DBMS PRACTICAL- 8 PRELAB

1.What is Normalization?

DBMS Lab-8 190031249 Mohith

1. Normalization is the process of organizing the data in the database

→ Normalization is used to maximize the redundancy from a relation or set of relations. It is also used to eliminate the undesirable characteristics like insertion, update and deletion Anomalies.

→ Normalization divides the larger tables into smaller table and links them using relationship.

2.What are various forms of Normalization?

2. Normalization :-

Here are the most commonly used normal forms:

- First normal form (1NF)
- Second normal form (2NF)
- Third normal form (3NF)
- Boyce & Codd normal form (BCNF)

3.A table has fields F1, F2, F3, F4, F5 with the following functional dependencies
F1 → F3 F2→ F4 (F1 . F2) → F5
In terms of Normalization, this table is in which normal form?

3. 1NF (A relation is in first normal form if every attribute in that relation is singled valued attribute.

4.What is a view?

4. View:-

It is a virtual table based on the result-set of an SQL statement. A view contains rows and columns, just like a real table. The fields in a view are fields from one (or) more real tables in the database.

5.What is the difference between Clustered and Non-clustered index?

5.

Clustered Index	Non-clustered Index
clustered index is faster.	Non-clustered index is slower
clustered index requires less Memory for operations.	Non-clustered index requires more memory for operations.
In this, index is the main data	In this, index is the copy of data
A table can have only one clustered index.	A table can have multiple non-clustered index.
clustered index has inherent ability of storing data on the disk.	Non-clustered index store both value and a pointer to actual row that holds data.

6.Relation R has eight attributes ABCDEFGH. Fields of R contain only atomic values. F = {CH -> G, A -> BC, B -> CFH, E -> A, F -> EG} is a set of functional dependencies (FDs) so that F+ is exactly the set of FDs that hold for R.How many candidate keys does the relation R have

6. 4

Explanation

A+ is ABCDEFGH which is all attributes except D.

B+ is ABCEFGH which is all attributes except D.

E+ is also ABCEFGH which is all attributes except D.

F+ is also ABCEFGH which is all attributes except D.

So there are total 4 candidate keys

AD, BD, ED, FD

7.Consider the relation scheme R = {E, F, G, H, I, J, K, L, M, M} and the set of functional dependencies {{E, F} -> {G}, {F} -> {I, J}, {E, H} -> {K, L}, K -> {M}, L -> {N} on R. What is the key for R?

7. {E, F, H}

Explanation:-

All attributes can be derived from {E, F, H}

INLAB

Case Study 3 : WAREHOUSE SYSTEM

employee *table:*

eno	ename
100	Hari
101	Giri
102	Arun
103	Verma
104	Jaya
105	Kalyan
106	Krishna
107	Mohan
108	Bhasker
109	Arjun

manager *table:****worker*** *table:*

eno
102
103
105
107
109

eno	mno
101	102
104	103
106	102
108	105

phone *table:*

eno	area_code	number
100	91	9678897435
101	81	9743523134
102	61	9808148833
103	91	9872774532
104	91	9937400231
105	91	9675453111
106	81	9413505991
107	81	9151558871
108	91	8889611751
109	91	8627664631

address *table:*

eno	street	city	state
100	Ameerpet	Hyderabad	Telangana
101	Raju Nagar	Guntur	Andhra Pradesh
102	Chowadavaram	Guntur	Andhra Pradesh
103	Kukatpally	Hyderabad	Telangana
104	BHEL	Hyderabad	Telangana
105	Poranki	Vijayawada	Andhra Pradesh
106	Bachupally	Hyderabad	Telangana
107	Nizampet	Hyderabad	Telangana
108	ECIL X Road	Hyderabad	Telangana
109	Benz Circle	Vijayawada	Andhra Pradesh

part *table:*

partno
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009

subpart *table:*

partno	assmno
1000	2001
1001	2000
1002	2001
1003	2000
1004	2000
1005	2002
1006	2002
1007	2001
1008	2000
1009	2002

warehouse *table:*

warehouseid	binno	capacity
5000	6000	100
5001	6001	150
5002	6002	200
5003	6003	250
5004	6004	300
5005	6005	200

bin *table:*

warehouseid
5000
5001
5002
5003
5004
5005

item *table:*

partno	itemno	batchno
1000	8000	7000
1005	8001	7002
1007	8002	7003
1008	8003	7004
1009	8004	7005

batch *table:*

partno	batchno	size	date_in	mgrno	warehousid	binno
1000	7000	10	13-03-2020	102	5000	6000

1001	7000	20	25-02-2020	103	5000	6001
1002	7001	30	03-07-2020	105	5000	6002
1003	7002	40	15-04-2020	107	5001	6002
1004	7002	50	20-04-2020	109	5001	6003
1005	7003	60	07-08-2019	102	5002	6004
1006	7003	10	02-02-2020	105	5003	6001
1007	7004	20	10-02-2020	107	5003	6000
1008	7005	30	17-05-2020	105	5000	6003
1009	7005	30	20-07-2020	105	5004	6000

current_backorder *table:*

partno	orgqty	remqty	bodate	backorder
1000	1000	500	10-03-2020	arun
1005	500	300	15-02-2020	kiran
1007	700	400	12-03-2020	raju
1008	800	600	11-04-2020	david
1009	600	400	20-06-2020	eswar

old_backorder *table:*

partno	orgqty	bodate	backorder	fulfilled
1000	1000	10-03-2020	arun	yes
1005	500	15-02-2020	kiran	no
1007	700	12-03-2020	raju	yes
1008	800	11-04-2020	david	yes
1009	600	20-06-2020	eswar	yes

1) Create all the tables required for creating the database for the Warehouse System case study.

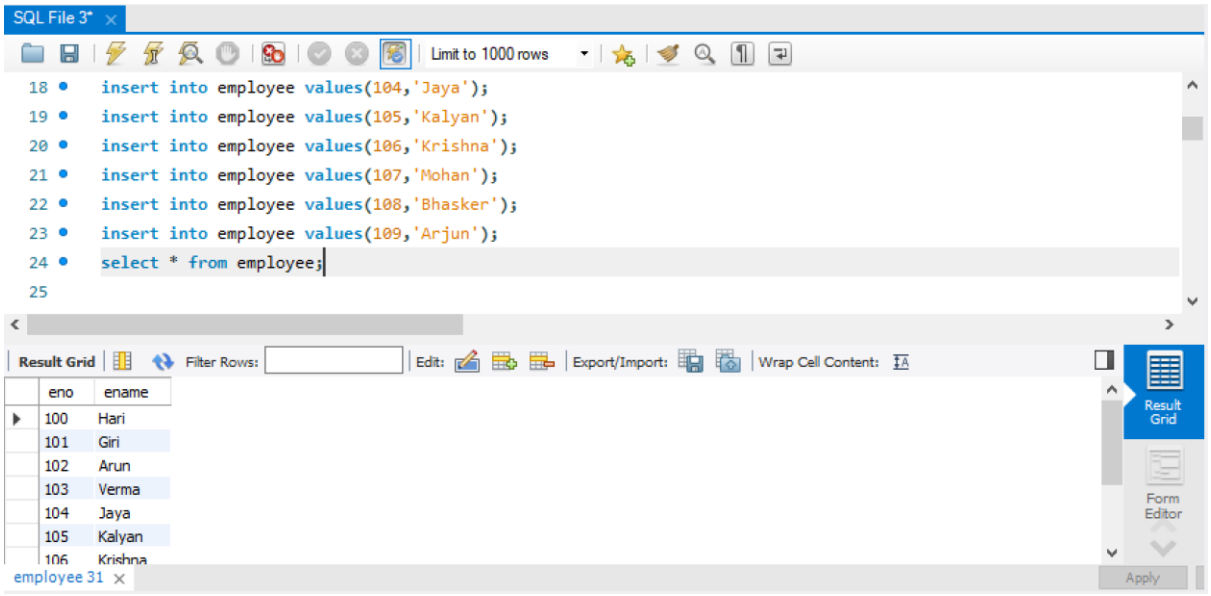
```
create table employee(eno int primary key,ename varchar(10));

create table manager(eno int,foreign key(eno) references employee(eno));

create table worker(eno int,mno int,foreign key(eno) references employee(eno),foreign key(mno) references employee(eno));

create table address(eno int,street varchar(20),city varchar(20),state varchar(20),foreign key(eno) references employee(eno));

create table part(partno int primary key);

create table subpart(partno int,assmno int,foreign key(partno) references part(partno));

create table warehouse(warehouseid int primary key);
create table bin(warehouseid int,binno int primary key,capacity int,foreign key(warehouseid) references warehouse(warehouseid));

create table batch(partno int,batchno int,size int,date_in date,mgrno int,warehouseid int,binno int,foreign key(partno) references part(partno),foreign key(mgrno) references manager(eno),foreign key(warehouseid) references warehouse(warehouseid),foreign key(binno) references bin(binno));
```

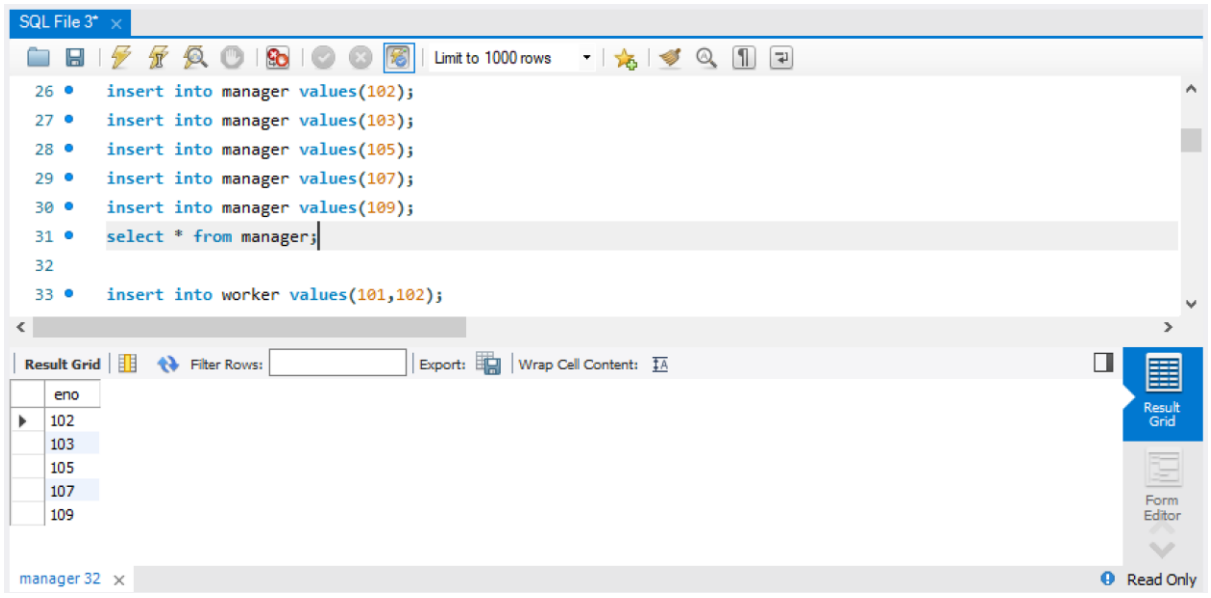
create table current_backorder(partno int,orgqty int,remqty int,bodate date,backorder varchar(10),foreign key(partno) references part(partno));

create table old_backorder(partno int,orgqty int,bodate date,backorder varchar(10),fulfilled varchar(10),foreign key(partno) references part(partno));

create table phone(eno int,area_code int,number bigint,foreign key(eno) references employee(eno));

