: 20 Duplicates: 0 Warnings: 0
263	23:48:39	select * from newemployee1 LIMIT 0, 1000	20 row(s) returned

)ay1.sql'

16. How do I fetch only common records between 2 tables.

→ fetching only common records between 2 tables can be done by inner join (equi join)

select * from employee inner join manager on employee.mgrID = manager.mgrID;

```
85
86    -- fetch only common records between 2 tables
87 •  select * from employee inner join manager on employee.mgrID = manager.mgrID;
88
```

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

eID	eName	loc	dept	annSal	yoj	mgrID	mgrID	mName
2	Kavya	Mum	HR	500000	2016	1	1	Akshay
8	Anjali	Hyd	NULL	600000	2015	4	4	Nitin
10	Surya	Chennai	HR	400000	2019	4	4	Nitin
11	Mohan	Bnglr	IT	700000	2018	1	1	Akshay
16	Anand	Mum	Sales	400000	2022	4	4	Nitin
17	Rupa	Bnglr	IT	550000	2019	1	1	Akshay
19	Surya	Chennai	HR	400000	2019	4	4	Nitin
20	Sai	Pune	NULL	1000000	2016	1	1	Akshay

Result 8 × Read Only

Output

Action Output

#	Time	Action	Message
26	09:23:18	select * from manager LIMIT 0, 1000	4 row(s) returned
27	09:23:23	select * from employee inner join manager on employee.mgrID = manager.mgrID LIMIT 0, 1000	8 row(s) returned

17. **Find Query to get information of Employee where Employee is not assigned to the department**

```
89    -- get information of Employee where Employee is not assigned to the department
90 •  select * from employee where dept IS NULL;
91
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
3	Arjun	Bnglr	NULL	450000	2016	2
8	Anjali	Hyd	NULL	600000	2015	4
20	Sai	Pune	NULL	1000000	2016	1

employee 13 | Read O

Output

Action Output

#	Time	Action	Message
22	09:23:18	insert into manager values(1, 'Akshay')	1 row(s) affected
23	09:23:18	insert into manager values(9,'John')	1 row(s) affected

18. **How to get distinct records from the table without using distinct keyword.**

```
121   -- get distinct records from table
122 • select mgrID,mname from manager group by mgrID,mname having count(*)=1;
123
```

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

mgrID	mname
1	Akshay
4	Nitin
2	Neha
3	Srija
5	Satya
6	vinod

manager 49 | Read Only

Output

Action Output

#	Time	Action	Message
76	10:58:16	select mgrID,mname from manager group by mgrID,mname having count(*)<1 LIMIT 0, 1000	0 row(s) returned
77	10:58:32	select mgrID,mname from manager group by mgrID,mname having count(*)=1 LIMIT 0, 1000	6 row(s) returned

19. Select all records from Employee table whose name is ‘Anil and ‘Praveen’

```
92    -- display all records from Employee table whose name is ‘Anil and ‘Praveen’
93 •  select * from employee where ename='Anil' OR ename='Praveen';
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
1	Anil	Hyd	IT	700000	2017	6
9	Praveen	Mum	IT	1200000	2017	2

employee 17

Output

Action Output

#	Time	Action	Message
35	09:47:03	select * from employee where ename='Priya' OR ename='Praveen' LIMIT 0, 1000	3 row(s) returned
36	09:47:14	select * from employee where ename='Anil' OR ename='Praveen' LIMIT 0, 1000	2 row(s) returned

