Title page:

MY SQL DATABASE CREATION

For

(Car Parking System)

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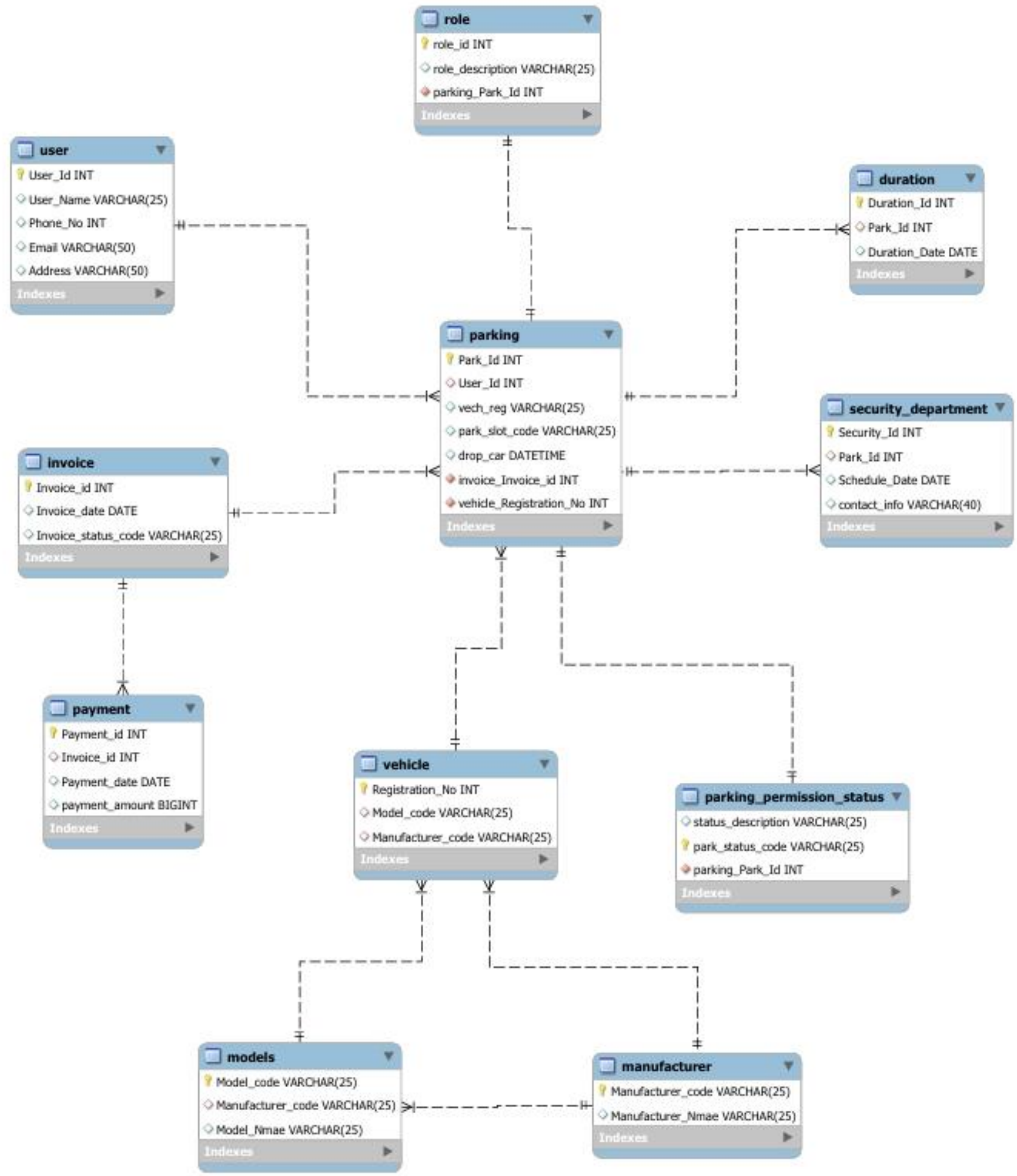
Degree (BSCS)

Section (A)

Mam Raheela Naseem

Previous assignment ER Model



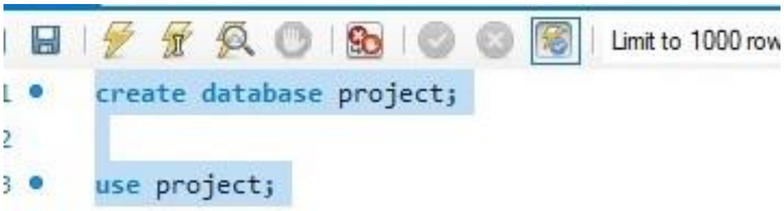
1.The Table satisfy 1NF,2NF & 3NF

2.My SQL Database Creation

create database project;

use assignment;

select database();



```
create database project;

use project;
```

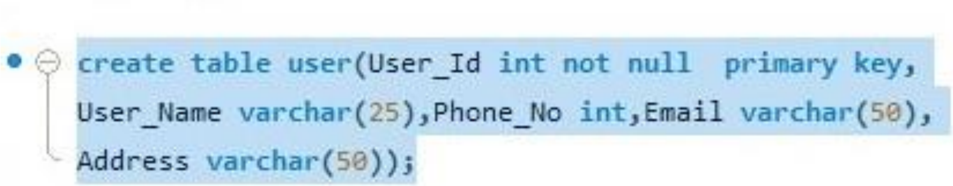
3.Table Creation

User Table:

create table user(User_Id int not null primary key,

User_Name varchar(25),Phone_No int,Email varchar(50),

Address varchar(50));



```
create table user(User_Id int not null  primary key,
User_Name varchar(25),Phone_No int,Email varchar(50),
Address varchar(50));
```

Parking Table:

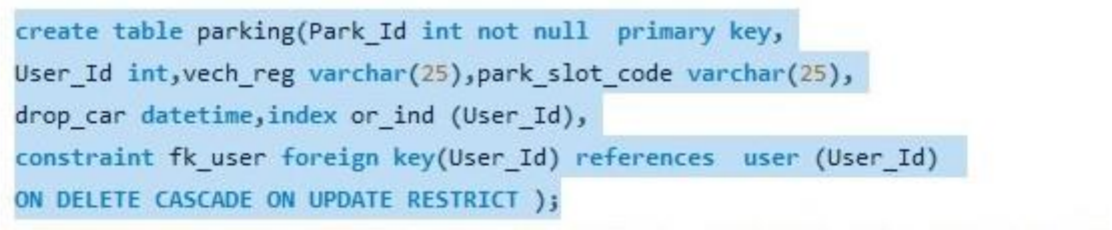
create table parking(Park_Id int not null primary key,

User_Id int,vech_reg varchar(25),

park_slot_code varchar(25), drop_car datetime,index or_ind (User_Id),

constraint fk_user foreign key(User_Id) references user (User_Id)

ON DELETE CASCADE ON UPDATE RESTRICT);

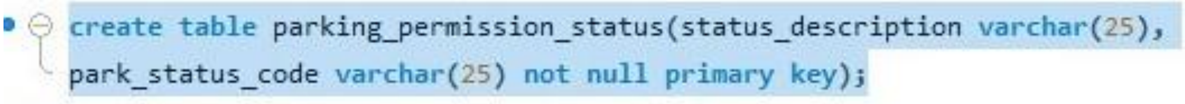


```
create table parking(Park_Id int not null  primary key,
User_Id int,vech_reg varchar(25),park_slot_code varchar(25),
drop_car datetime,index or_ind (User_Id),
constraint fk_user foreign key(User_Id) references  user (User_Id)
ON DELETE CASCADE ON UPDATE RESTRICT );
```

Parking Permission Status Table:

create table parking_permission_status(status_description varchar(25),

park_status_code varchar(25) not null primary key);

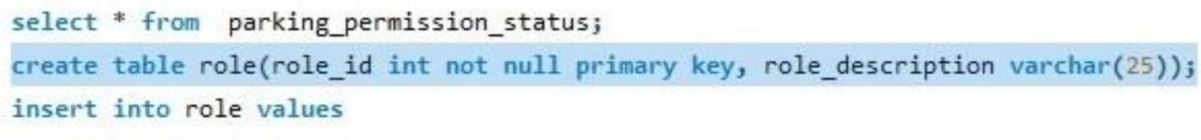


```
create table parking_permission_status(status_description varchar(25),
park_status_code varchar(25) not null primary key);
```

Role Table:

create table role(role_id int not null primary key,

role_description varchar(25));

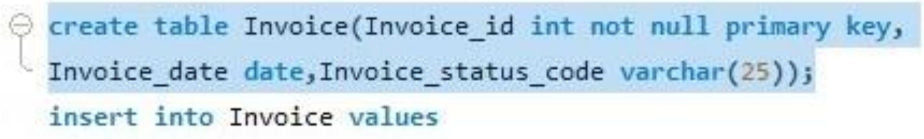


```
select * from  parking_permission_status;
create table role(role_id int not null primary key, role_description varchar(25));
insert into role values
```

Invoice Table:

create table Invoice(Invoice_id int not null primary key,

Invoice_date date,Invoice_status_code varchar(25));



```
create table Invoice(Invoice_id int not null primary key,
Invoice_date date,Invoice_status_code varchar(25));
insert into Invoice values
```

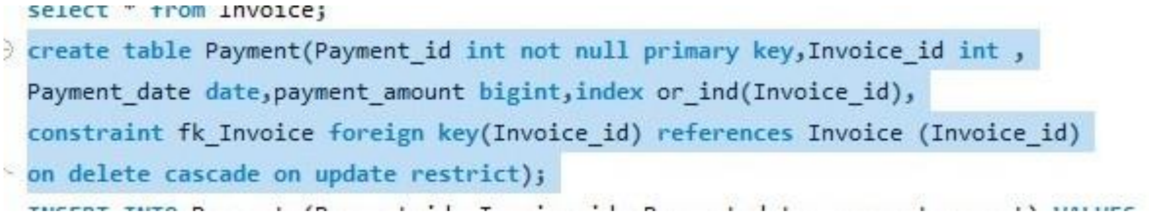
Payment Table:

create table Payment(Payment_id int not null primary key,Invoice_id int ,

Payment_date date,payment_amount bigint,index or_ind(Invoice_id),

constraint fk_Invoice foreign key(Invoice_id) references Invoice (Invoice_id)

on delete cascade on update restrict);



```
select * from invoice;
create table Payment(Payment_id int not null primary key,Invoice_id int ,
Payment_date date,payment_amount bigint,index or_ind(Invoice_id),
constraint fk_Invoice foreign key(Invoice_id) references Invoice (Invoice_id)
on delete cascade on update restrict);
```

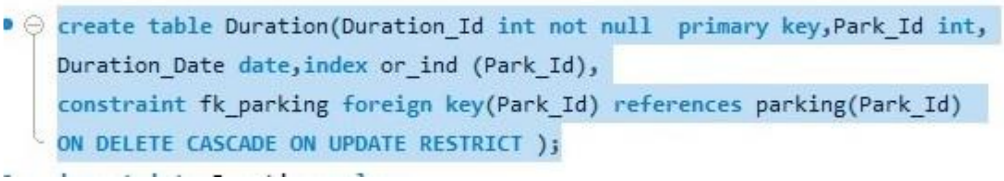
Duration Table:

create table Duration(Duration_Id int not null primary key,Park_Id int,

Duration_Date date,index or_ind (Park_Id),

constraint fk_parking foreign key(Park_Id) references parking(Park_Id)

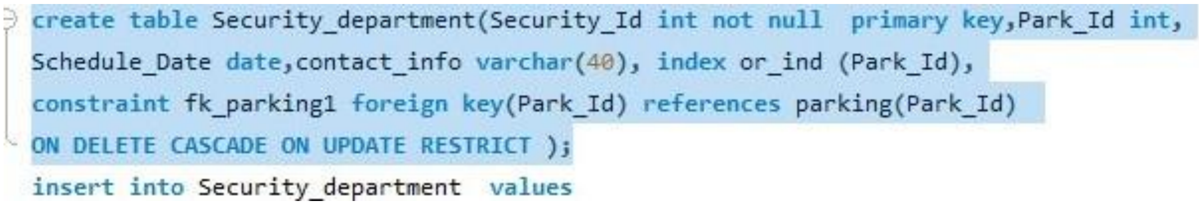
ON DELETE CASCADE ON UPDATE RESTRICT);



```
create table Duration(Duration_Id int not null  primary key,Park_Id int,
Duration_Date date,index or_ind (Park_Id),
constraint fk_parking foreign key(Park_Id) references parking(Park_Id)
ON DELETE CASCADE ON UPDATE RESTRICT );
```

Security Department Table:

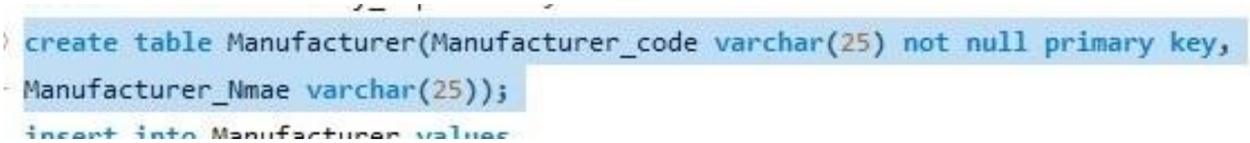
create table Security_department(Security_Id int not null primary key,Park_Id int, Schedule_Date date,contact_info varchar(40), index or_ind (Park_Id), constraint fk_parking1 foreign key(Park_Id) references parking(Park_Id) ON DELETE CASCADE ON UPDATE RESTRICT);



```
create table Security_department(Security_Id int not null  primary key,Park_Id int,
Schedule_Date date,contact_info varchar(40), index or_ind (Park_Id),
constraint fk_parking1 foreign key(Park_Id) references parking(Park_Id)
ON DELETE CASCADE ON UPDATE RESTRICT );
insert into Security_department  values
```