2) Insert atleast 10 records into all the tables





SQL File 3*

```
32
33 •  insert into worker values(101,102);
34 •  insert into worker values(104,103);
35 •  insert into worker values(106,102);
36 •  insert into worker values(108,105);
37 •  select *from worker;
38
39 •  insert into address values(100,'Ameerpet','Hyderabad','Telangana');
```

Result Grid

eno	mno
101	102
104	103
106	102
108	105

SQL File 3*

```
43 •  insert into address values(104,'BHEL','Hyderabad','Telangana');
44 •  insert into address values(105,'Poranki','Vijayawada','Andhra Pradesh');
45 •  insert into address values(106,'Bachupally','Hyderabad','Telangana');
46 •  insert into address values(107,'Nizampet','Hyderabad','Telangana');
47 •  insert into address values(108,'ECIL X Road','Hyderabad','Telangana');
48 •  insert into address values(109,'Benz Circle','Vijayawada','Andhra Pradesh');
49 •  select *from address;
50
```

Result Grid

eno	street	city	state
100	Ameerpet	Hyderabad	Telangana
101	Raju Nagar	Guntur	Andhra Pradesh
102	Chowadavaram	Guntur	Andhra Pradesh
103	Kukatpally	Hyderabad	Telangana
104	BHEL	Hyderabad	Telangana
105	Poranki	Vijayawada	Andhra Pradesh
106	Bachupally	Hyderabad	Telangana

address 34 — Read Only

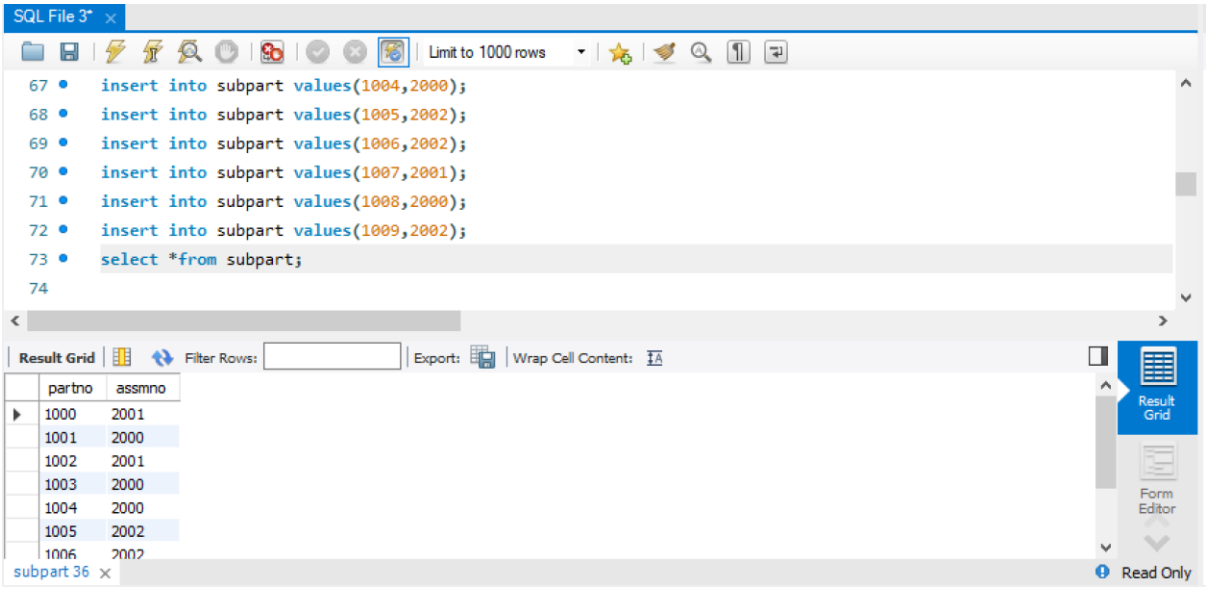
SQL File 3*

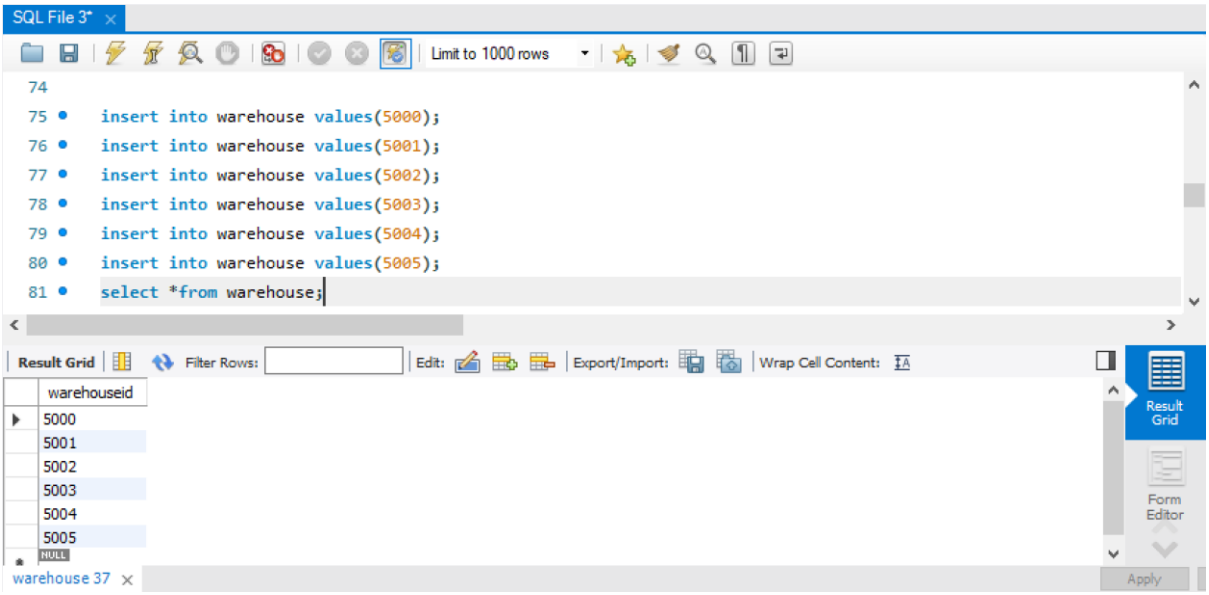
```
55 •  insert into part values(1004);
56 •  insert into part values(1005);
57 •  insert into part values(1006);
58 •  insert into part values(1007);
59 •  insert into part values(1008);
60 •  insert into part values(1009);
61 •  select *from part;
62
```

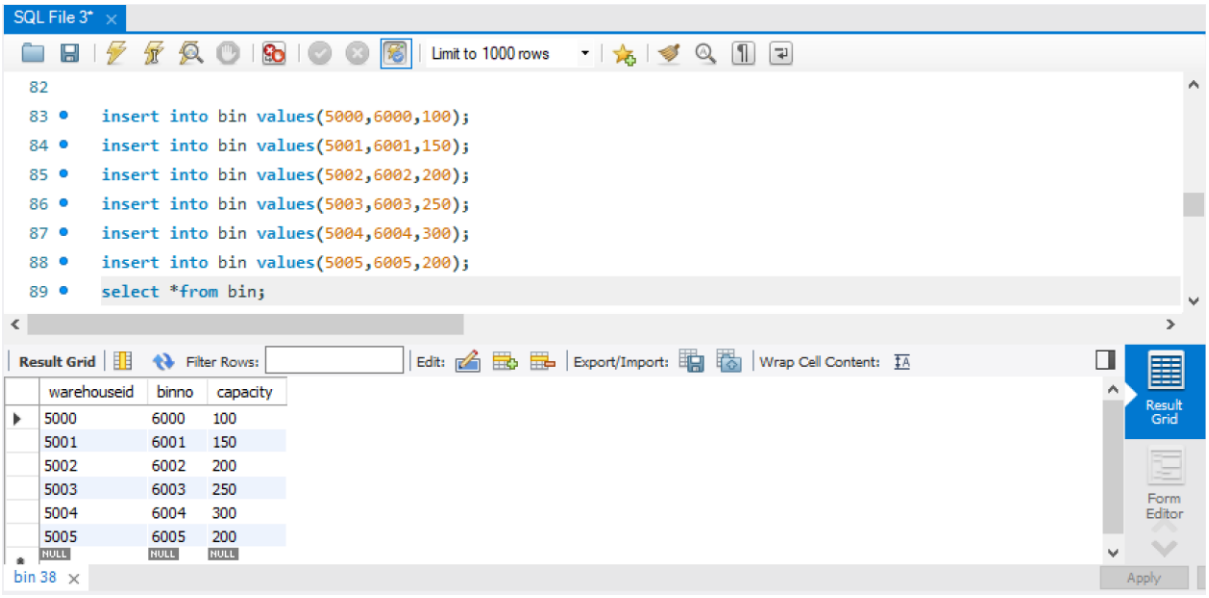
Result Grid

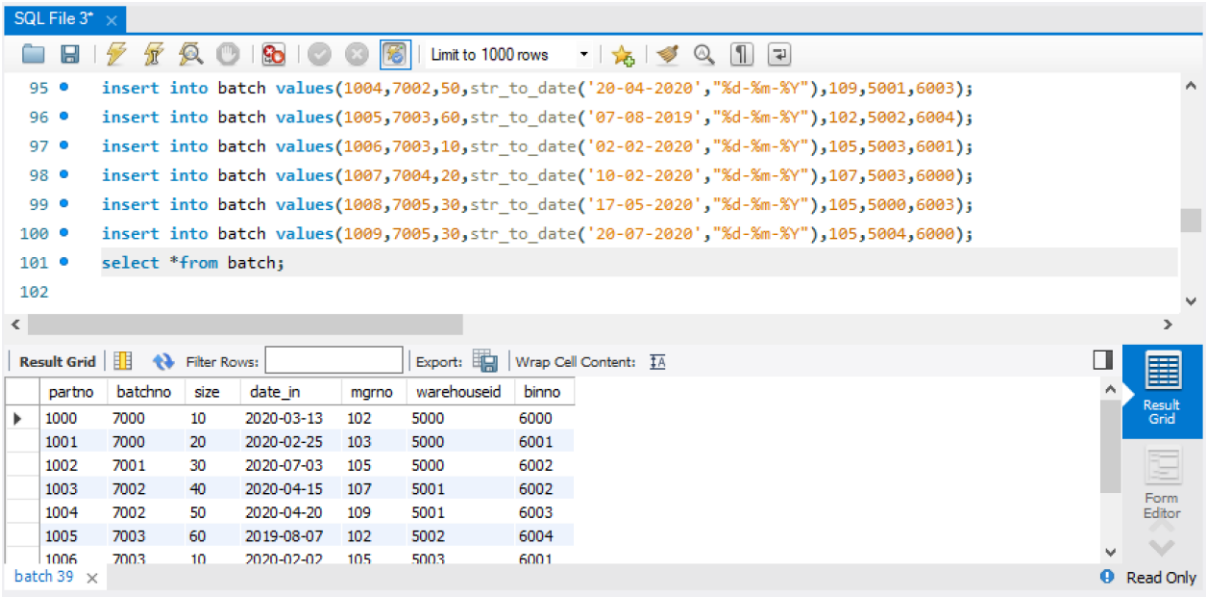
partno
1000
1001
1002
1003
1004
1005
1006

part 35


SQL File 3*
Limit to 1000 rows
67 insert into subpart values(1004,2000);
68 insert into subpart values(1005,2002);
69 insert into subpart values(1006,2002);
70 insert into subpart values(1007,2001);
71 insert into subpart values(1008,2000);
72 insert into subpart values(1009,2002);
73 select *from subpart;
74
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
partno assmno
1000 2001
1001 2000
1002 2001
1003 2000
1004 2000
1005 2002
1006 2002
Result Grid
Form Editor
Read Only
subpart 36