20. Select all records from Employee table where name not in ‘Anil and ‘Praveen’

```
95    -- display all records from Employee table whose name is not ‘Anil and ‘Praveen’
96    select * from employee where ename!='Anil' AND ename!='Praveen';
97
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
2	Kavya	Mum	HR	500000	2016	1
3	Arjun	Bnglr	NULL	450000	2016	2
4	Rohit	Chennai	Sales	550000	2015	3
5	Janvi	Pune	Sales	400000	2019	5
6	Meera	Pune	IT	750000	2016	3
7	Priya	Mum	IT	950000	2015	2
8	Anjali	Hyd	NULL	600000	2015	4
10	Surya	Chennai	HR	400000	2019	4
11	Mohan	Bnglr	IT	700000	2018	1
12	Mahesh	Pune	HR	650000	2016	6
13	Priya	Mum	IT	950000	2015	2
14	Ajay	Hyd	Mrkt	400000	2021	3
15	Vamsi	Chennai	Mrkt	550000	2018	5
16	Anand	Mum	Sales	400000	2022	4

employee 18 | Read Only

Output

Action Output

#	Time	Action	Message
36	09:47:14	select * from employee where ename='Anil' OR ename='Praveen' LIMIT 0, 1000	2 row(s) returned
37	09:48:56	select * from employee where ename!='Anil' AND ename!='Praveen' LIMIT 0, 1000	18 row(s) returned

21. **how to write sql query for the below scenario**