Manufacture Table:

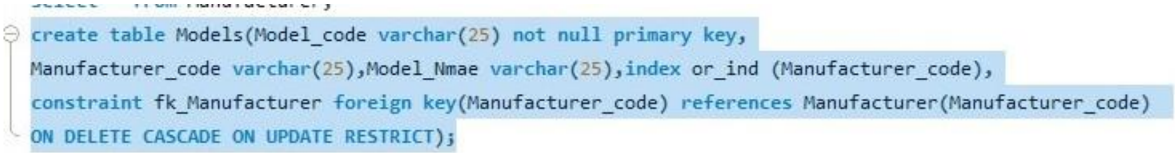
create table Manufacturer(Manufacturer_code varchar(25) not null primary key, Manufacturer_Nmae varchar(25));



```
create table Manufacturer(Manufacturer_code varchar(25) not null primary key,
Manufacturer_Nmae varchar(25));
insert into Manufacturer values
```

Model Table:

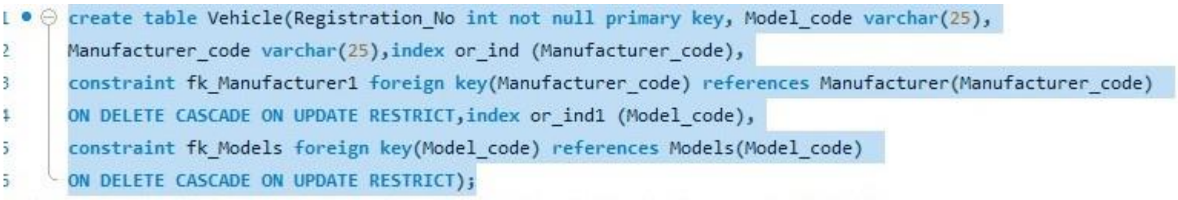
create table Models(Model_code varchar(25) not null primary key, Manufacturer_code varchar(25),Model_Nmae varchar(25),index or_ind (Manufacturer_code), constraint fk_Manufacturer foreign key(Manufacturer_code) references Manufacturer(Manufacturer_code) ON DELETE CASCADE ON UPDATE RESTRICT);



```
create table Models(Model_code varchar(25) not null primary key,
Manufacturer_code varchar(25),Model_Nmae varchar(25),index or_ind (Manufacturer_code),
constraint fk_Manufacturer foreign key(Manufacturer_code) references Manufacturer(Manufacturer_code)
ON DELETE CASCADE ON UPDATE RESTRICT);
```

Vehicle Table:

create table Vehicle(Registration_No int not null primary key, Model_code varchar(25), Manufacturer_code varchar(25),index or_ind (Manufacturer_code), constraint fk_Manufacturer1 foreign key(Manufacturer_code) references Manufacturer(Manufacturer_code) ON DELETE CASCADE ON UPDATE RESTRICT,index or_ind1 (Model_code), constraint fk_Models foreign key(Model_code) references Models(Model_code) ON DELETE CASCADE ON UPDATE RESTRICT);

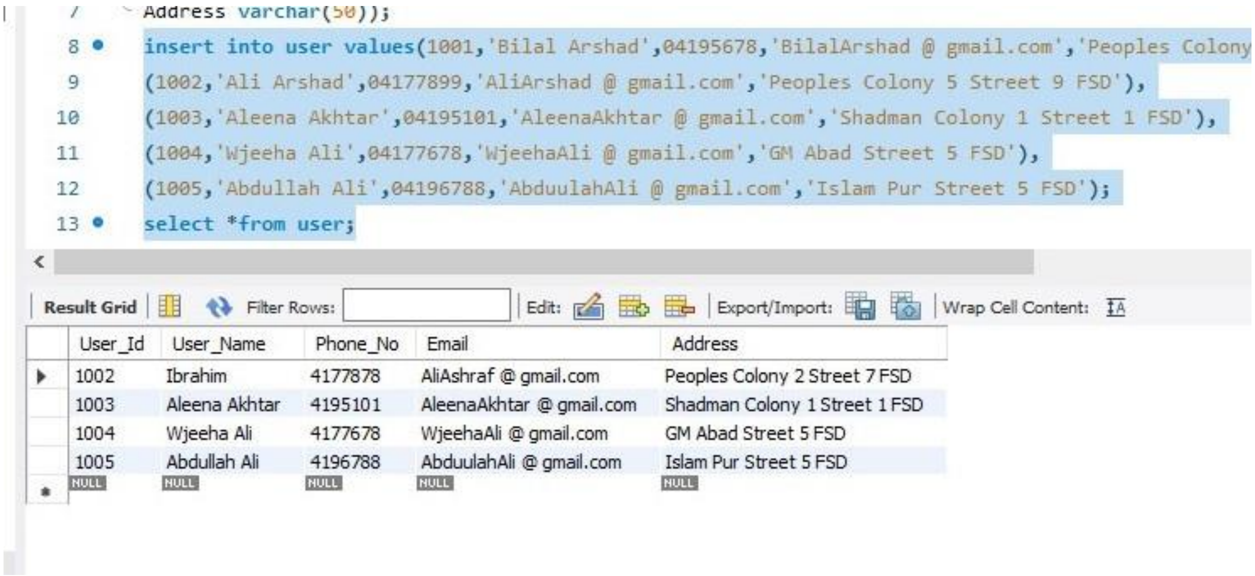


```
create table Vehicle(Registration_No int not null primary key, Model_code varchar(25),
Manufacturer_code varchar(25),index or_ind (Manufacturer_code),
constraint fk_Manufacturer1 foreign key(Manufacturer_code) references Manufacturer(Manufacturer_code)
ON DELETE CASCADE ON UPDATE RESTRICT,index or_ind1 (Model_code),
constraint fk_Models foreign key(Model_code) references Models(Model_code)
ON DELETE CASCADE ON UPDATE RESTRICT);
```

4.Data Population

User Table:

insert into user values(1001,'Bilal Arshad',04195678,'BilalArshad @ gmail.com','Peoples Colony 1 Street 1 FSD'), (1002,'Ali Arshad',04177899,'AliArshad @ gmail.com','Peoples Colony 5 Street 9 FSD'), (1003,'Aleena Akhtar',04195101,'AleenaAkhtar @ gmail.com','Shadman Colony 1 Street 1 FSD'), (1004,'Wjeeha Ali',04177678,'WjeehaAli @ gmail.com','GM Abad Street 5 FSD'), (1005,'Abdullah Ali',04196788,'AbduulahAli @ gmail.com','Islam Pur Street 5 FSD');

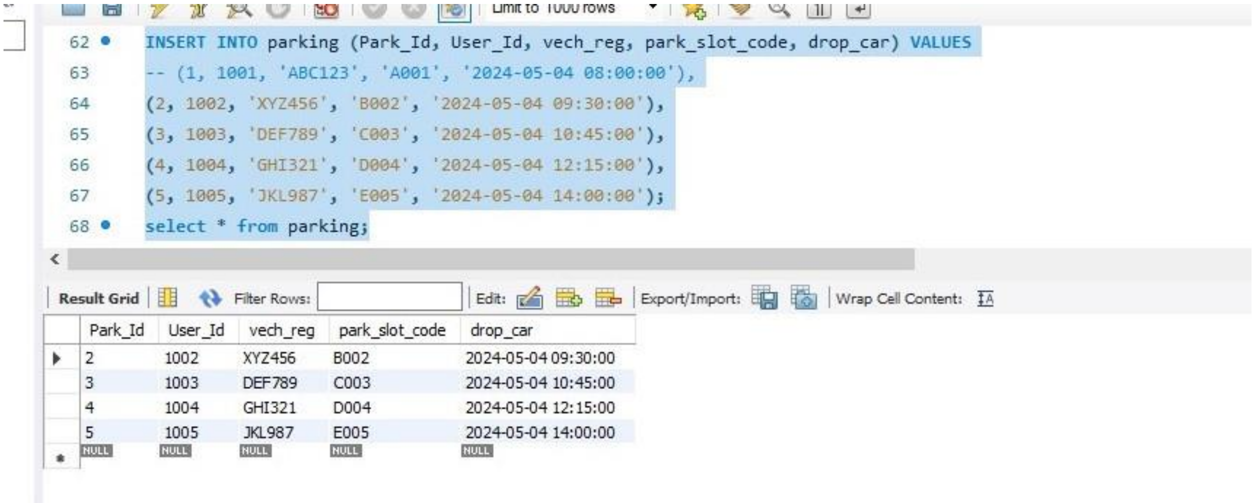


```
Address varchar(50));
insert into user values(1001,'Bilal Arshad',04195678,'BilalArshad @ gmail.com','Peoples Colony
(1002,'Ali Arshad',04177899,'AliArshad @ gmail.com','Peoples Colony 5 Street 9 FSD'),
(1003,'Aleena Akhtar',04195101,'AleenaAkhtar @ gmail.com','Shadman Colony 1 Street 1 FSD'),
(1004,'Wjeeha Ali',04177678,'WjeehaAli @ gmail.com','GM Abad Street 5 FSD'),
(1005,'Abdullah Ali',04196788,'AbduulahAli @ gmail.com','Islam Pur Street 5 FSD');
select *from user;
```

User_Id	User_Name	Phone_No	Email	Address
1002	Ibrahim	4177878	AliAshraf @ gmail.com	Peoples Colony 2 Street 7 FSD
1003	Aleena Akhtar	4195101	AleenaAkhtar @ gmail.com	Shadman Colony 1 Street 1 FSD
1004	Wjeeha Ali	4177678	WjeehaAli @ gmail.com	GM Abad Street 5 FSD
1005	Abdullah Ali	4196788	AbduulahAli @ gmail.com	Islam Pur Street 5 FSD
NULL	NULL	NULL	NULL	NULL

Parking Table:

INSERT INTO parking (Park_Id, User_Id, vech_reg, park_slot_code, drop_car) VALUES -- (1, 1001, 'ABC123', 'A001', '2024-05-04 08:00:00'), (2, 1002, 'XYZ456', 'B002', '2024-05-04 09:30:00'), (3, 1003, 'DEF789', 'C003', '2024-05-04 10:45:00'), (4, 1004, 'GHI321', 'D004', '2024-05-04 12:15:00'), (5, 1005, 'JKL987', 'E005', '2024-05-04 14:00:00'); select * from parking;

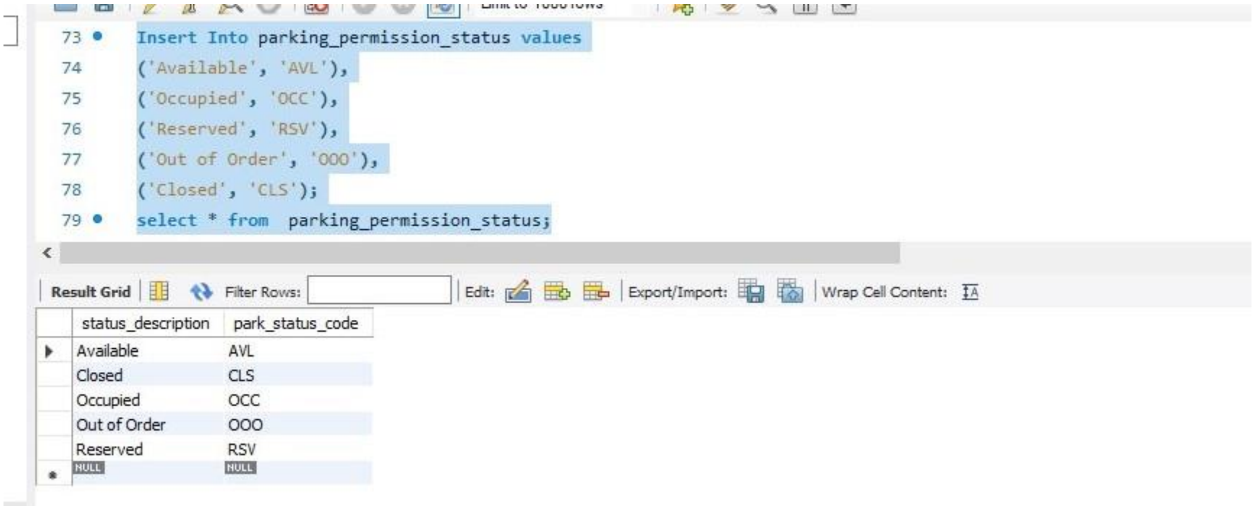


```sql
INSERT INTO parking (Park_Id, User_Id, vech_reg, park_slot_code, drop_car) VALUES
-- (1, 1001, 'ABC123', 'A001', '2024-05-04 08:00:00'),
(2, 1002, 'XYZ456', 'B002', '2024-05-04 09:30:00'),
(3, 1003, 'DEF789', 'C003', '2024-05-04 10:45:00'),
(4, 1004, 'GHI321', 'D004', '2024-05-04 12:15:00'),
(5, 1005, 'JKL987', 'E005', '2024-05-04 14:00:00');
select * from parking;
```