SQL File 3*
Limit to 1000 rows
74
75 insert into warehouse values(5000);
76 insert into warehouse values(5001);
77 insert into warehouse values(5002);
78 insert into warehouse values(5003);
79 insert into warehouse values(5004);
80 insert into warehouse values(5005);
81 select *from warehouse;
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
warehouseid
5000
5001
5002
5003
5004
5005
Result Grid
Form Editor
Apply
warehouse 37


SQL File 3*
Limit to 1000 rows
82
83 insert into bin values(5000,6000,100);
84 insert into bin values(5001,6001,150);
85 insert into bin values(5002,6002,200);
86 insert into bin values(5003,6003,250);
87 insert into bin values(5004,6004,300);
88 insert into bin values(5005,6005,200);
89 select *from bin;
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
warehouseid binno capacity
5000 6000 100
5001 6001 150
5002 6002 200
5003 6003 250
5004 6004 300
5005 6005 200
Result Grid
Form Editor
Apply
bin 38

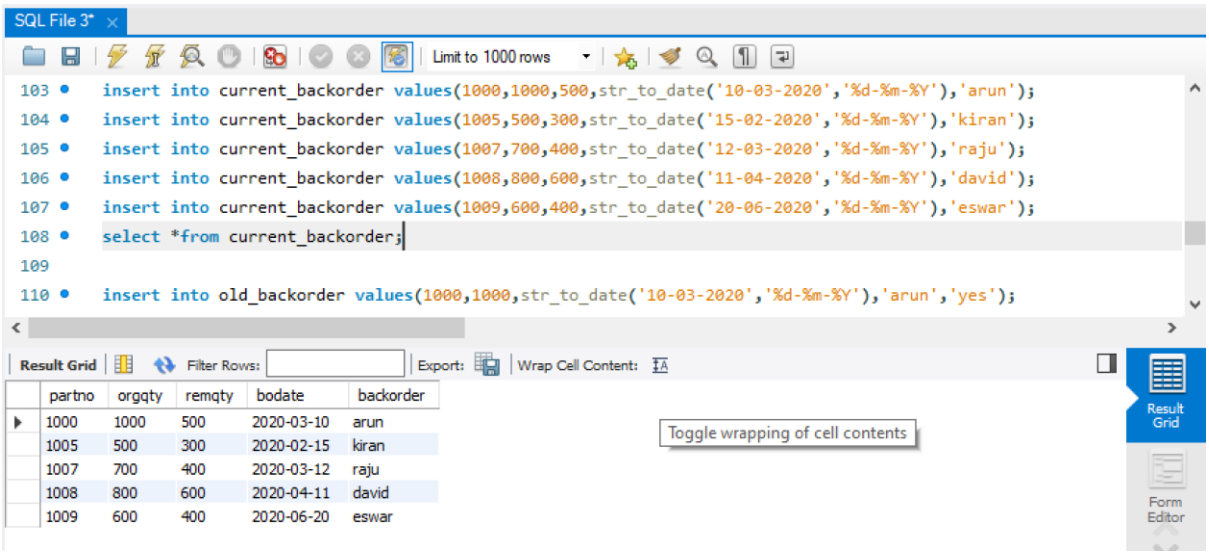


```
SQL File 3*
Limit to 1000 rows
95  insert into batch values(1004,7002,50,str_to_date('20-04-2020',"%d-%m-%Y"),109,5001,6003);
96  insert into batch values(1005,7003,60,str_to_date('07-08-2019',"%d-%m-%Y"),102,5002,6004);
97  insert into batch values(1006,7003,10,str_to_date('02-02-2020',"%d-%m-%Y"),105,5003,6001);
98  insert into batch values(1007,7004,20,str_to_date('10-02-2020',"%d-%m-%Y"),107,5003,6000);
99  insert into batch values(1008,7005,30,str_to_date('17-05-2020',"%d-%m-%Y"),105,5000,6003);
100 insert into batch values(1009,7005,30,str_to_date('20-07-2020',"%d-%m-%Y"),105,5004,6000);
101 select *from batch;
102
```

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

partno	batchno	size	date_in	mgrno	warehouseid	binno
1000	7000	10	2020-03-13	102	5000	6000
1001	7000	20	2020-02-25	103	5000	6001
1002	7001	30	2020-07-03	105	5000	6002
1003	7002	40	2020-04-15	107	5001	6002
1004	7002	50	2020-04-20	109	5001	6003
1005	7003	60	2019-08-07	102	5002	6004
1006	7003	10	2020-02-02	105	5003	6001

batch 39 | Result Grid | Form Editor | Read Only



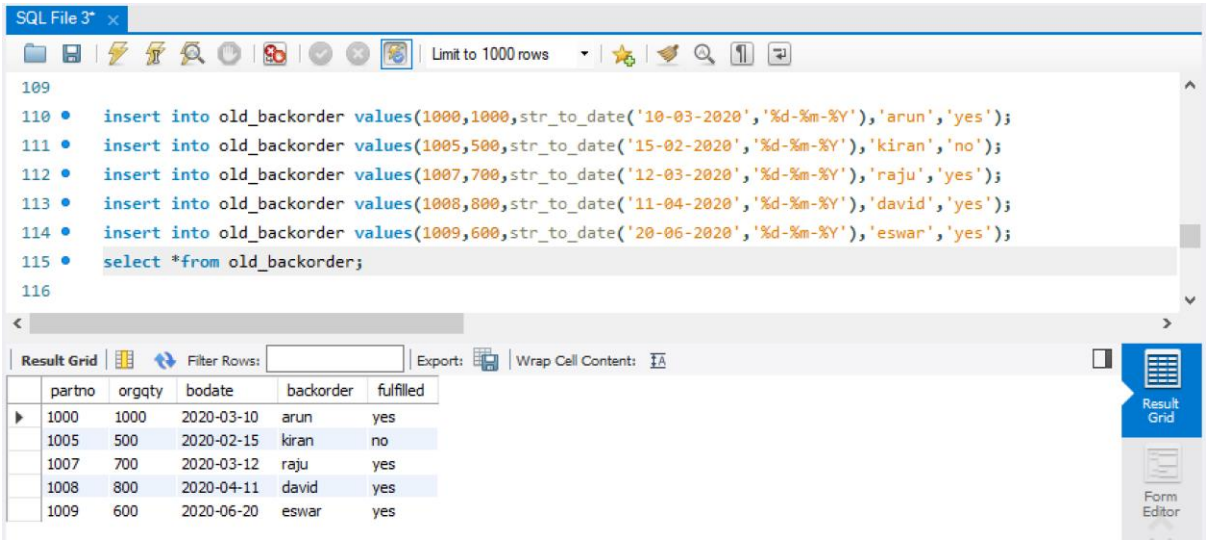
```
SQL File 3*
Limit to 1000 rows
103 insert into current_backorder values(1000,1000,500,str_to_date('10-03-2020','%d-%m-%Y'),'arun');
104 insert into current_backorder values(1005,500,300,str_to_date('15-02-2020','%d-%m-%Y'),'kiran');
105 insert into current_backorder values(1007,700,400,str_to_date('12-03-2020','%d-%m-%Y'),'raju');
106 insert into current_backorder values(1008,800,600,str_to_date('11-04-2020','%d-%m-%Y'),'david');
107 insert into current_backorder values(1009,600,400,str_to_date('20-06-2020','%d-%m-%Y'),'eswar');
108 select *from current_backorder;
109
110 insert into old_backorder values(1000,1000,str_to_date('10-03-2020','%d-%m-%Y'),'arun','yes');
```

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

partno	orgqty	remqty	bodate	backorder
1000	1000	500	2020-03-10	arun
1005	500	300	2020-02-15	kiran
1007	700	400	2020-03-12	raju
1008	800	600	2020-04-11	david
1009	600	400	2020-06-20	eswar

Toggle wrapping of cell contents

Result Grid | Form Editor

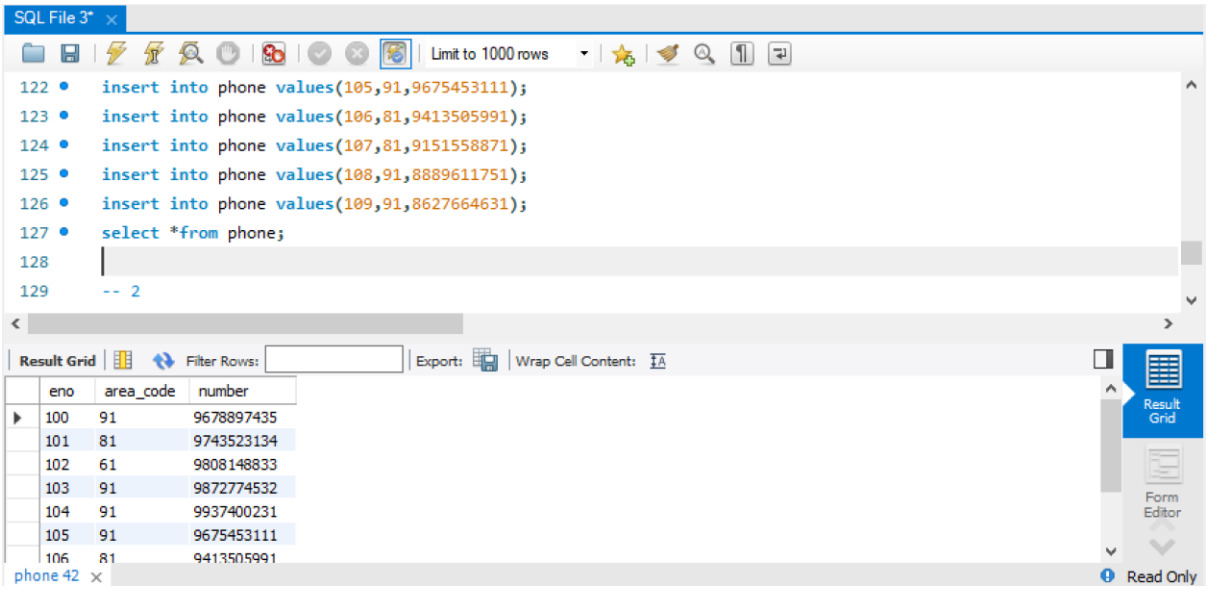


```
SQL File 3*
Limit to 1000 rows
109
110 insert into old_backorder values(1000,1000,str_to_date('10-03-2020','%d-%m-%Y'),'arun','yes');
111 insert into old_backorder values(1005,500,str_to_date('15-02-2020','%d-%m-%Y'),'kiran','no');
112 insert into old_backorder values(1007,700,str_to_date('12-03-2020','%d-%m-%Y'),'raju','yes');
113 insert into old_backorder values(1008,800,str_to_date('11-04-2020','%d-%m-%Y'),'david','yes');
114 insert into old_backorder values(1009,600,str_to_date('20-06-2020','%d-%m-%Y'),'eswar','yes');
115 select *from old_backorder;
116
```