I/p:DATABASE

O/p:

D

A

T

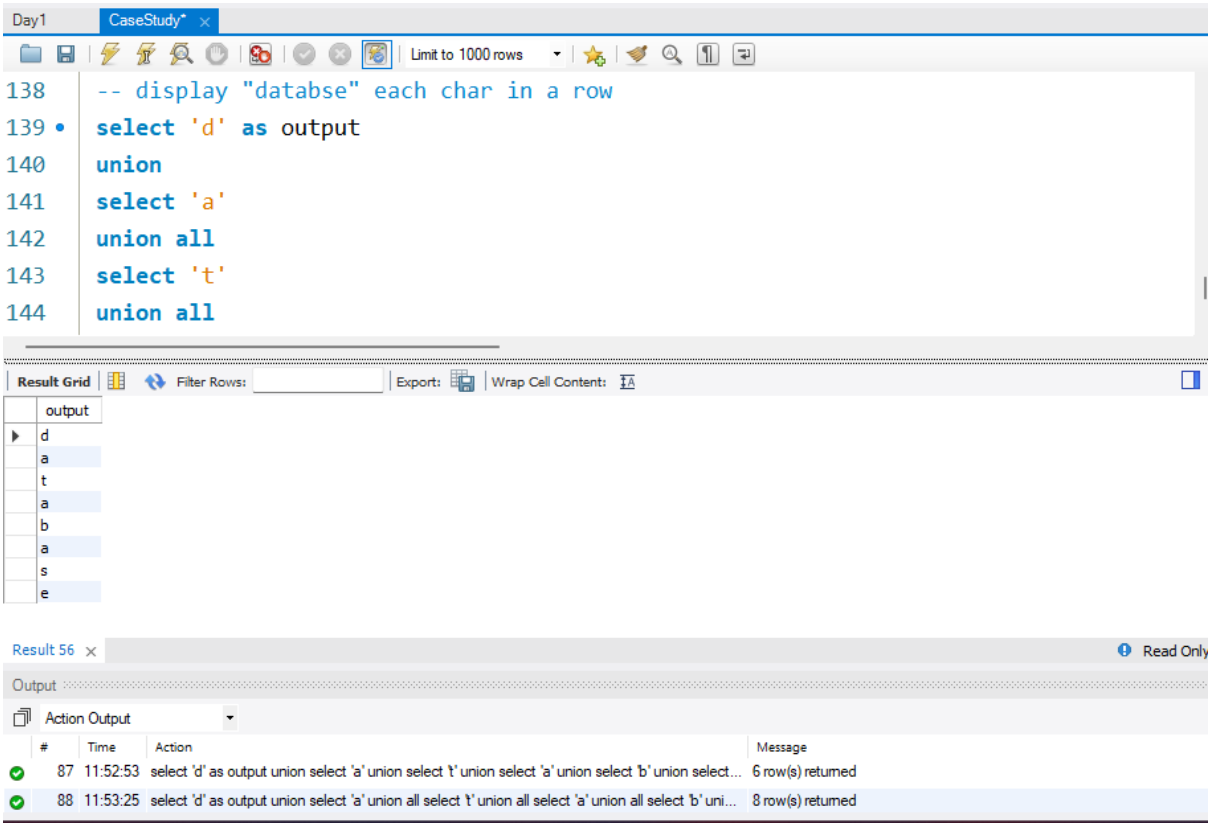
A

B

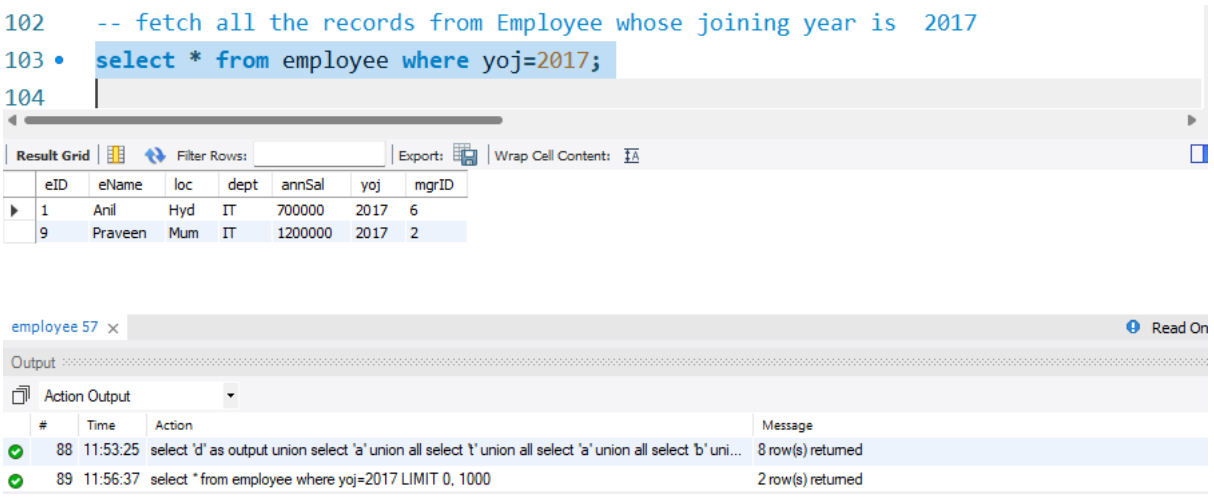
A

S

E

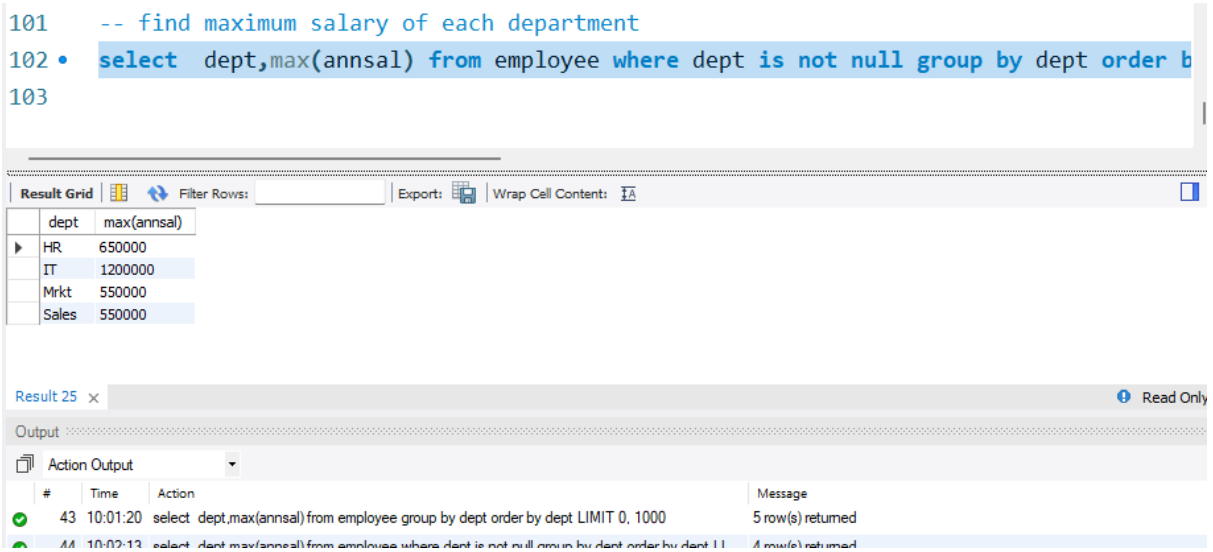


22. **fetch all the records from Employee whose joining year is 2017**

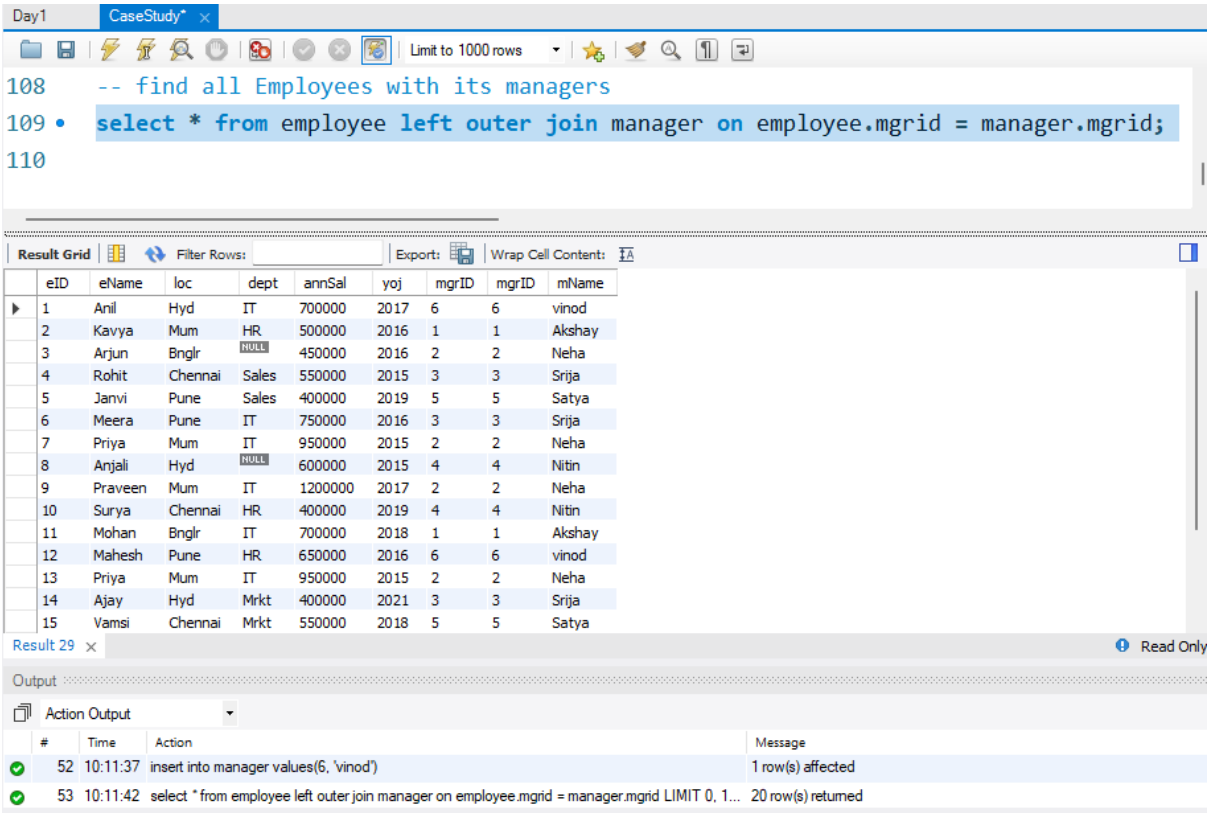


23. find maximum salary of each department

select dept,max(annsal) from employee where dept is not null group by dept ;



24. find all Employees with its managers



25. Display the name of employees who have joined in 2016 and salary is greater than 10000