Park_Id	User_Id	vech_reg	park_slot_code	drop_car
2	1002	XYZ456	B002	2024-05-04 09:30:00
3	1003	DEF789	C003	2024-05-04 10:45:00
4	1004	GHI321	D004	2024-05-04 12:15:00
5	1005	JKL987	E005	2024-05-04 14:00:00
NULL	NULL	NULL	NULL	NULL

Parking Permission Status Table:

Insert Into parking_permission_status values ('Available', 'AVL'), ('Occupied', 'OCC'), ('Reserved', 'RSV'), ('Out of Order', 'OOO'), ('Closed', 'CLS'); select * from parking_permission_status;

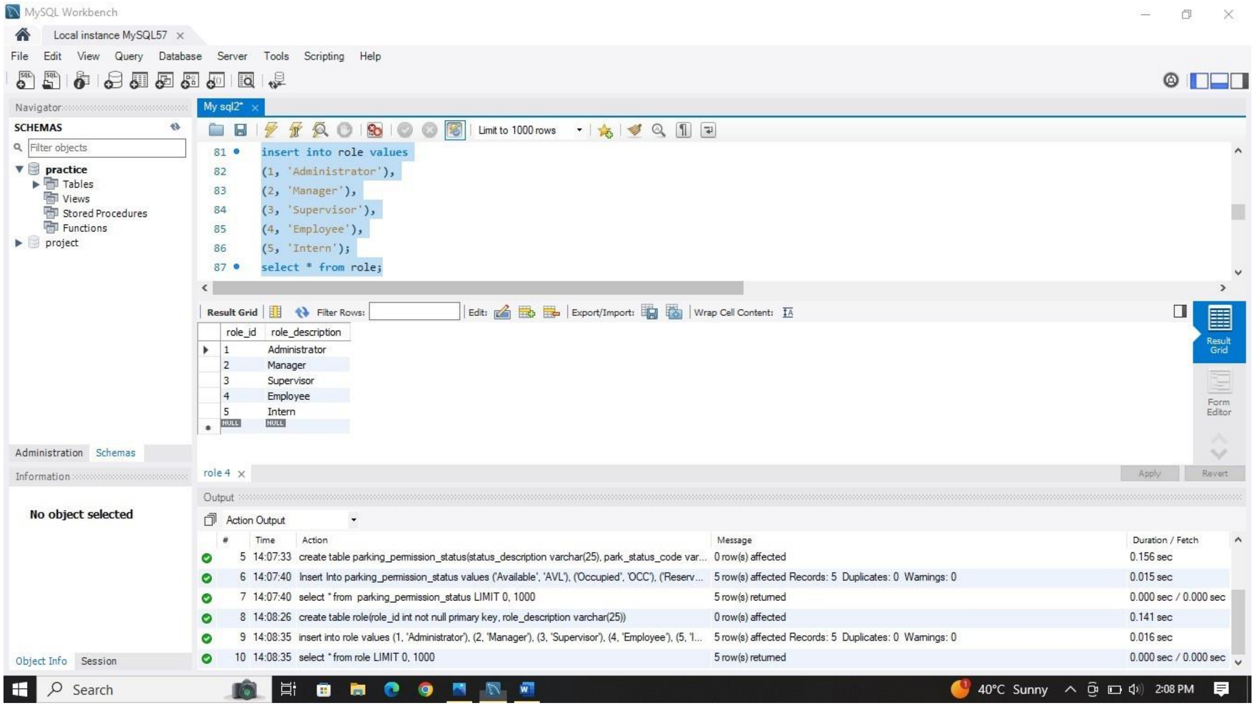


```sql
Insert Into parking_permission_status values
('Available', 'AVL'),
('Occupied', 'OCC'),
('Reserved', 'RSV'),
('Out of Order', 'OOO'),
('Closed', 'CLS');
select * from  parking_permission_status;
```

status_description	park_status_code
Available	AVL
Closed	CLS
Occupied	OCC
Out of Order	OOO
Reserved	RSV
NULL	NULL

Role Table:

insert into role values (1, 'Administrator'), (2, 'Manager'), (3, 'Supervisor'), (4, 'Employee'), (5, 'Intern'); select * from role;



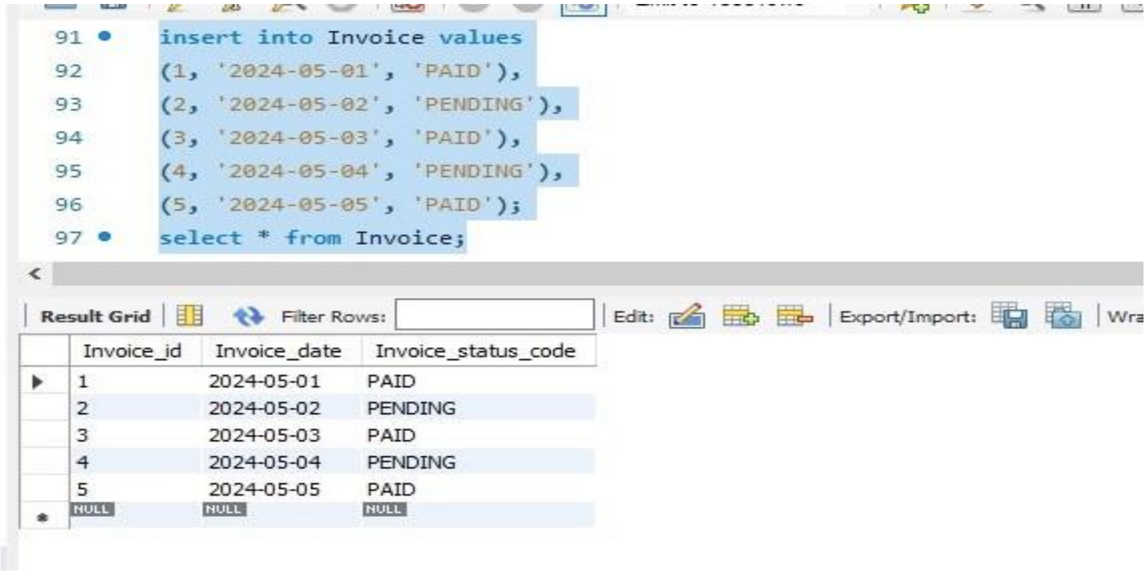
```
insert into role values
(1, 'Administrator'),
(2, 'Manager'),
(3, 'Supervisor'),
(4, 'Employee'),
(5, 'Intern');
select * from role;
```

role_id	role_description
1	Administrator
2	Manager
3	Supervisor
4	Employee
5	Intern
NULL	NULL

```
#   Time      Action                                                                                              Message                                                         Duration / Fetch
5   14:07:33  create table parking_permission_status(status_description varchar(25), park_status_code var...     0 row(s) affected                                               0.156 sec
6   14:07:40  Insert Into parking_permission_status values ('Available', 'AVL'), ('Occupied', 'OCC'), ('Reserv...  5 row(s) affected Records: 5  Duplicates: 0  Warnings: 0        0.015 sec
7   14:07:40  select * from  parking_permission_status LIMIT 0, 1000                                              5 row(s) returned                                               0.000 sec / 0.000 sec
8   14:08:26  create table role(role_id int not null primary key, role_description varchar(25))                   0 row(s) affected                                               0.141 sec
9   14:08:35  insert into role values (1, 'Administrator'), (2, 'Manager'), (3, 'Supervisor'), (4, 'Employee'), (5, 'I...  5 row(s) affected Records: 5  Duplicates: 0  Warnings: 0  0.016 sec
10  14:08:35  select * from role LIMIT 0, 1000                                                                    5 row(s) returned                                               0.000 sec / 0.000 sec
```

Invoice Table:

create table Invoice(Invoice_id int not null primary key, Invoice_date date,Invoice_status_code varchar(25)); insert into Invoice values (1, '2024-05-01', 'PAID'), (2, '2024-05-02', 'PENDING'), (3, '2024-05-03', 'PAID'), (4, '2024-05-04', 'PENDING'), (5, '2024-05-05', 'PAID'); select * from Invoice;

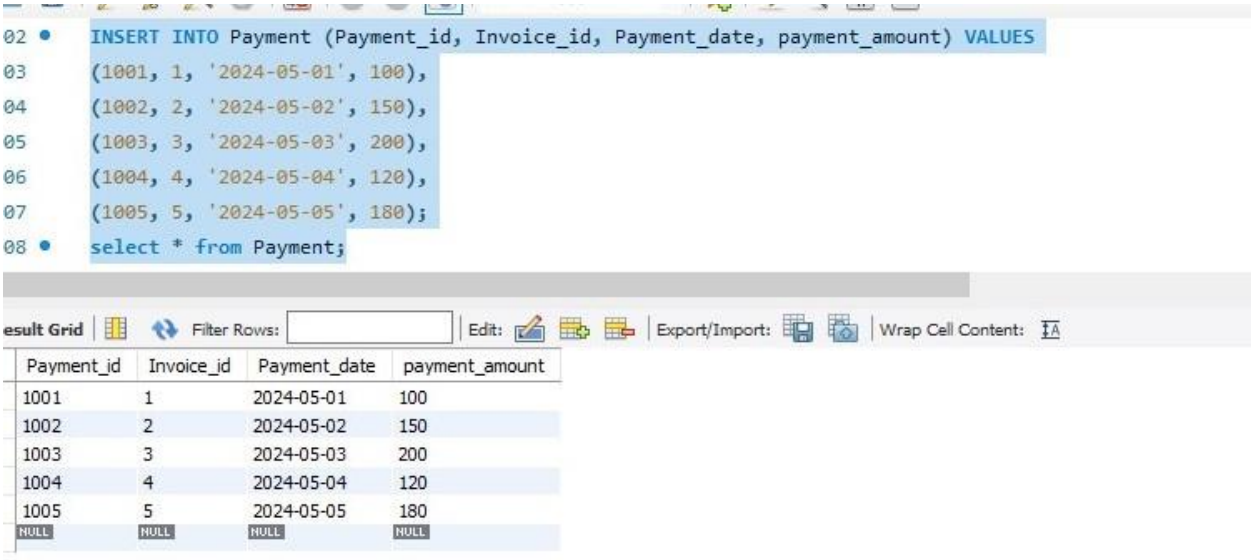


```
insert into Invoice values
(1, '2024-05-01', 'PAID'),
(2, '2024-05-02', 'PENDING'),
(3, '2024-05-03', 'PAID'),
(4, '2024-05-04', 'PENDING'),
(5, '2024-05-05', 'PAID');
select * from Invoice;
```

Invoice_id	Invoice_date	Invoice_status_code
1	2024-05-01	PAID
2	2024-05-02	PENDING
3	2024-05-03	PAID
4	2024-05-04	PENDING
5	2024-05-05	PAID
NULL	NULL	NULL

Payment Table:

INSERT INTO Payment (Payment_id, Invoice_id, Payment_date, payment_amount) VALUES (1001, 1, '2024-05-01', 100), (1002, 2, '2024-05-02', 150), (1003, 3, '2024-05-03', 200), (1004, 4, '2024-05-04', 120), (1005, 5, '2024-05-05', 180); select * from Payment;

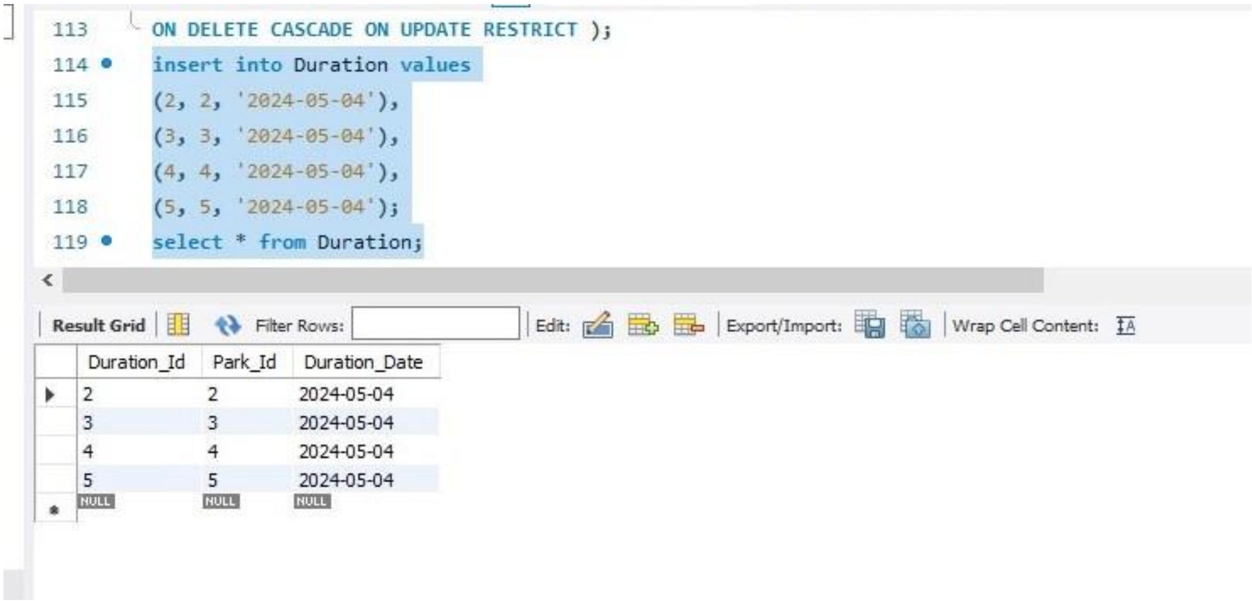


```
INSERT INTO Payment (Payment_id, Invoice_id, Payment_date, payment_amount) VALUES
(1001, 1, '2024-05-01', 100),
(1002, 2, '2024-05-02', 150),
(1003, 3, '2024-05-03', 200),
(1004, 4, '2024-05-04', 120),
(1005, 5, '2024-05-05', 180);
select * from Payment;
```