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

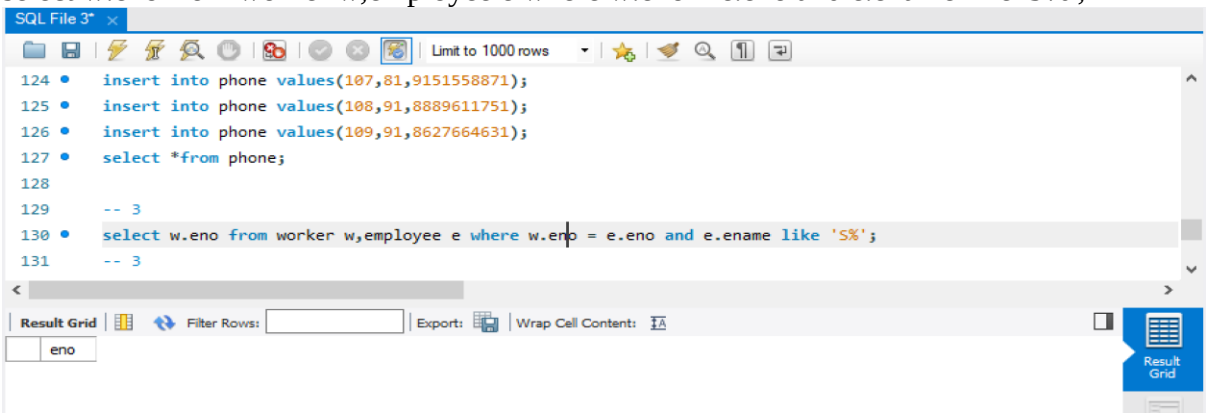
partno	orgqty	bodate	backorder	fulfilled
1000	1000	2020-03-10	arun	yes
1005	500	2020-02-15	kiran	no
1007	700	2020-03-12	raju	yes
1008	800	2020-04-11	david	yes
1009	600	2020-06-20	eswar	yes

Result Grid | Form Editor



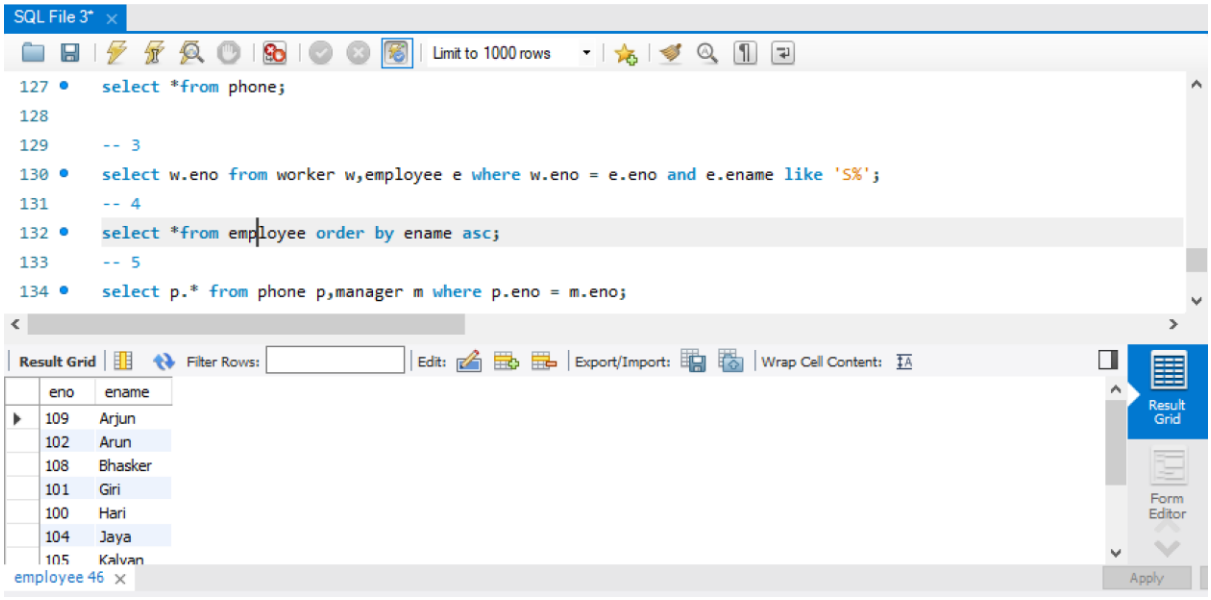
3) Display all employee numbers for all the workers that work under manager with the name starting with “S”

select w.eno from worker w,employee e where w.eno = e.eno and e.ename like 'S%';

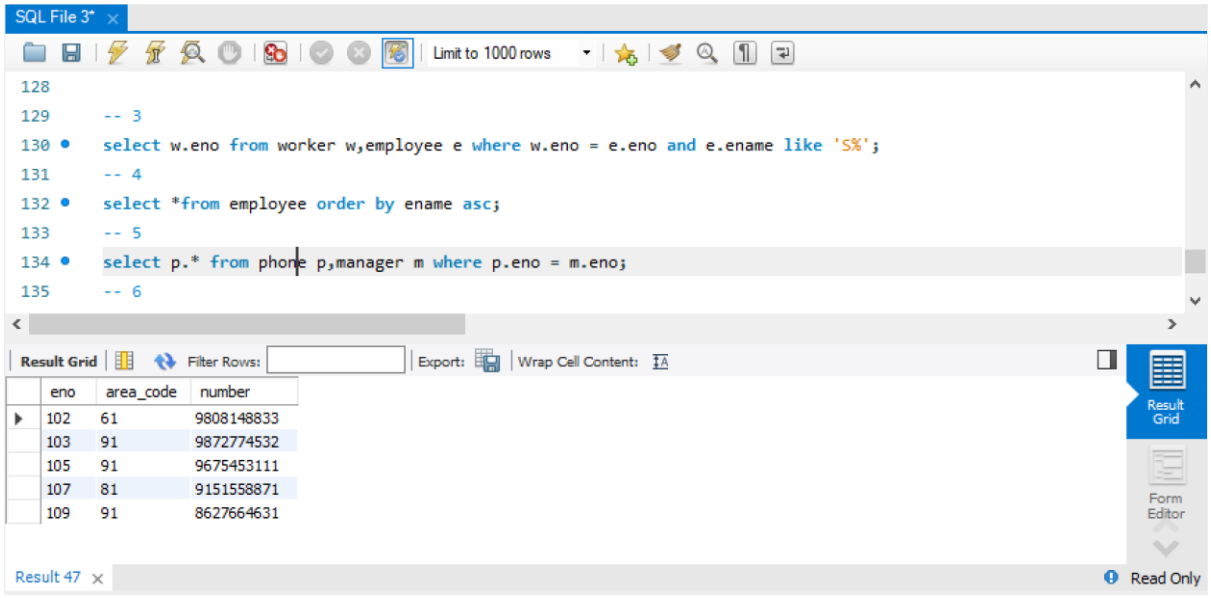


4) Display name and employee number of all employees in the ascending order on their name.The names should be listed in an alphabetic order

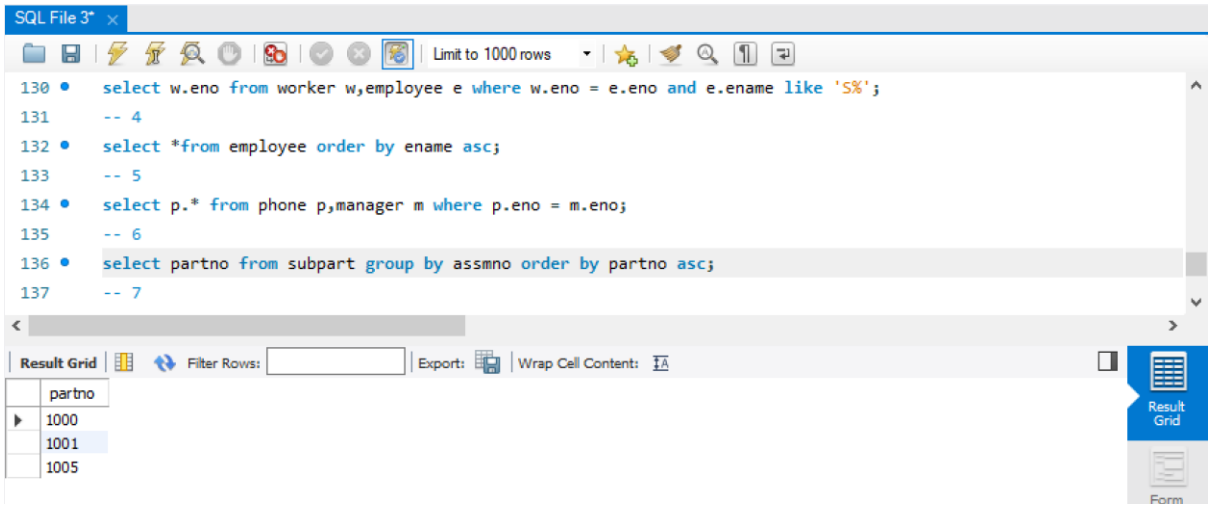
select *from employee order by ename asc;