```
111    -- Display the name of employees who have joined in 2016 and salary is greater than
112 •  select * from employee where yoj=2016 having annsal/12>10000
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
2	Kavya	Mum	HR	500000	2016	1
3	Arjun	Bnglr	NULL	450000	2016	2
6	Meera	Pune	IT	750000	2016	3
12	Mahesh	Pune	HR	650000	2016	6
20	Sai	Pune	NULL	1000000	2016	1

employee 35 × Read Only

Output

Action Output

#	Time	Action	Message
58	10:17:58	select * from employee where yoj=2016 having annsal>10000 LIMIT 0, 1000	5 row(s) returned
59	10:18:15	select * from employee where yoj=2016 having annsal/12>10000 LIMIT 0, 1000	5 row(s) returned

26. How to display the following using a query?

*

**

***

Day1 | CaseStudy* ×

Limit to 1000 rows

```
124    -- How to display following using query?
125    -- *
126    -- **
127    -- ***
128 •  select repeat('*',1) as pattern
129    union
130    select repeat('*',2)
131    union
132    select repeat('*',3);
```

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

pattern
*
**
***

Result 50 × Read O

Output

Action Output

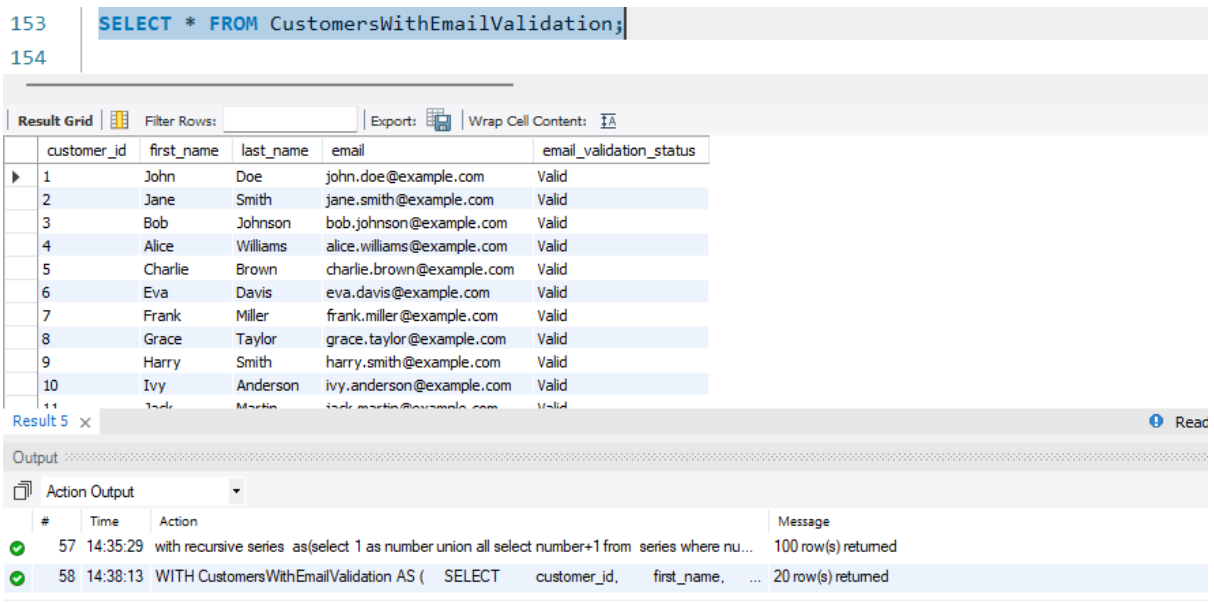
#	Time	Action	Message
77	10:58:32	select mgrID,mname from manager group by mgrID,mname having count(*)=1 LIMIT 0, 1000	6 row(s) returned
78	11:29:02	select repeat("*",1) as pattern union select repeat("*",2) union select repeat("*",3)	3 row(s) returned

27. How to add the email validation using only one query?

Query-

```
WITH CustomersWithEmailValidation AS (
   SELECT
      customer_id,
      first_name,
      last_name,
      email,
      CASE
         WHEN email LIKE '%_@__%.__%' AND email NOT LIKE '%@%@%' THEN
'Valid'
         ELSE 'Invalid'
      END AS email_validation_status
   FROM
      Customers
)
SELECT * FROM CustomersWithEmailValidation;
```

Output



28. How to display 1 to 100 Numbers with a query?

```
134  -- display 1 to 100 Numbers with query
135  with recursive series
136  as(select 1 as number union all select number+1 from  series where number <100)
137  select number from series;
138
```

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

number
1
2
3
4
5
6
7
8
9
10

Result 4

Output

Action Output

#	Time	Action	Message
56	14:34:59	WITH RECURSIVE series AS (SELECT 1 AS number UNION ALL SELECT number ...	100 row(s) returned

29. How to remove duplicate rows from table

```
114  -- remove duplicate rows from table
115  create table employee_NoDup as select distinct * from employee;
116  select * from employee_NoDup;
117
```

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

eID	eName	loc	dept	annSal	yoj	mgrID
1	Anil	Hyd	IT	700000	2017	6
2	Kavya	Mum	HR	500000	2016	1
3	Arjun	Bnglr	NULL	450000	2016	2
4	Rohit	Chennai	Sales	550000	2015	3
5	Janvi	Pune	Sales	400000	2019	5
6	Meera	Pune	IT	750000	2016	3
7	Priya	Mum	IT	950000	2015	2
8	Anjali	Hyd	NULL	600000	2015	4
9	Praveen	Mum	IT	1200000	2017	2
10	Surya	Chennai	HR	400000	2019	4
11	Mohan	Bnglr	IT	700000	2018	1

employee_NoDup 36 | Read Only

Output

Action Output

#	Time	Action	Message
60	10:24:35	create table employee_NoDup as select distinct * from employee	20 row(s) affected Records: 20 Duplicates: 0 Warnings: 0
61	10:25:15	select * from employee_NoDup LIMIT 0, 1000	20 row(s) returned

30. How to find count of duplicate rows

```
118    -- find count of duplicate rows
119 •  select mgrID,mname, count(*) from manager group by mgrID,mname having count(*)>1;
120
```

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

mgrID	mname	count(*)
9	John	2
8	Amelia	2

Result 42 ×

Output

Action Output

#	Time	Action	Message
69	10:43:50	select mgrID,mname from manager group by mgrID,mname having count(*)>1 LIMIT 0, 1000	2 row(s) returned
70	10:44:03	select mgrID,mname, count(*) from manager group by mgrID,mname having count(*)>1 LIMIT...	2 row(s) returned