Payment_id	Invoice_id	Payment_date	payment_amount
1001	1	2024-05-01	100
1002	2	2024-05-02	150
1003	3	2024-05-03	200
1004	4	2024-05-04	120
1005	5	2024-05-05	180
NULL	NULL	NULL	NULL

Duration Table:

insert into Duration values (1, 1, '2024-05-04'), (2, 2, '2024-05-04'), (3, 3, '2024-05-04'), (4, 4, '2024-05-04'), (5, 5, '2024-05-04'); select * from Duration;

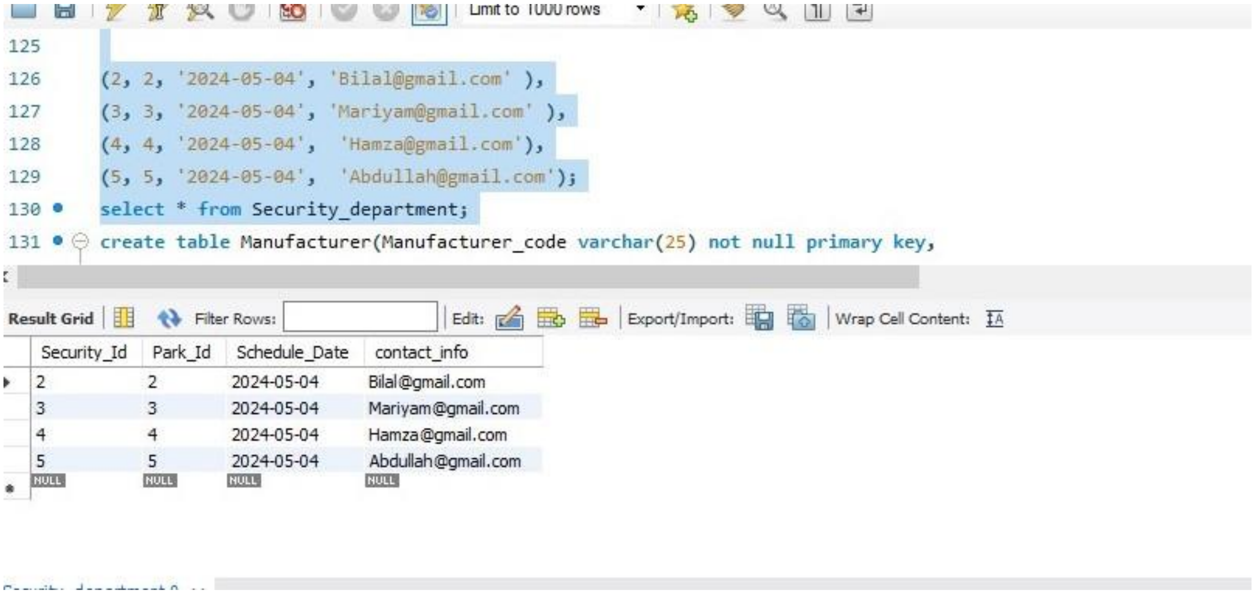


```
ON DELETE CASCADE ON UPDATE RESTRICT );
insert into Duration values
(2, 2, '2024-05-04'),
(3, 3, '2024-05-04'),
(4, 4, '2024-05-04'),
(5, 5, '2024-05-04');
select * from Duration;
```

Duration_Id	Park_Id	Duration_Date
2	2	2024-05-04
3	3	2024-05-04
4	4	2024-05-04
5	5	2024-05-04
NULL	NULL	NULL

Security Department Table:

insert into Security_department values (1, 1, '2024-05-04', 'Ali@gmail.com'), (2, 2, '2024-05-04', 'Bilal@gmail.com'), (3, 3, '2024-05-04', 'Mariyam@gmail.com'), (4, 4, '2024-05-04', 'Hamza@gmail.com'), (5, 5, '2024-05-04', 'Abdullah@gmail.com'); select * from Security_department;



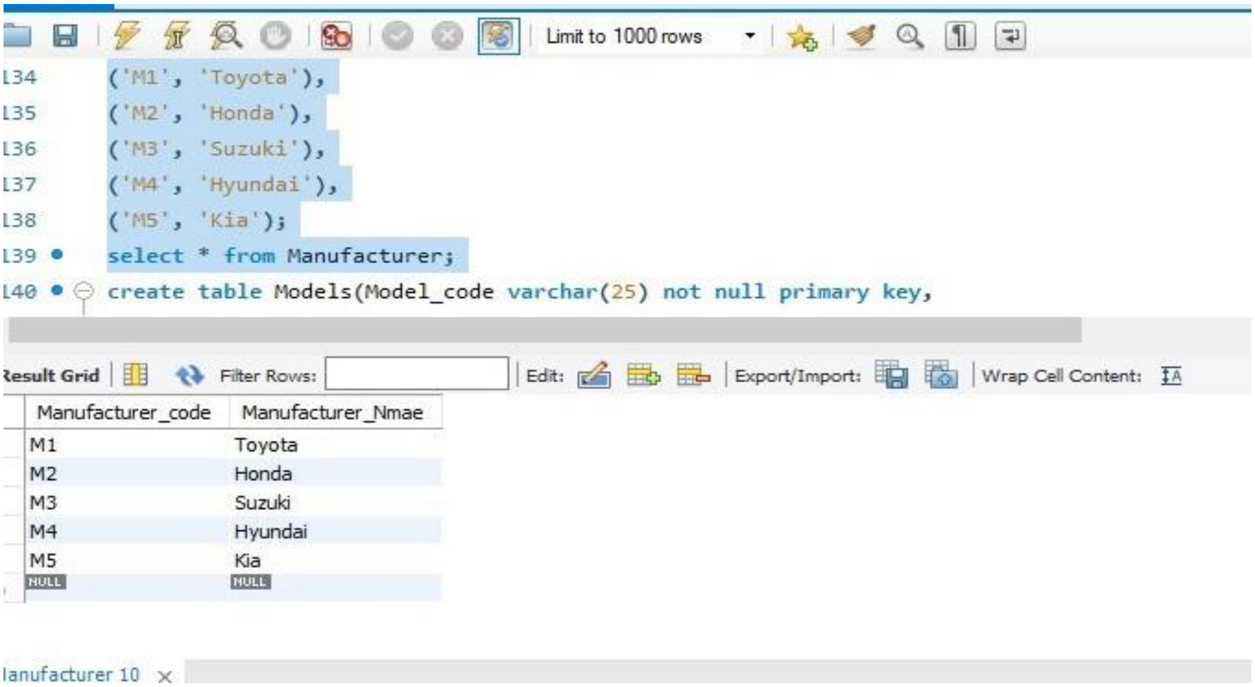
```

(2, 2, '2024-05-04', 'Bilal@gmail.com' ),
(3, 3, '2024-05-04', 'Mariyam@gmail.com' ),
(4, 4, '2024-05-04',  'Hamza@gmail.com'),
(5, 5, '2024-05-04',  'Abdullah@gmail.com');
select * from Security_department;
create table Manufacturer(Manufacturer_code varchar(25) not null primary key,
```

Security_Id	Park_Id	Schedule_Date	contact_info
2	2	2024-05-04	Bilal@gmail.com
3	3	2024-05-04	Mariyam@gmail.com
4	4	2024-05-04	Hamza@gmail.com
5	5	2024-05-04	Abdullah@gmail.com
NULL	NULL	NULL	NULL

Manufacture Table:

insert into Manufacturer values ('M1', 'Toyota'), ('M2', 'Honda'), ('M3', 'Suzuki'), ('M4', 'Hyundai'), ('M5', 'Kia'); select * from Manufacturer;

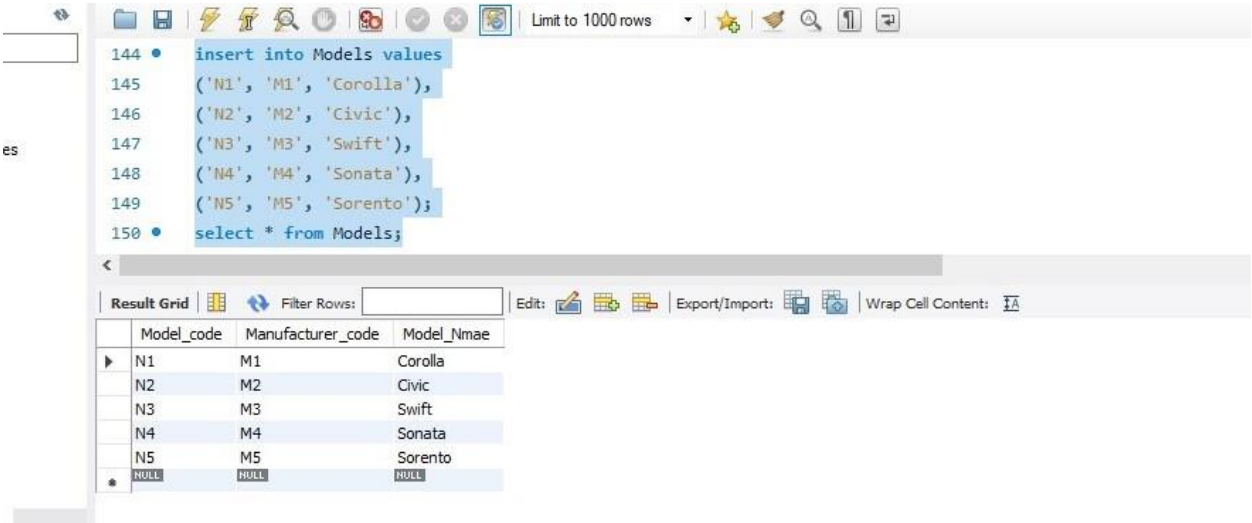


```
('M1', 'Toyota'),
('M2', 'Honda'),
('M3', 'Suzuki'),
('M4', 'Hyundai'),
('M5', 'Kia');
select * from Manufacturer;
create table Models(Model_code varchar(25) not null primary key,
```

Manufacturer_code	Manufacturer_Nmae
M1	Toyota
M2	Honda
M3	Suzuki
M4	Hyundai
M5	Kia
NULL	NULL

Model Table:

insert into Models values ('N1', 'M1', 'Corolla'), ('N2', 'M2', 'Civic'), ('N3', 'M3', 'Swift'), ('N4', 'M4', 'Sonata'), ('N5', 'M5', 'Sorento'); select * from Models;

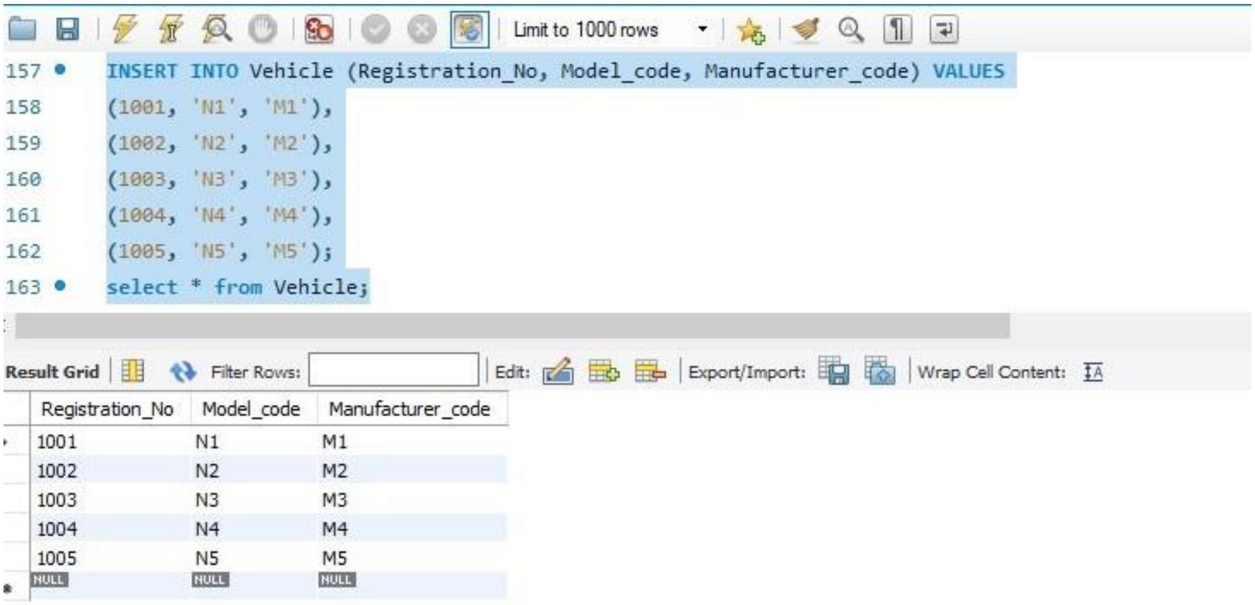


```
insert into Models values
('N1', 'M1', 'Corolla'),
('N2', 'M2', 'Civic'),
('N3', 'M3', 'Swift'),
('N4', 'M4', 'Sonata'),
('N5', 'M5', 'Sorento');
select * from Models;
```