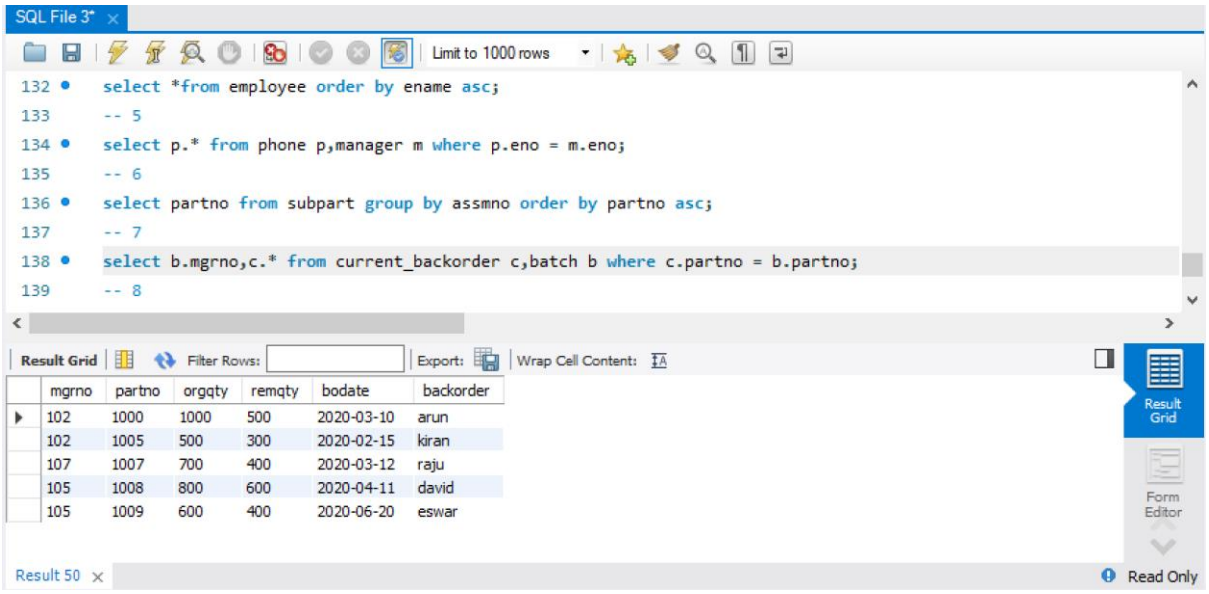
5) Display all the phones and employee number for all the managers.



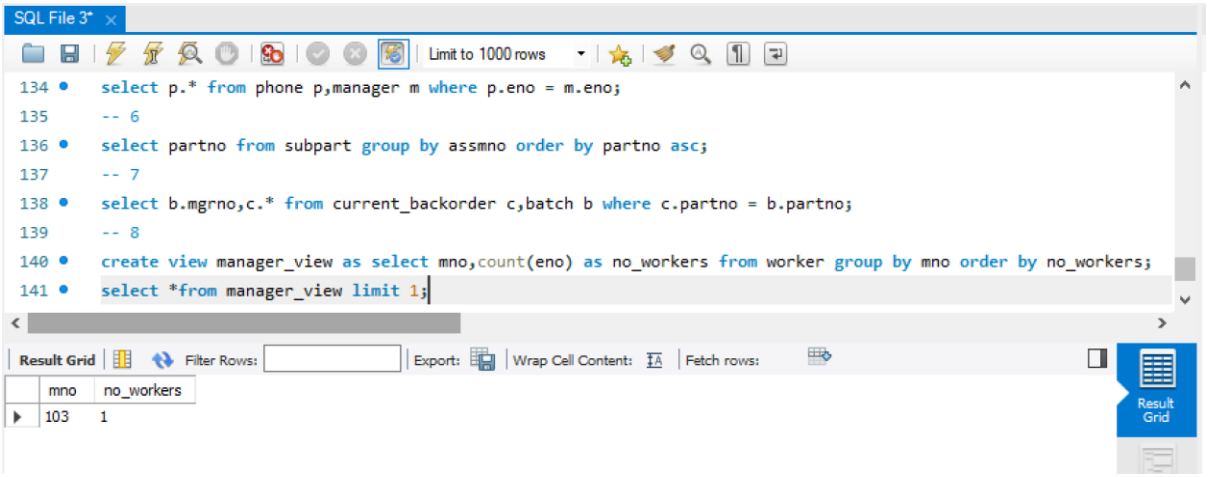
6) Display the all parts that are assemblies they should be listed in ascending order.



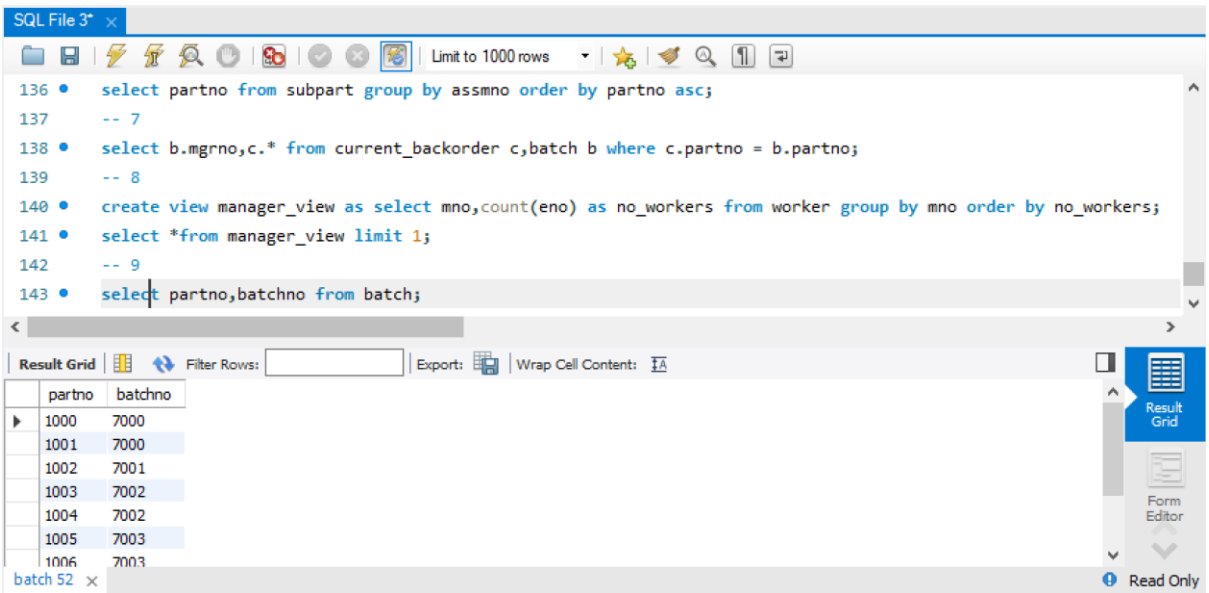
7) Display all current backorders done by each manager.



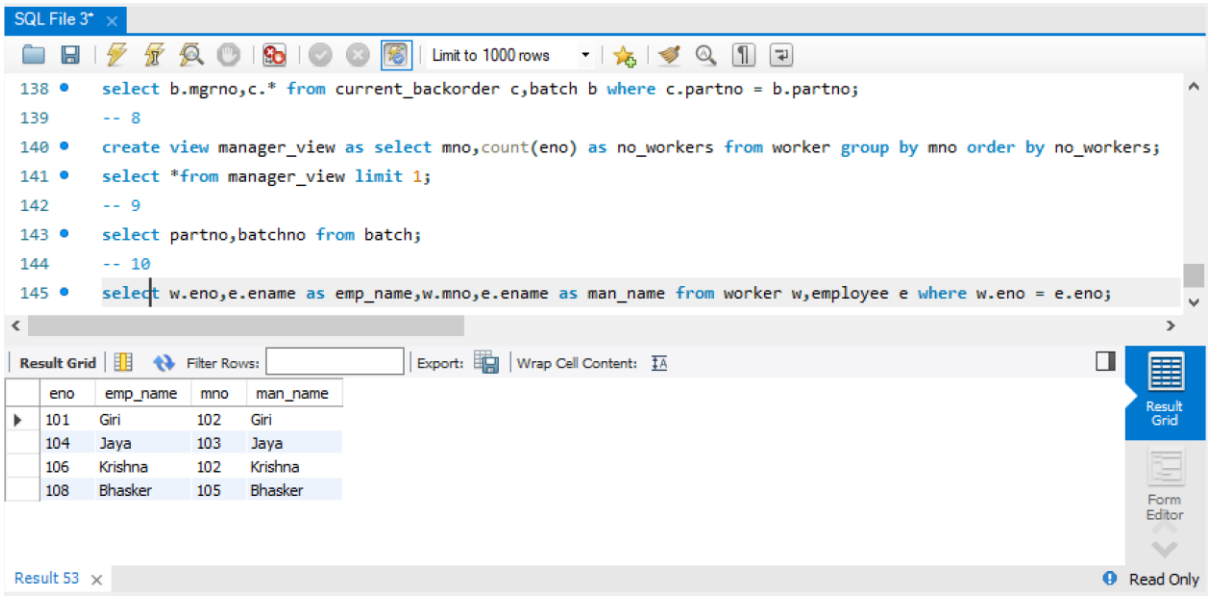
8) Display employee id and number of workers managed for all the managers with the smallest number of workers managed.



9) Display the list of all parts with their batchno



10) Display the employee details with their manager details



Case Study 6 : PAINITING HIRE BUSINESS

CUSTOMER:

cid	cname	address	phone	category
100	Raju	Hyderabad	9876045789	Bronze
101	Hari	Vijayawada	8877678956	Gold
102	Devi	Guntur	7879312123	Silver
103	Rani	Delhi	8780945290	Platinum
104	Jaya	Mumbai	9612578457	Gold
105	Haritha	Kolkata	9611665513	Silver
106	Kalyan	Vijayawada	9610752569	Bronze
107	Roja	Hyderabad	9609839625	Platinum
108	Amar	Vijayawada	9608926681	Gold
109	Padma	Vijayawada	9608013737	Bronze

ARTIST:

aid	name	address	phone
200	John	Delhi	7786549803
201	Samuel	Mumbai	7123458790
202	Samson	Lucknow	9460367777
203	David	Hyderabad	9797276764
204	Raghu	Hyderabad	8134185751
205	Ravi	Mumbai	7471094738
206	Kiran	Delhi	9808003725

PAINTING:

pid	aid	rental_cost	type
300	201	4500	Hired
301	202	3500	Not hired
302	203	7500	Hired
303	205	2500	Not hired
304	202	10000	Not hired
305	201	8000	Not hired
306	203	6500	Not hired

RENT:

cid	pid	renatl_date	rental_period
104	300	10-06-2020	6
105	302	05-07-2020	10
108	304	15-07-2020	3
109	305	25-06-2020	6

OWNER:

pid	oid	name	address	phone
300	500	Raju	Hyderabad	9460367777
301	500	Hari	Vijayawada	8134185751
302	501	Giri	Hyderabad	7808003725
303	501	Gopi	Delhi	9481821699
304	503	Krishna	Mumbai	7155639673
305	502	Verma	Delhi	8829457647
306	502	Guna	Delhi	7503275621

1) Create the tables identifying the constraints and relationships

create table Customer(cid int primary key,cname varchar(10),address varchar(10),phone bigint,category varchar(10));

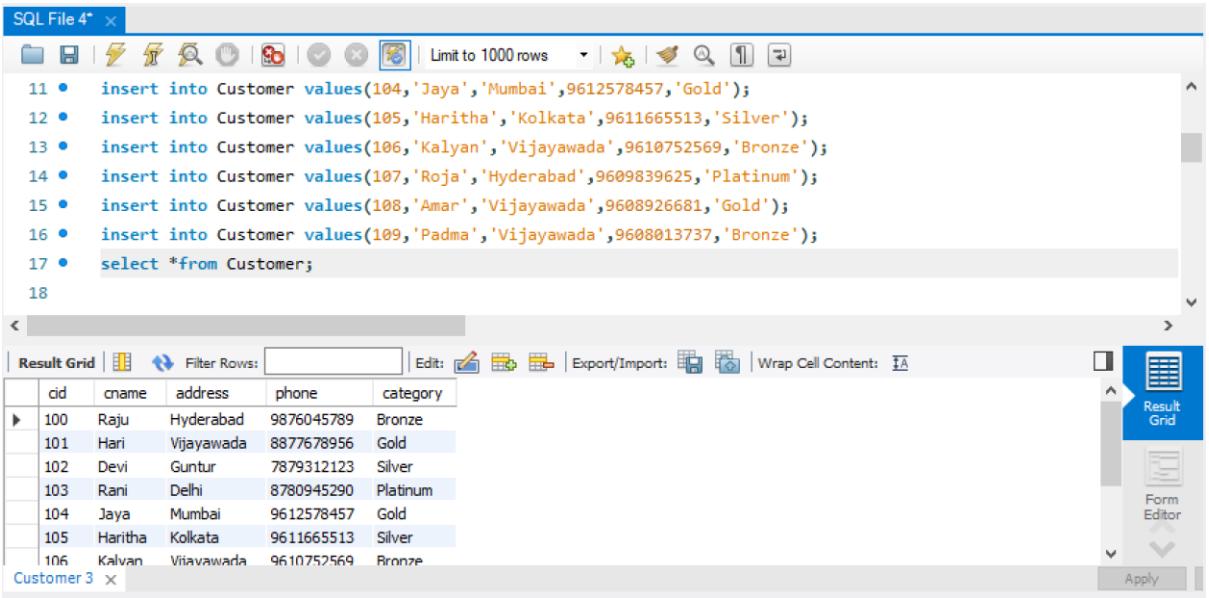
create table Artist(aid int primary key,name varchar(10),address varchar(10),phone bigint);

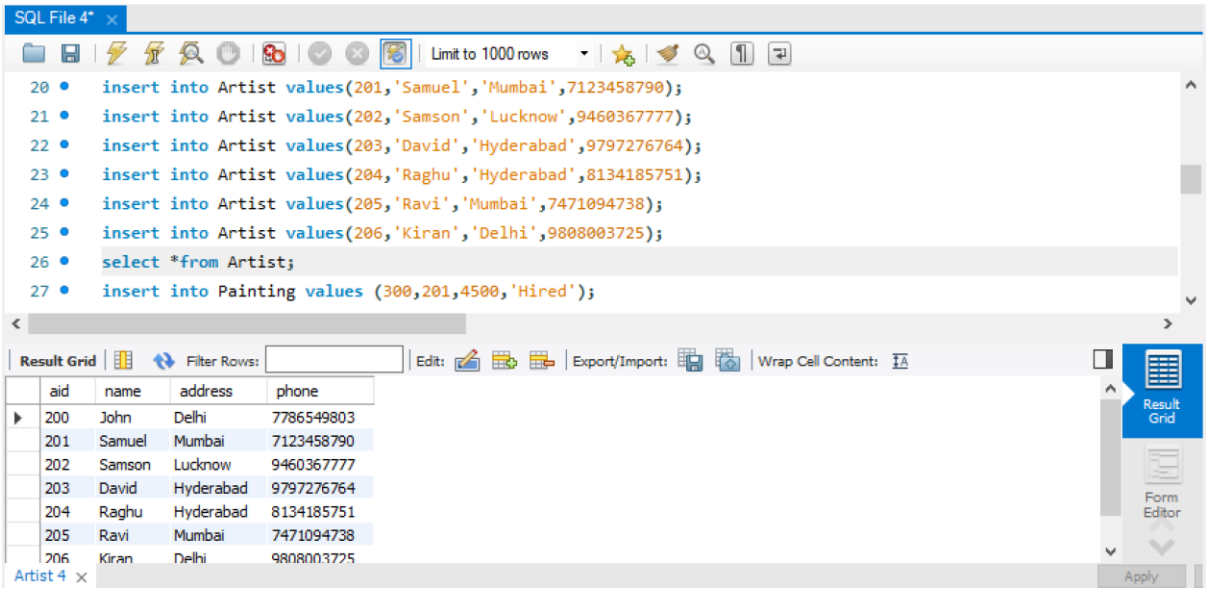
create table Painting(pid int primary key,aid int,rental_cost int,type varchar(10),foreign key(aid) references Artist(aid));

create table Owner(pid int,oid int,name varchar(10),address varchar(10),phone bigint,foreign key(pid) references Painting(pid));

create table Rent(cid int,pid int,rental_date date,rental_period int,foreign key(cid) references Customer(cid),foreign key(pid) references Painting(pid));

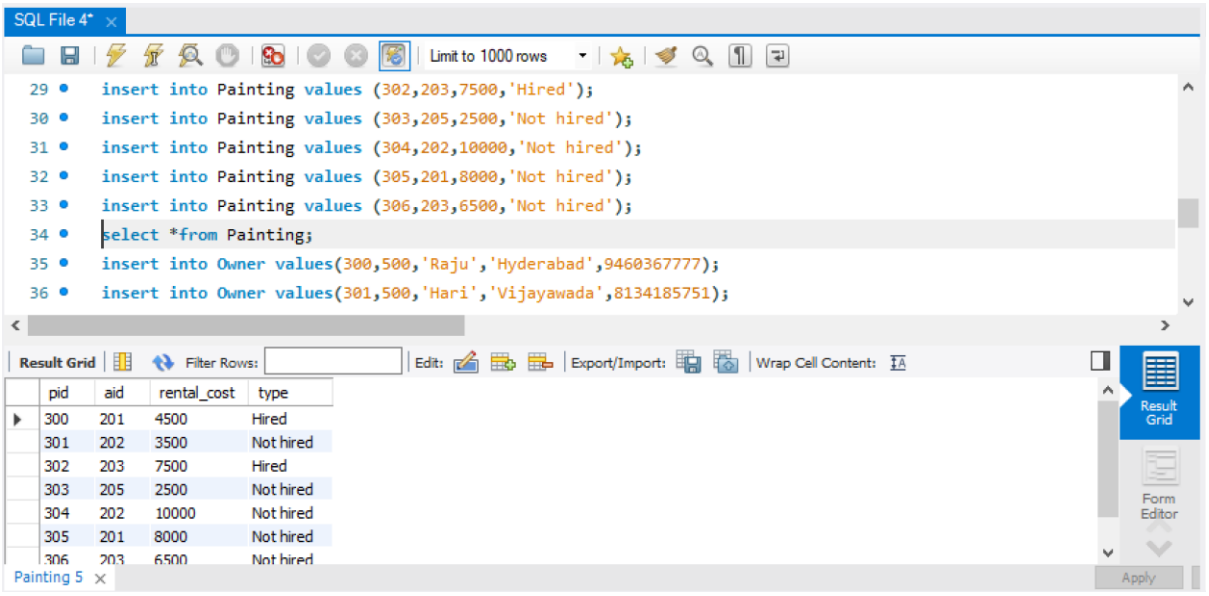
2) Insert atleast 10 records into these tables





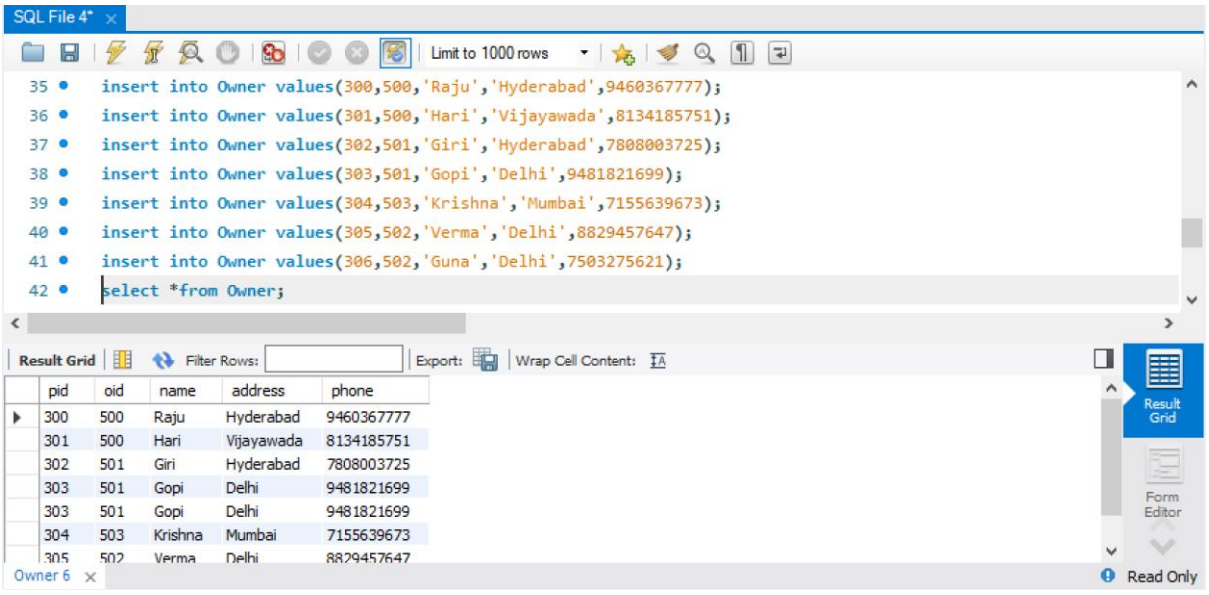
```
insert into Artist values(201,'Samuel','Mumbai',7123458790);
insert into Artist values(202,'Samson','Lucknow',9460367777);
insert into Artist values(203,'David','Hyderabad',9797276764);
insert into Artist values(204,'Raghu','Hyderabad',8134185751);
insert into Artist values(205,'Ravi','Mumbai',7471094738);
insert into Artist values(206,'Kiran','Delhi',9808003725);
select *from Artist;
insert into Painting values (300,201,4500,'Hired');
```

aid	name	address	phone
200	John	Delhi	7786549803
201	Samuel	Mumbai	7123458790
202	Samson	Lucknow	9460367777
203	David	Hyderabad	9797276764
204	Raghu	Hyderabad	8134185751
205	Ravi	Mumbai	7471094738
206	Kiran	Delhi	9808003725