Model_code	Manufacturer_code	Model_Nmae
N1	M1	Corolla
N2	M2	Civic
N3	M3	Swift
N4	M4	Sonata
N5	M5	Sorento
NULL	NULL	NULL

Vehicle Table:

INSERT INTO Vehicle (Registration_No, Model_code, Manufacturer_code) VALUES (1001, 'N1', 'M1'), (1002, 'N2', 'M2'), (1003, 'N3', 'M3'), (1004, 'N4', 'M4'), (1005, 'N5', 'M5'); select * from Vehicle;



```
INSERT INTO Vehicle (Registration_No, Model_code, Manufacturer_code) VALUES
(1001, 'N1', 'M1'),
(1002, 'N2', 'M2'),
(1003, 'N3', 'M3'),
(1004, 'N4', 'M4'),
(1005, 'N5', 'M5');
select * from Vehicle;
```

Registration_No	Model_code	Manufacturer_code
1001	N1	M1
1002	N2	M2
1003	N3	M3
1004	N4	M4
1005	N5	M5
NULL	NULL	NULL

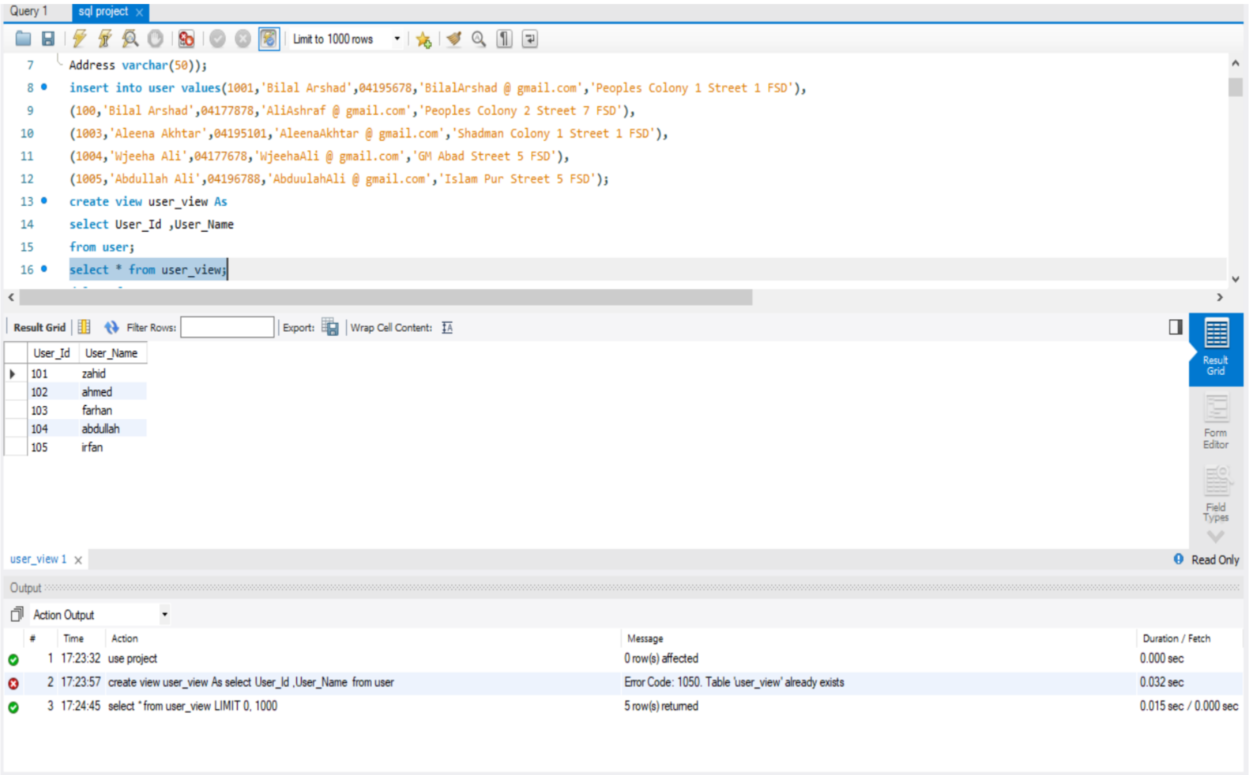
5.View Creation

create view user_view As

select User_Id ,User_Name

from user;

select * from user_view;



```
Address varchar(50));
insert into user values(1001,'Bilal Arshad',04195678,'BilalArshad @ gmail.com','Peoples Colony 1 Street 1 FSD'),
(100,'Bilal Arshad',04177878,'AliAshraf @ gmail.com','Peoples Colony 2 Street 7 FSD'),
(1003,'Aleena Akhtar',04195101,'AleenaAkhtar @ gmail.com','Shadman Colony 1 Street 1 FSD'),
(1004,'Wjeeha Ali',04177678,'WjeehaAli @ gmail.com','GM Abad Street 5 FSD'),
(1005,'Abdullah Ali',04196788,'AbduulahAli @ gmail.com','Islam Pur Street 5 FSD');
create view user_view As
select User_Id ,User_Name
from user;
select * from user_view;
```

User_Id	User_Name
101	zahid
102	ahmed
103	farhan
104	abdullah
105	irfan

```
    #  Time      Action                                                   Message                                           Duration / Fetch
✓   1  17:23:32  use project                                              0 row(s) affected                                 0.000 sec
✗   2  17:23:57  create view user_view As select User_Id ,User_Name  from user   Error Code: 1050. Table 'user_view' already exists   0.032 sec
✓   3  17:24:45  select * from user_view LIMIT 0, 1000                    5 row(s) returned                                 0.015 sec / 0.000 sec
```

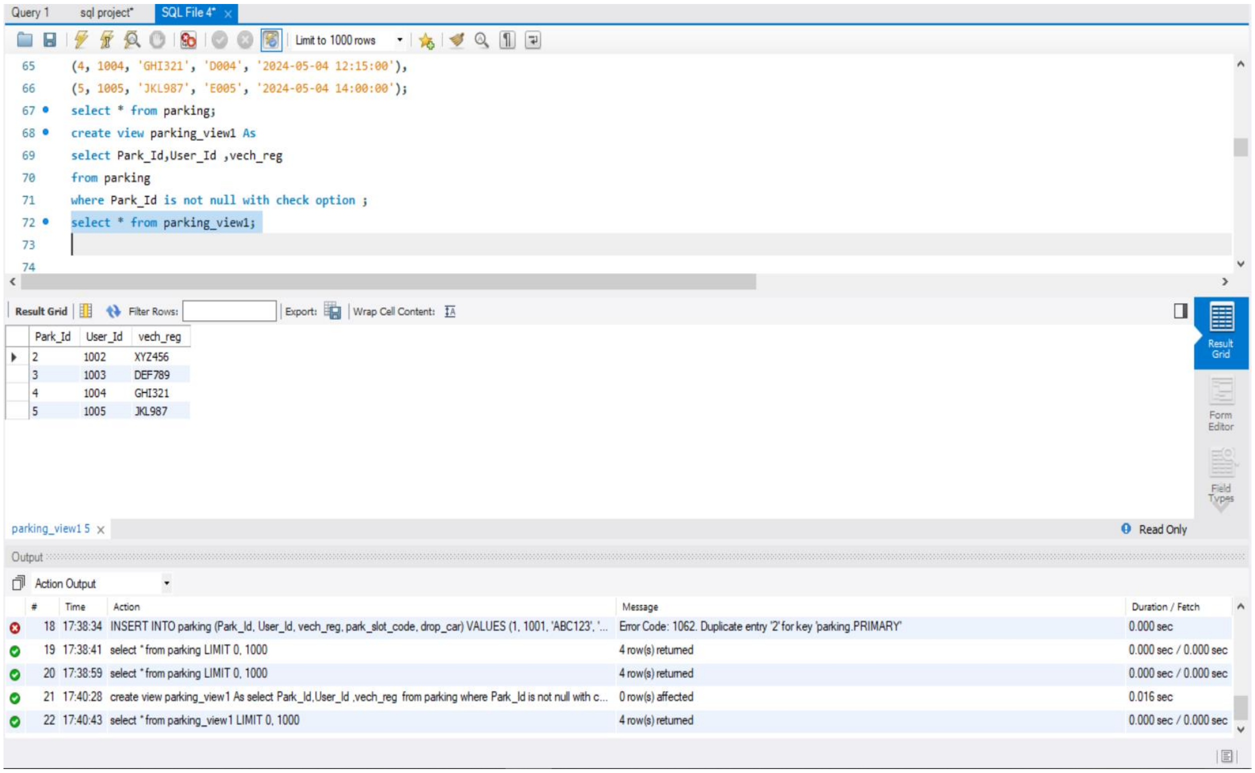
create view parking_view1 As

select Park_Id,User_Id ,vech_reg

from parking

where Park_Id is not null with check option ;

select * from parking_view1;



```
(4, 1004, 'GHI321', 'D004', '2024-05-04 12:15:00'),
(5, 1005, 'JKL987', 'E005', '2024-05-04 14:00:00');
select * from parking;
create view parking_view1 As
select Park_Id,User_Id ,vech_reg
from parking
where Park_Id is not null with check option ;
select * from parking_view1;
```

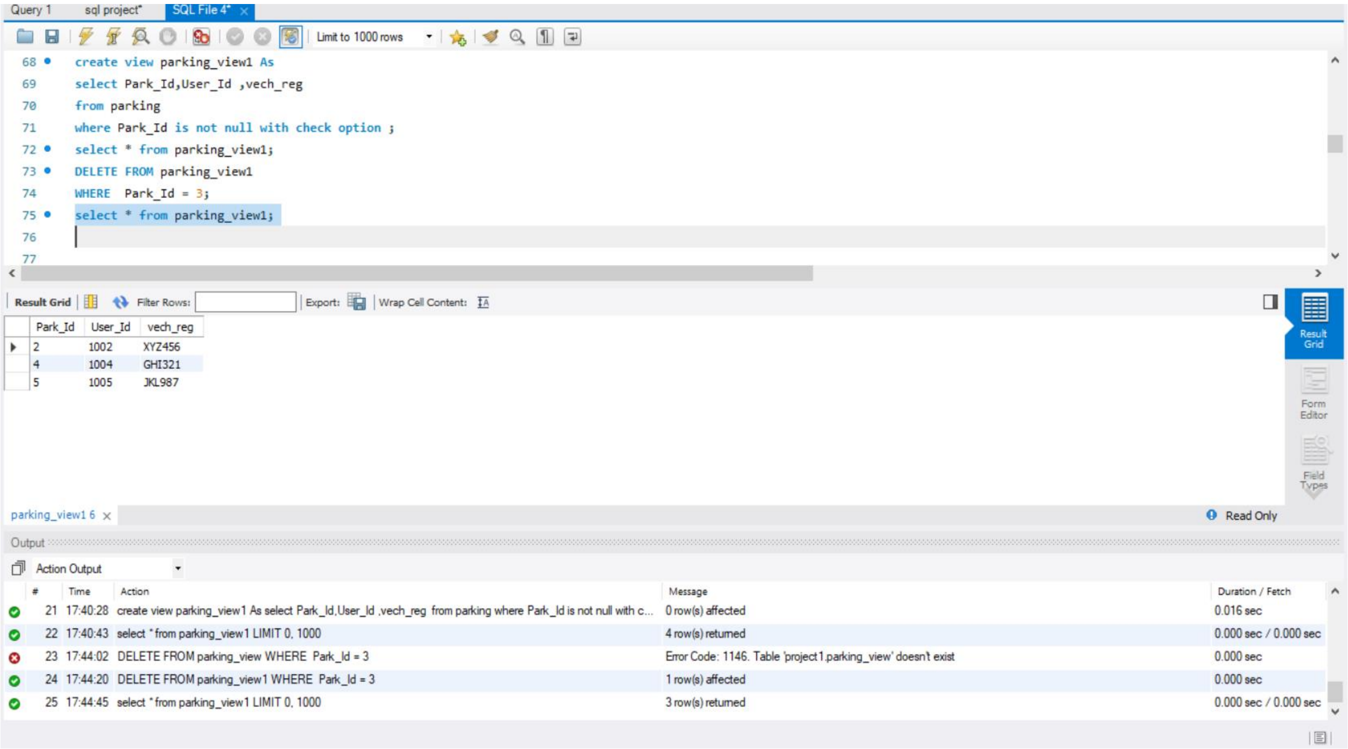
Park_Id	User_Id	vech_reg
2	1002	XYZ456
3	1003	DEF789
4	1004	GHI321
5	1005	JKL987

```
#   Time      Action                                                                                          Message                                                     Duration / Fetch
18  17:38:34  INSERT INTO parking (Park_Id, User_Id, vech_reg, park_slot_code, drop_car) VALUES (1, 1001, 'ABC123', '...  Error Code: 1062. Duplicate entry '2' for key 'parking.PRIMARY'  0.000 sec
19  17:38:41  select * from parking LIMIT 0, 1000                                                             4 row(s) returned                                           0.000 sec / 0.000 sec
20  17:38:59  select * from parking LIMIT 0, 1000                                                             4 row(s) returned                                           0.000 sec / 0.000 sec
21  17:40:28  create view parking_view1 As select Park_Id,User_Id ,vech_reg  from parking where Park_Id is not null with c...  0 row(s) affected           0.016 sec
22  17:40:43  select * from parking_view1 LIMIT 0, 1000                                                       4 row(s) returned                                           0.000 sec / 0.000 sec
```