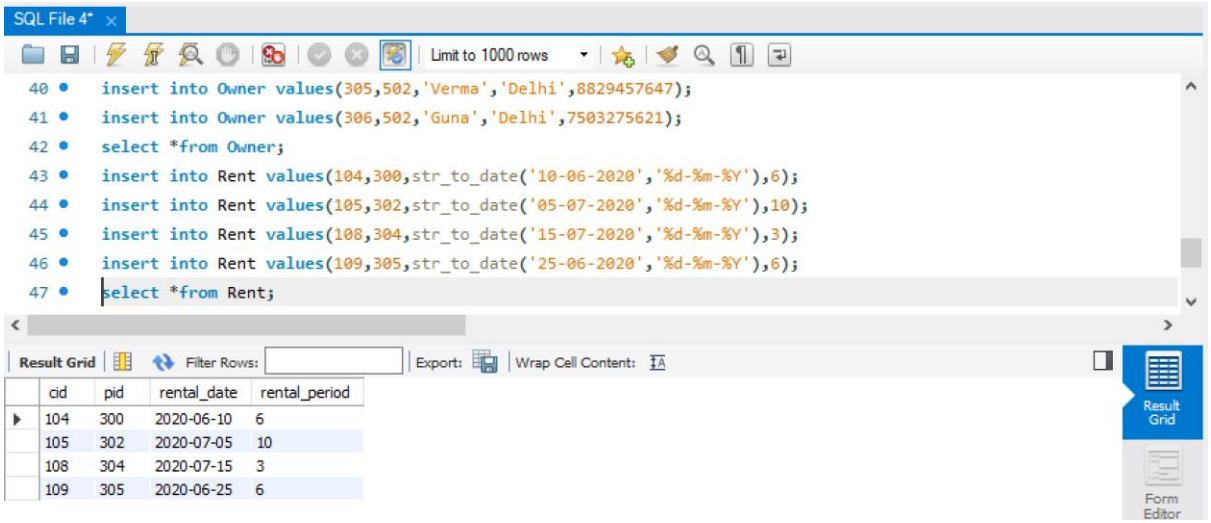
```
insert into Painting values (302,203,7500,'Hired');
insert into Painting values (303,205,2500,'Not hired');
insert into Painting values (304,202,10000,'Not hired');
insert into Painting values (305,201,8000,'Not hired');
insert into Painting values (306,203,6500,'Not hired');
select *from Painting;
insert into Owner values(300,500,'Raju','Hyderabad',9460367777);
insert into Owner values(301,500,'Hari','Vijayawada',8134185751);
```

pid	aid	rental_cost	type
300	201	4500	Hired
301	202	3500	Not hired
302	203	7500	Hired
303	205	2500	Not hired
304	202	10000	Not hired
305	201	8000	Not hired
306	203	6500	Not hired

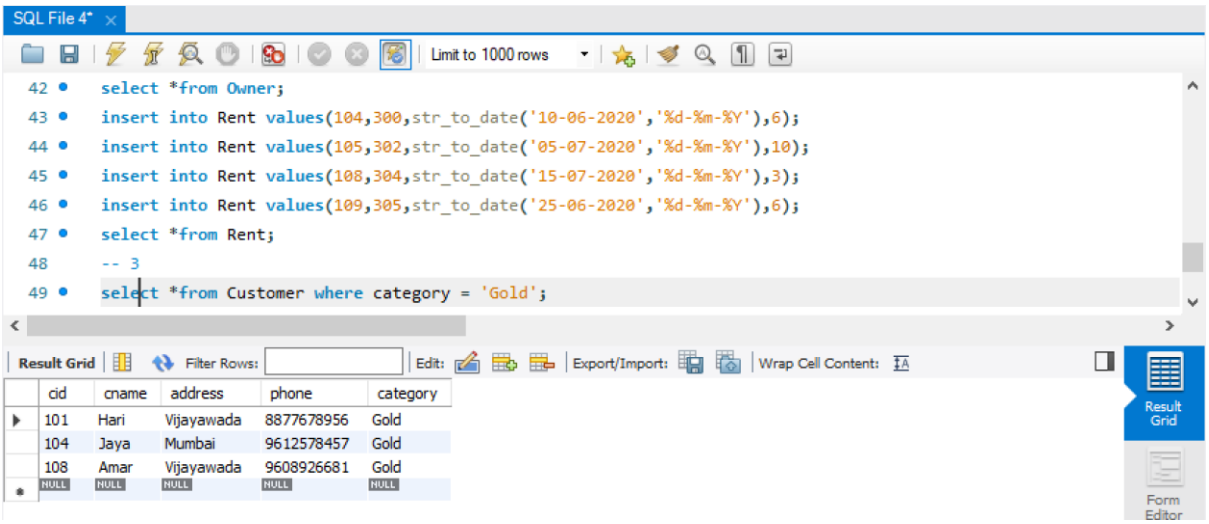


```
insert into Owner values(300,500,'Raju','Hyderabad',9460367777);
insert into Owner values(301,500,'Hari','Vijayawada',8134185751);
insert into Owner values(302,501,'Giri','Hyderabad',7808003725);
insert into Owner values(303,501,'Gopi','Delhi',9481821699);
insert into Owner values(304,503,'Krishna','Mumbai',7155639673);
insert into Owner values(305,502,'Verma','Delhi',8829457647);
insert into Owner values(306,502,'Guna','Delhi',7503275621);
select *from Owner;
```

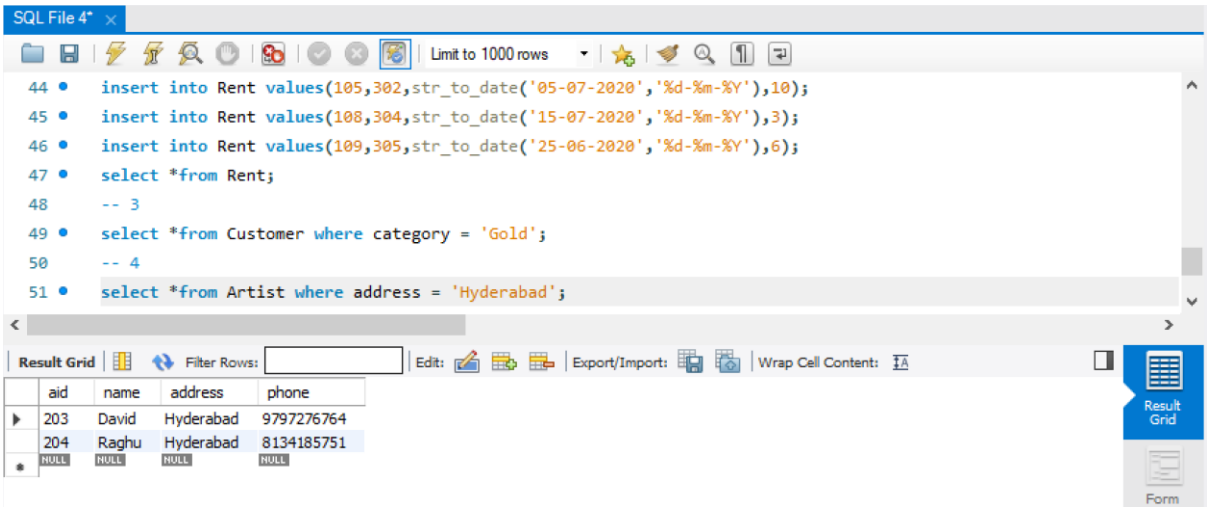
pid	oid	name	address	phone
300	500	Raju	Hyderabad	9460367777
301	500	Hari	Vijayawada	8134185751
302	501	Giri	Hyderabad	7808003725
303	501	Gopi	Delhi	9481821699
303	501	Gopi	Delhi	9481821699
304	503	Krishna	Mumbai	7155639673
305	502	Verma	Delhi	8829457647



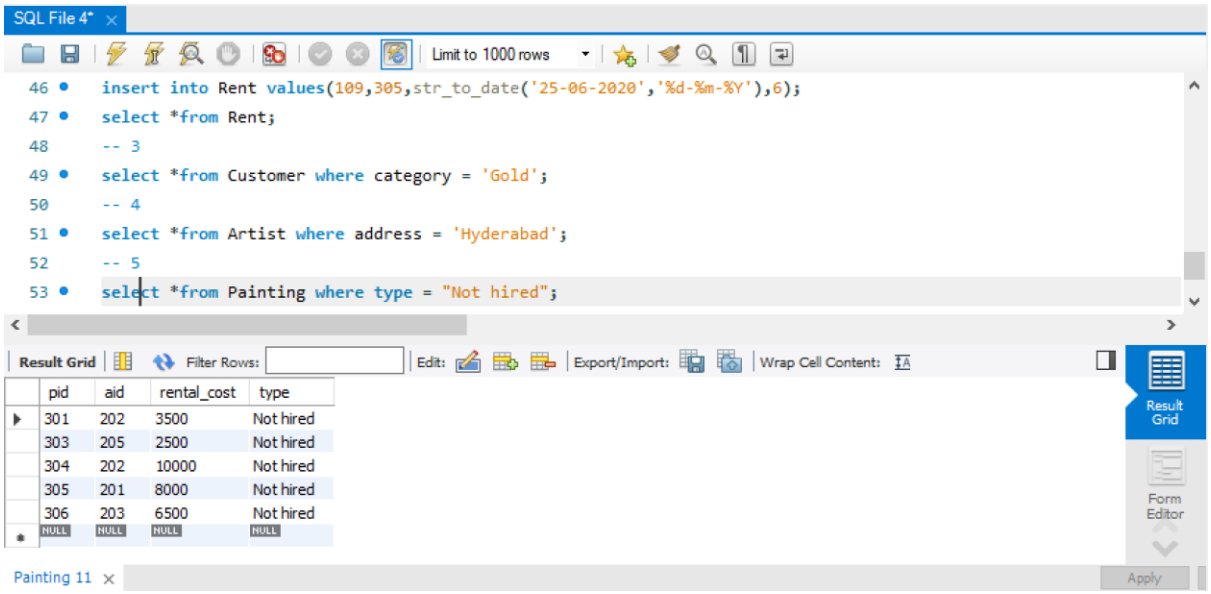
3) Display the customer details who got the category as “Gold”



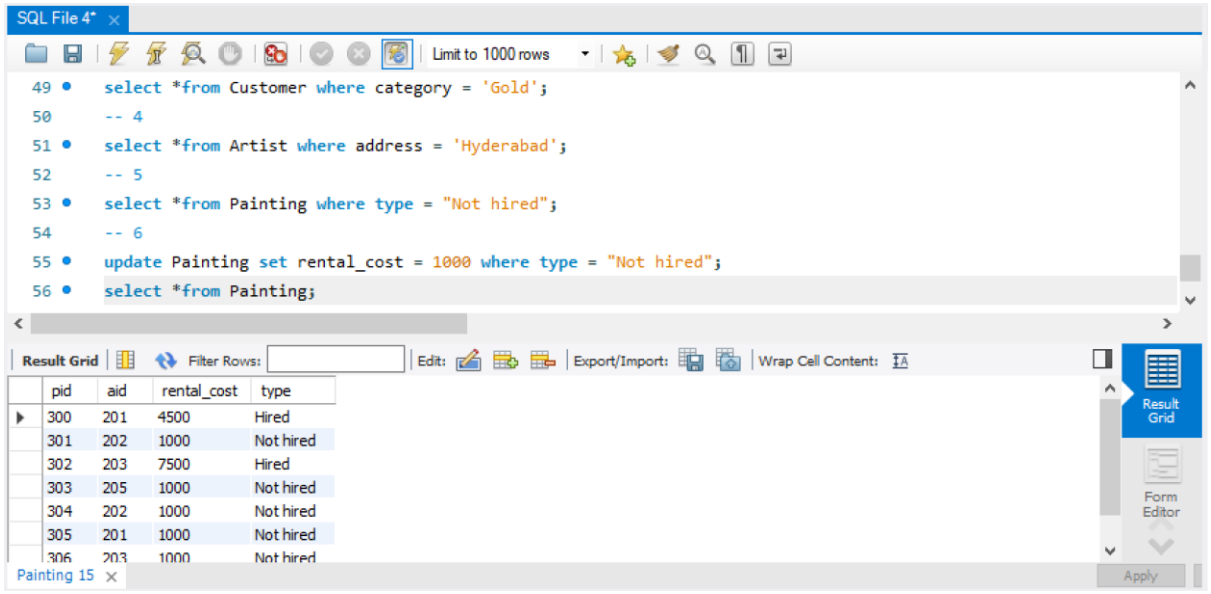
4) Display the list of artists who belong to “Hyderabad”