DELETE FROM parking_view1

WHERE Park_Id = 3;

select * from parking_view1;



```
create view parking_view1 As
select Park_Id,User_Id ,vech_reg
from parking
where Park_Id is not null with check option ;
select * from parking_view1;
DELETE FROM parking_view1
WHERE  Park_Id = 3;
select * from parking_view1;
```

Park_Id	User_Id	vech_reg
2	1002	XYZ456
4	1004	GHI321
5	1005	JKL987

```
#   Time      Action                                                                                          Message                                                     Duration / Fetch
21  17:40:28  create view parking_view1 As select Park_Id,User_Id ,vech_reg  from parking where Park_Id is not null with c...  0 row(s) affected           0.016 sec
22  17:40:43  select * from parking_view1 LIMIT 0, 1000                                                       4 row(s) returned                                           0.000 sec / 0.000 sec
23  17:44:02  DELETE FROM parking_view WHERE  Park_Id = 3                                                     Error Code: 1146. Table 'project1.parking_view' doesn't exist  0.000 sec
24  17:44:20  DELETE FROM parking_view1 WHERE  Park_Id = 3                                                    1 row(s) affected                                           0.000 sec
25  17:44:45  select * from parking_view1 LIMIT 0, 1000                                                       3 row(s) returned                                           0.000 sec / 0.000 sec
```

6. Transactions

Commit:

SET autocommit=0;

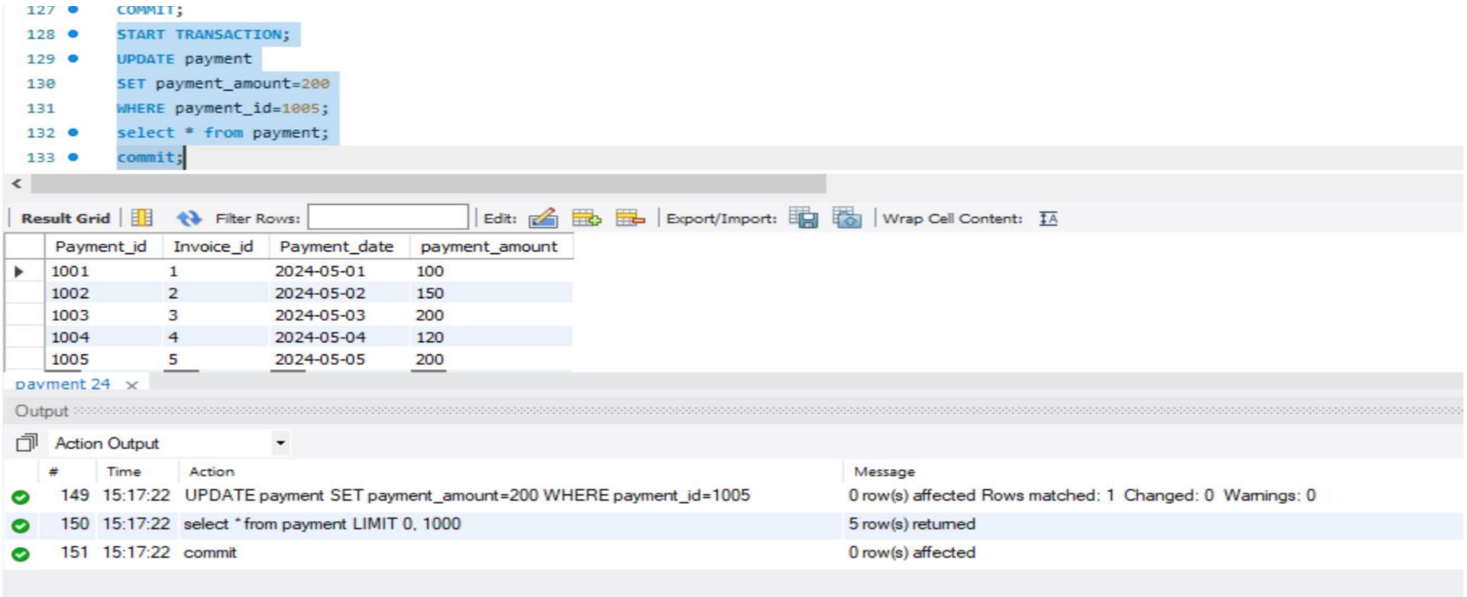
START TRANSACTION;

UPDATE payment

SET payment_amount=200

WHERE payment_id=1005;

COMMIT;



```
COMMIT;
START TRANSACTION;
UPDATE payment
SET payment_amount=200
WHERE payment_id=1005;
select * from payment;
commit;
```

Payment_id	Invoice_id	Payment_date	payment_amount
1001	1	2024-05-01	100
1002	2	2024-05-02	150
1003	3	2024-05-03	200
1004	4	2024-05-04	120
1005	5	2024-05-05	200

```
#    Time      Action                                                   Message
149  15:17:22  UPDATE payment SET payment_amount=200 WHERE payment_id=1005  0 row(s) affected Rows matched: 1  Changed: 0  Warnings: 0
150  15:17:22  select * from payment LIMIT 0, 1000                      5 row(s) returned
151  15:17:22  commit                                                   0 row(s) affected
```

Rollback:

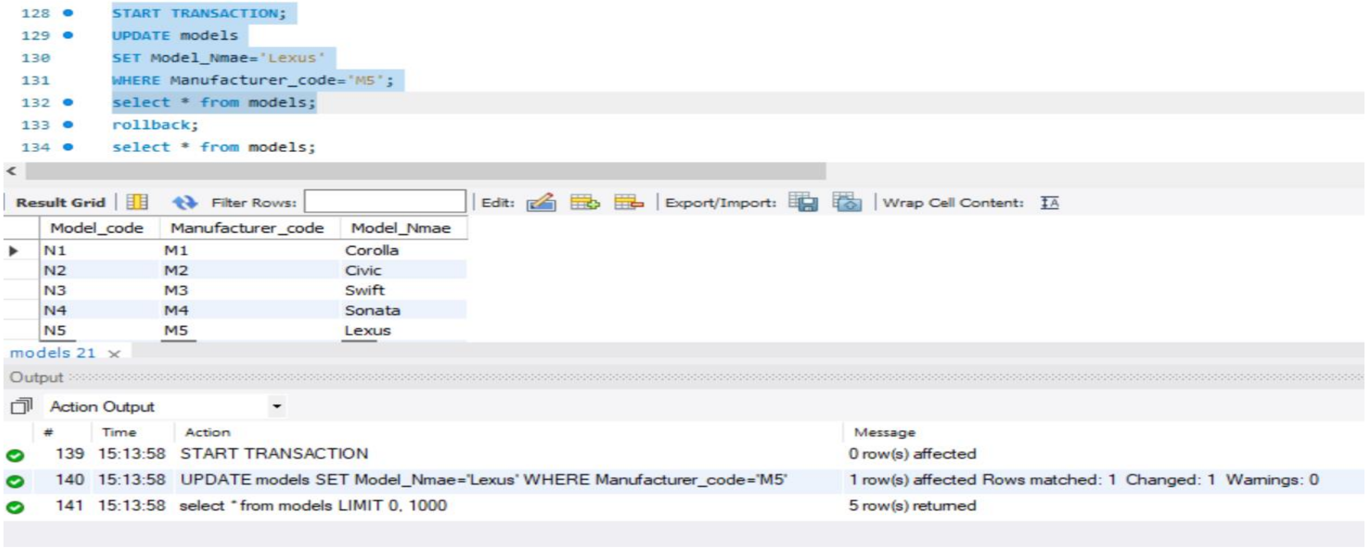
START TRANSACTION;

UPDATE models

SET model_name= 'Lexus'

WHERE manufacturer_code= 'MS';

Rollback;



```
START TRANSACTION;
UPDATE models
SET Model_Nmae='Lexus'
WHERE Manufacturer_code='M5';
select * from models;
rollback;
select * from models;
```

Model_code	Manufacturer_code	Model_Nmae
N1	M1	Corolla
N2	M2	Civic
N3	M3	Swift
N4	M4	Sonata
N5	M5	Lexus

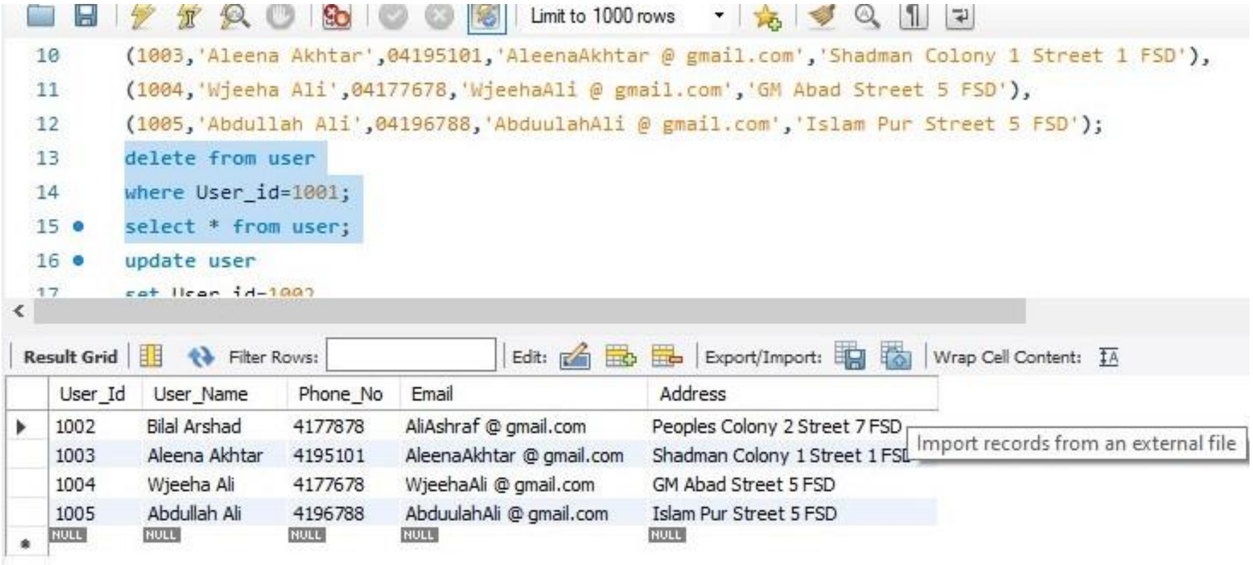
```
#    Time      Action                                                         Message
139  15:13:58  START TRANSACTION                                              0 row(s) affected
140  15:13:58  UPDATE models SET Model_Nmae='Lexus' WHERE Manufacturer_code='M5'   1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
141  15:13:58  select * from models LIMIT 0, 1000                             5 row(s) returned
```

7.Advanced SQL Queries

Delete:

delete from user

where User_id=1001;



```
(1003,'Aleena Akhtar',04195101,'AleenaAkhtar @ gmail.com','Shadman Colony 1 Street 1 FSD'),
(1004,'Wjeeha Ali',04177678,'WjeehaAli @ gmail.com','GM Abad Street 5 FSD'),
(1005,'Abdullah Ali',04196788,'AbduulahAli @ gmail.com','Islam Pur Street 5 FSD');
delete from user
where User_id=1001;
select * from user;
update user
set User_id=1002
```

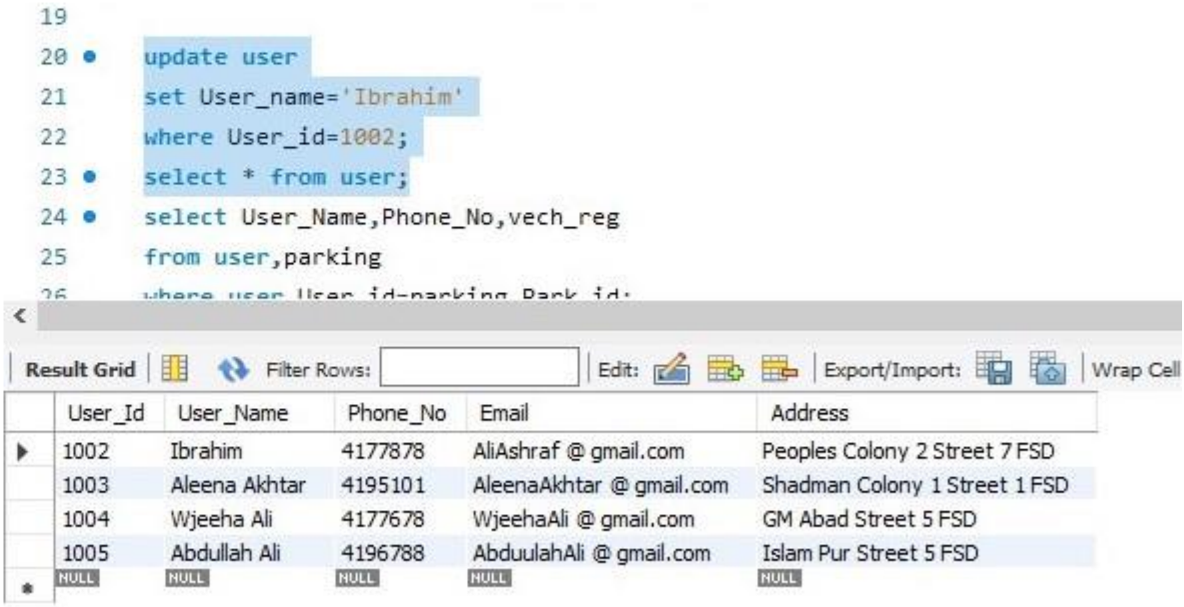
User_Id	User_Name	Phone_No	Email	Address
1002	Bilal Arshad	4177878	AliAshraf @ gmail.com	Peoples Colony 2 Street 7 FSD
1003	Aleena Akhtar	4195101	AleenaAkhtar @ gmail.com	Shadman Colony 1 Street 1 FSD
1004	Wjeeha Ali	4177678	WjeehaAli @ gmail.com	GM Abad Street 5 FSD
1005	Abdullah Ali	4196788	AbduulahAli @ gmail.com	Islam Pur Street 5 FSD
NULL	NULL	NULL	NULL	NULL

Update

update user

set User_name='Ibrahim'

where User_id=1002;



```
update user
set User_name='Ibrahim'
where User_id=1002;
select * from user;
select User_Name,Phone_No,vech_reg
from user,parking
where user.User_id=parking.Park_id;
```

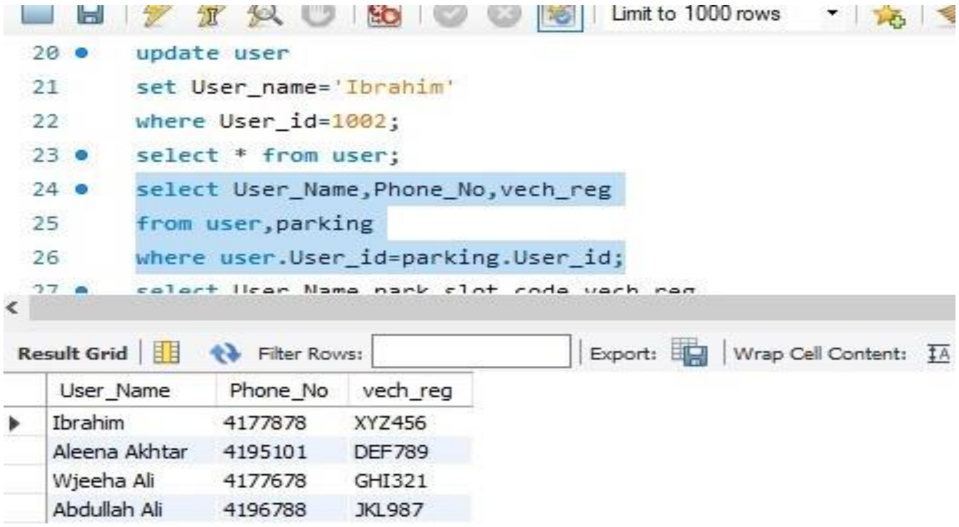
User_Id	User_Name	Phone_No	Email	Address
1002	Ibrahim	4177878	AliAshraf @ gmail.com	Peoples Colony 2 Street 7 FSD
1003	Aleena Akhtar	4195101	AleenaAkhtar @ gmail.com	Shadman Colony 1 Street 1 FSD
1004	Wjeeha Ali	4177678	WjeehaAli @ gmail.com	GM Abad Street 5 FSD
1005	Abdullah Ali	4196788	AbduulahAli @ gmail.com	Islam Pur Street 5 FSD
NULL	NULL	NULL	NULL	NULL

Join:

select User_Name,Phone_No,vech_reg

from user,parking

where user.User_id=parking.User_i



```
update user
set User_name='Ibrahim'
where User_id=1002;
select * from user;
select User_Name,Phone_No,vech_reg
from user,parking
where user.User_id=parking.User_id;
select User_Name,park_slot_code,vech_reg
```

User_Name	Phone_No	vech_reg
Ibrahim	4177878	XYZ456
Aleena Akhtar	4195101	DEF789
Wjeeha Ali	4177678	GHI321
Abdullah Ali	4196788	JKL987

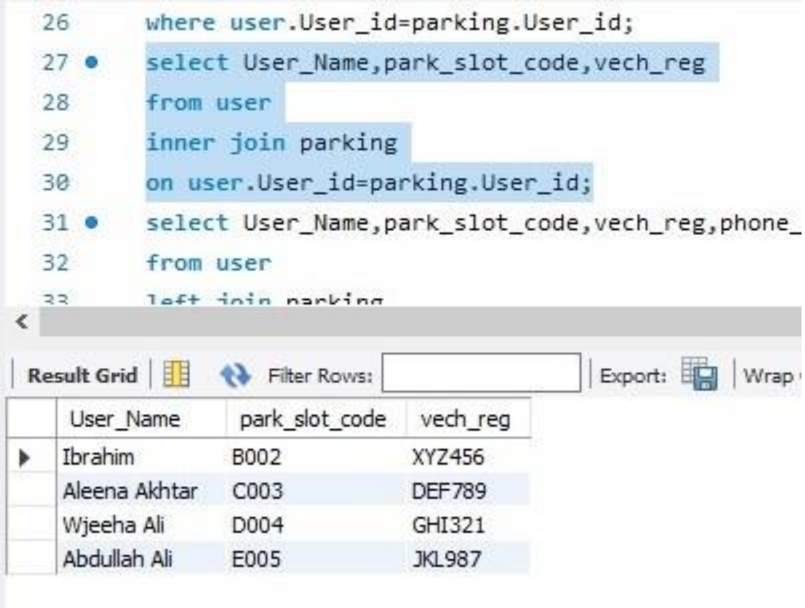
Inner Join:

select User_Name,park_slot_code,vech_reg

from user

inner join parking

on user.User_id=parking.User_id;



```
where user.User_id=parking.User_id;
select User_Name,park_slot_code,vech_reg
from user
inner join parking
on user.User_id=parking.User_id;
select User_Name,park_slot_code,vech_reg,phone_
from user
left join parking
```

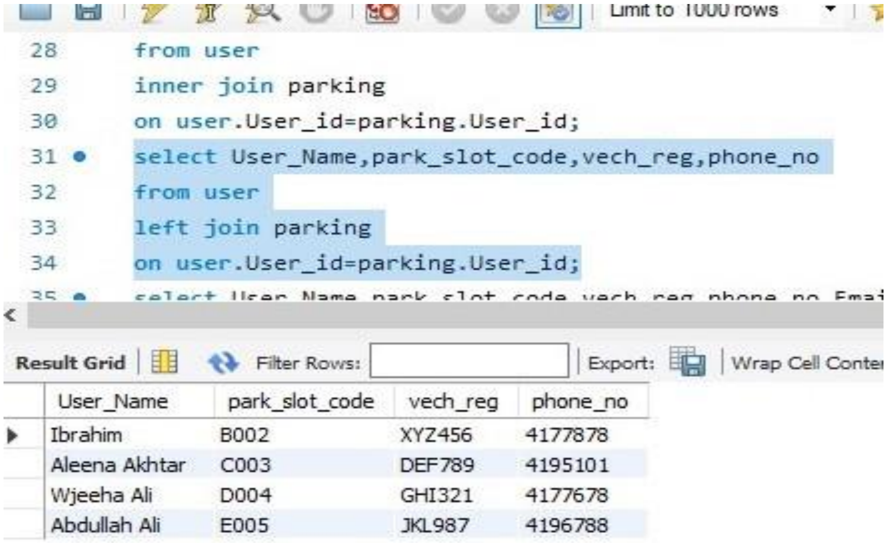
User_Name	park_slot_code	vech_reg
Ibrahim	B002	XYZ456
Aleena Akhtar	C003	DEF789
Wjeeha Ali	D004	GHI321
Abdullah Ali	E005	JKL987

Left Join:

select User_Name,park_slot_code,vech_reg,phone_no

from user

left join parking on user.User_id=parking.User_id;



```
from user
inner join parking
on user.User_id=parking.User_id;
select User_Name,park_slot_code,vech_reg,phone_no
from user
left join parking
on user.User_id=parking.User_id;
select User_Name,park_slot_code,vech_reg,phone_no,Emai
```

User_Name	park_slot_code	vech_reg	phone_no
Ibrahim	B002	XYZ456	4177878
Aleena Akhtar	C003	DEF789	4195101
Wjeeha Ali	D004	GHI321	4177678
Abdullah Ali	E005	JKL987	4196788

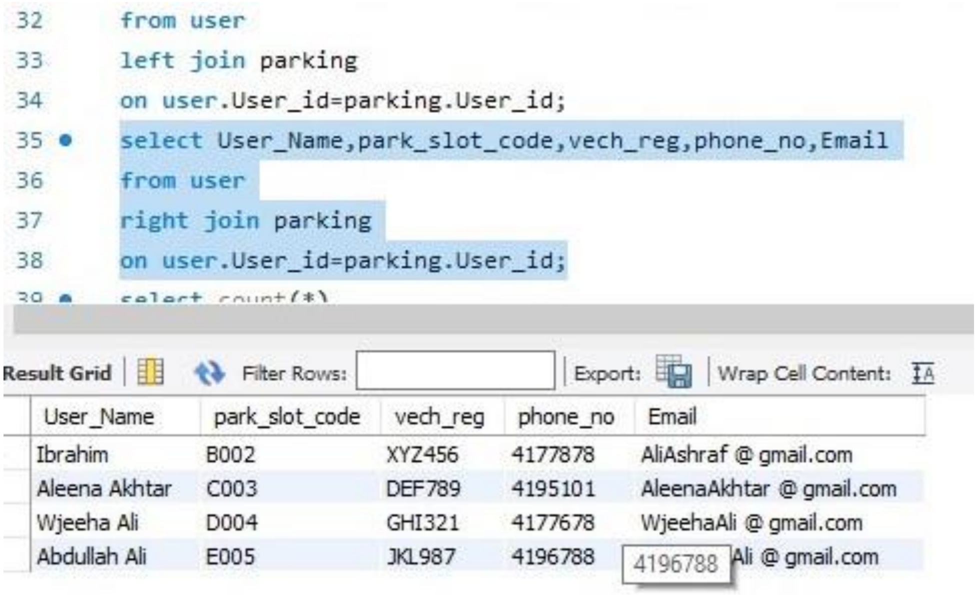
Right Join:

select User_Name,park_slot_code,vech_reg,phone_no,Email

from user

right join parking

on user.User_id=parking.User_id;



```
from user
left join parking
on user.User_id=parking.User_id;
select User_Name,park_slot_code,vech_reg,phone_no,Email
from user
right join parking
on user.User_id=parking.User_id;
select count(*)
```

User_Name	park_slot_code	vech_reg	phone_no	Email
Ibrahim	B002	XYZ456	4177878	AliAshraf @ gmail.com
Aleena Akhtar	C003	DEF789	4195101	AleenaAkhtar @ gmail.com
Wjeeha Ali	D004	GHI321	4177678	WjeehaAli @ gmail.com
Abdullah Ali	E005	JKL987	4196788	Ali @ gmail.com

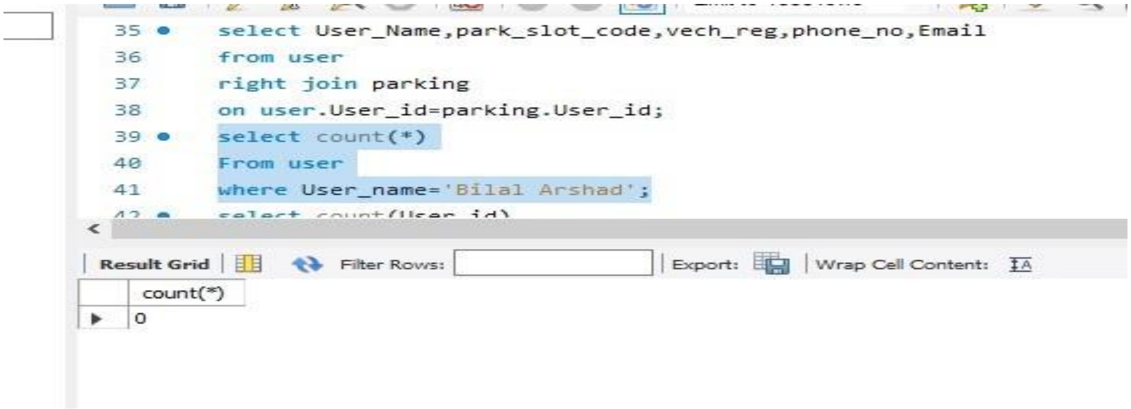
Aggregate Function:

Count(*):

select count(*)

From user

where User_name='Bilal Arshad';