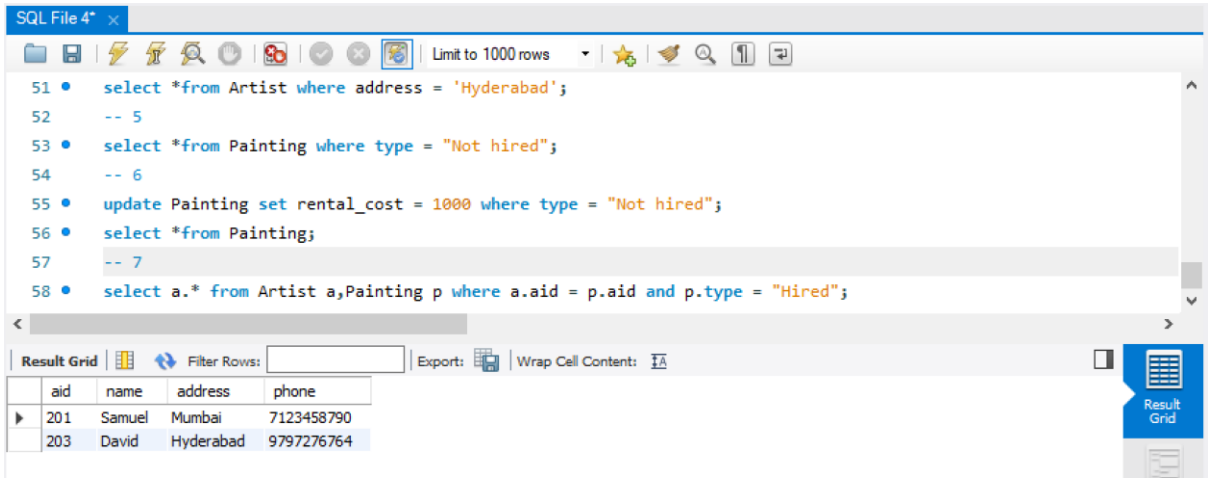
5) Create a query display the painting details which are not hired



6) Create a query to update the rental cost of the painting with 1000 for the paintings which are not hired



7) Display the details of the artist whose paintings are hired



POST-LAB

1) Company 'ABC' has decided to get the details of every employee. The company wants to know *id, name, manager id, manager name and computer brand* of every employee.Your job is to generate the report in the above mentioned format. Output must be in ascending order of employee name.

Table: **computer**

Field	Type
id	int
brand	varchar

Table: **employee**

Field	Type
id	int
name	text
manager	int
comp_id	int

Table: Computer

id	brand
1001	Dell
1002	HP
1003	Lenovo
1004	Asus
1005	Compac
1006	Apple
1007	Samsung
1008	Acer
1009	Sony

Table:Employee

id	name	manager	comp_id
100001	Vishal	100002	1004
100002	Kanak	100005	1006
100003	Dinesh	100001	1002
100004	Rajesh	100003	1001
100005	Rohan	100001	1007
100006	Manisha	100004	1008
100007	Prabhat	100005	1006
100008	Abhishek	100007	1006

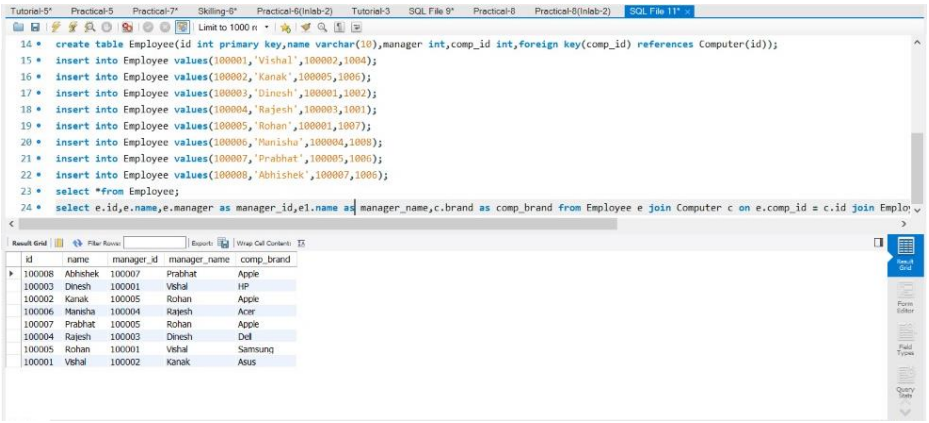
Table: Output

id	name	manager_id	manager_name	comp_brand
100008	Abhishek	100007	Prabhat	Apple
100003	Dinesh	100001	Vishal	HP
100002	Kanak	100005	Rohan	Apple

100006	Manisha	100004	Rajesh	Acer
100007	Prabhat	100005	Rohan	Apple
100004	Rajesh	100003	Dinesh	Dell
100005	Rohan	100001	Vishal	Samsung
100001	Vishal	100002	Kanak	Asus

ANS)

select e.id,e.name,e.manager as manager_id,e1.name as manager_name,c.brand as comp_brand from Employee e join Computer c on e.comp_id = c.id join Employee e1 on e1.id = e.manager order by e.name asc;



2) Micro has made a new search algorithm. What it does is check whether the query string is a subsequence of the search string or not. A string *A* is considered a subsequence of string *B* if some characters from *B* can be deleted so that it becomes equal to *A*.Micro ran his algorithm on a list of messages he has and got some output but now he needs to verify it. Help Micro verify the output by doing a search on the same list of messages. String he queried for is "hack" (without quotes).

Input Format:

Table : **Messages**

Field	Type
Content	text
id	integer

Sample:

Content	id
hacker	1
hacak	2
happy	3

Output:

Content	id
hacker	1
hacak	2

Explanation

String "hack" appears as a subsequence in strings "hacker" and "hacak".

ANS) **select *from Messages where Content like '%h%a%c%k%' order by id asc;**

3) You are given a table Employee.Employee: It will consist of 2 column, first is Employee Id, and second is the Joining Date of that employee.Date format will be: YYYY-MM-DD. You need to find the number of joinings happened on the even days, for all the special years in the given data.Special years are the ones, in which joining happened only in the even months in the given data.
Example:
i) Even months of an year are : February (2nd month), April (4^{th} month) and so on.

ii) Number of even days of a normal year are:Given dates: 1999-12-01 (odd day), 1999-02-02 (even day), 1999-06-08 (even day). Here number of joinings happened on even days for year 1999 is 2.

Note: Output the data in the ascending order of the Special Year.

Input Format:

Table : Employee

Field	Type
EmployeeID	int
JoiningDate	Date

Output Format:

Field	Type
Special_Year	int
EvenDays	int

Sample Input:

Employee Table:

EmployeeID	JoiningDate
1	1998-12-01
2	1998-06-02
3	1998-02-28
4	2000-04-16
5	2000-04-18
6	2000-06-18
7	1999-08-12
8	1999-10-14
9	1999-10-15
10	2002-01-12
11	2002-02-14

Sample Output:

Special_Year	EvenDays
1998	2
1999	2
2000	3

ANS)

```
SELECT SPECIAL_YEAR.ONLYYEAR, COUNT(*) FROM (SELECT ONLYYEAR
FROM  ( SELECT YEAR(JOININGDATE) ONLYYEAR , COUNT(*) ALL_DAY,
COUNT(IF(XX = 'TRUE', 1, NULL))  EVEN_MONTH_COUNT FROM
(SELECT JOININGDATE, MONTH(JOININGDATE) , CASE WHEN
MONTH(JOININGDATE)%2 = 0 THEN 'TRUE' ELSE 'FALSE' END AS XX FROM
Employee) X GROUP BY YEAR(JOININGDATE)) X  WHERE
X.ALL_DAY=X.EVEN_MONTH_COUNT) SPECIAL_YEAR JOIN  Employee
ON SPECIAL_YEAR.ONLYYEAR = YEAR(Employee.JOININGDATE) WHERE
DAY(Employee.JOININGDATE)%2 = 0 GROUP BY SPECIAL_YEAR.ONLYYEAR ;
```

4) Fredo and his friends regularly visit their college canteen. As with any group, on a day, one of the friends pays the canteen bill of all the friends. You are given a table of logs which shows the entries of transactions between friends. The table consists of three fields as described below:

1. P1: Name of the person who pays the bill.

2. P2: Name of the person whose bill is paid by P1.

3. amount: Amount paid by P1 for P2.

You have to summarise the transaction between all pairs of friends. See the sample input and output for explanation.

Input Format:

Table : logs

Field	Type
P1	text
P2	text
amount	int

Output Format:

Field	Type
P1	text
P2	text
NetAmount	int

Sample Input: logs Table:

P1	P2	amount
Fredo	Zeus	81
Fredo	John	59
Zeus	Fredo	81
Zeus	John	16
John	Fredo	27
John	Zeus	83
Fredo	Zeus	27

Fredo	John	17

Sample Output:

P1	P2	NetAmount
Fredo	John	49
Fredo	Zeus	27
John	Zeus	67

Explanation:

Here Fredo lends John 59+17=76 and John lends Fredo 27. So, in all John owes Fredo 49 units.Similarly, Fredo lends Zeus 81+27=108 and Zeus lends Fredo 81. So, in all Zeus owes Fredo 17 units.Similarly, Zeus owes John 67 units.

Note:

Only direct transactions are to be covered in the output table.
Only those entries should come in the output table which have NetAmount greater than 0.
The output table should be ordered by P1 in ascending order and then by P2 in ascending order.
It is guaranteed that the input table will contain all ordered pairs of friends atleast once.

ANS)

```
select e.P1 as P1,e.P2 as P2,(e.total-f.total) as net from (select
P1,P2,sum(amount) as total from logs group by P1,P2) as e, (select
P1,P2,sum(amount) as total from logs group by P1,P2) as f where e.total-f.total
> 0 and (e.P1=f.P2 and e.P2=f.P1) order by P1 asc,P2 asc;
```