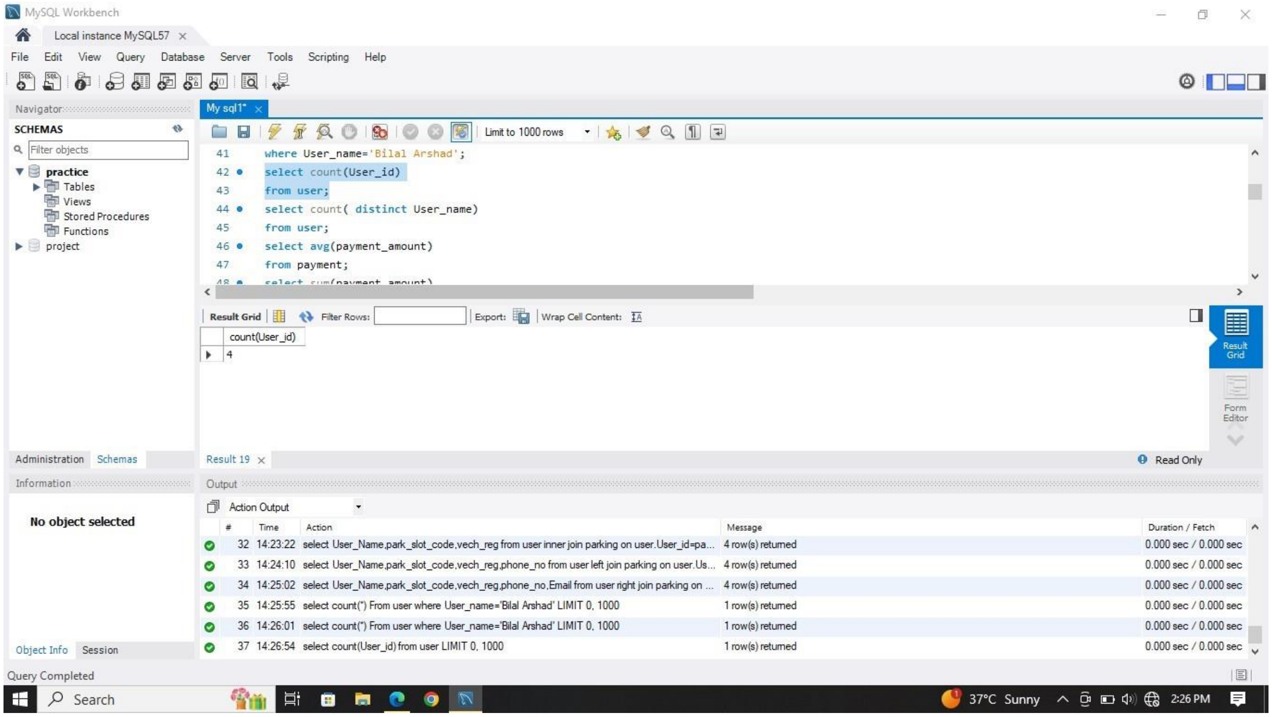
```
select User_Name,park_slot_code,vech_reg,phone_no,Email
from user
right join parking
on user.User_id=parking.User_id;
select count(*)
From user
where User_name='Bilal Arshad';
select count(User_id)
```

count(*)
0

Count(Column_Name):

select count(User_id)

from user;



```
where User_name='Bilal Arshad';
select count(User_id)
from user;
select count( distinct User_name)
from user;
select avg(payment_amount)
from payment;
select sum(payment_amount)
```

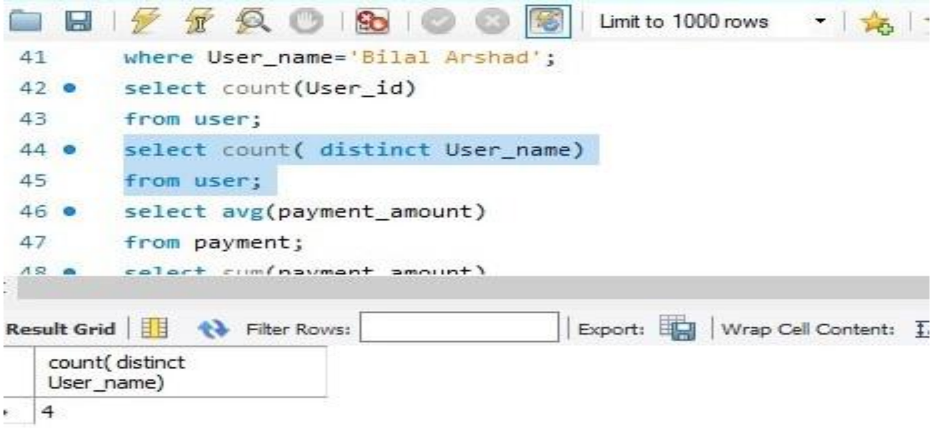
count(User_id)
4

```
#   Time      Action                                                                                  Message            Duration / Fetch
32  14:23:22  select User_Name,park_slot_code,vech_reg from user inner join parking on user.User_id=pa...  4 row(s) returned  0.000 sec / 0.000 sec
33  14:24:10  select User_Name,park_slot_code,vech_reg,phone_no from user left join parking on user.Us...  4 row(s) returned  0.000 sec / 0.000 sec
34  14:25:02  select User_Name,park_slot_code,vech_reg,phone_no,Email from user right join parking on ...  4 row(s) returned  0.000 sec / 0.000 sec
35  14:25:55  select count(*) From user where User_name='Bilal Arshad' LIMIT 0, 1000                        1 row(s) returned  0.000 sec / 0.000 sec
36  14:26:01  select count(*) From user where User_name='Bilal Arshad' LIMIT 0, 1000                        1 row(s) returned  0.000 sec / 0.000 sec
37  14:26:54  select count(User_id) from user LIMIT 0, 1000                                                 1 row(s) returned  0.000 sec / 0.000 sec
```

Count(Distinct Column_Name):

select count(distinct User_name)

from user;



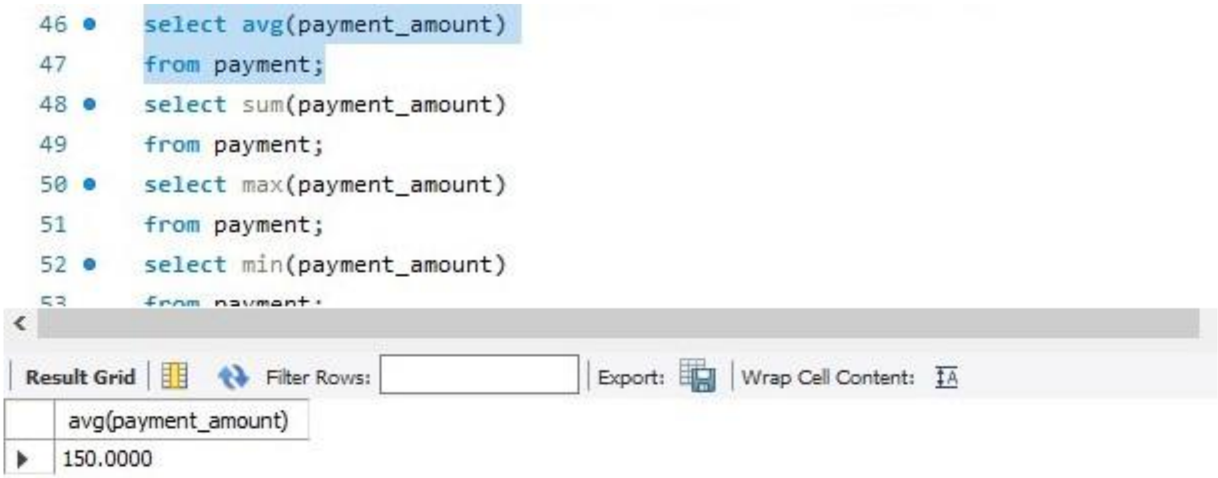
```
where User_name='Bilal Arshad';
select count(User_id)
from user;
select count( distinct User_name)
from user;
select avg(payment_amount)
from payment;
select sum(payment_amount)
```

count(distinct User_name)
4

AVG :

select avg(payment_amount)

from payment;



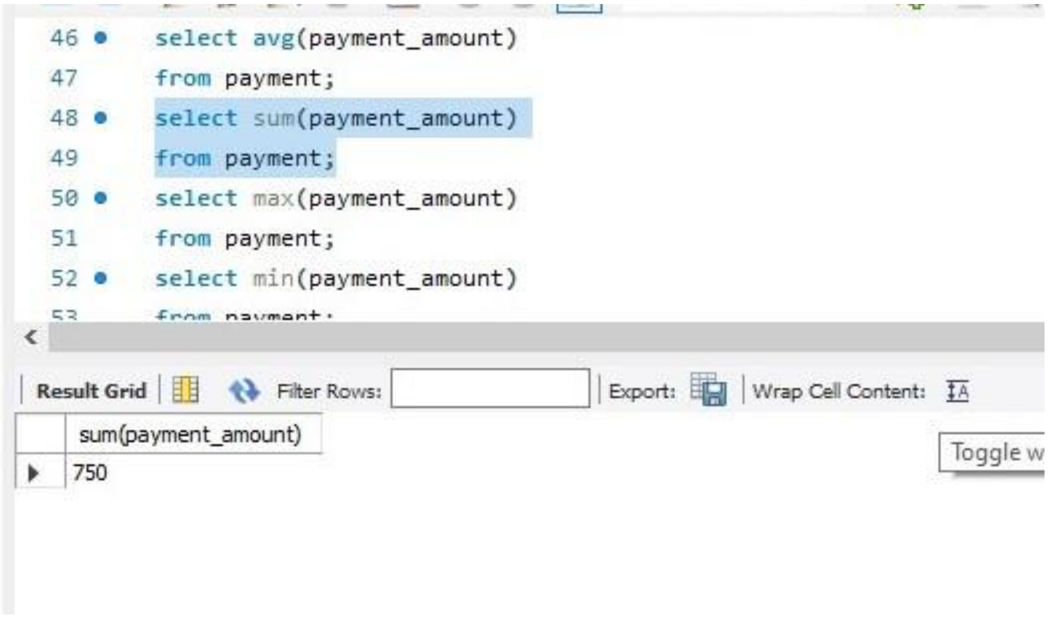
```
select avg(payment_amount)
from payment;
select sum(payment_amount)
from payment;
select max(payment_amount)
from payment;
select min(payment_amount)
from payment;
```

```
avg(payment_amount)
150.0000
```

SUM:

select sum(payment_amount)

from payment;



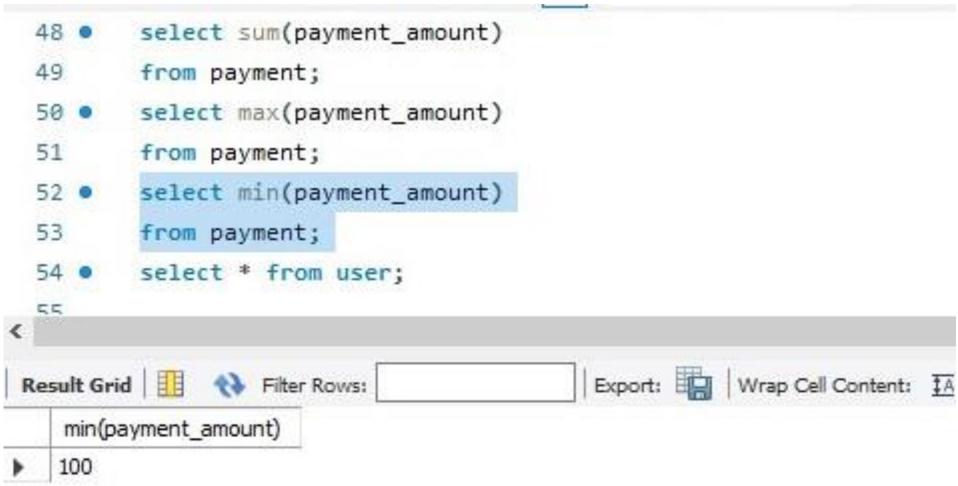
```
select avg(payment_amount)
from payment;
select sum(payment_amount)
from payment;
select max(payment_amount)
from payment;
select min(payment_amount)
from payment;
```

```
sum(payment_amount)
750
```

MIN:

select min(payment_amount)

from payment;



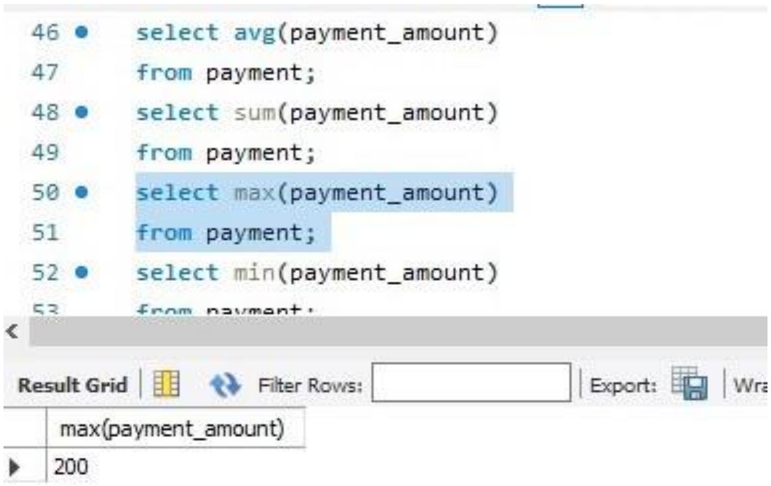
```
select sum(payment_amount)
from payment;
select max(payment_amount)
from payment;
select min(payment_amount)
from payment;
select * from user;
```

```
min(payment_amount)
100
```

MAX:

select max(payment_amount)

from payment;



```
select avg(payment_amount)
from payment;
select sum(payment_amount)
from payment;
select max(payment_amount)
from payment;
select min(payment_amount)
from payment;
```

```
max(payment_amount)
200
```