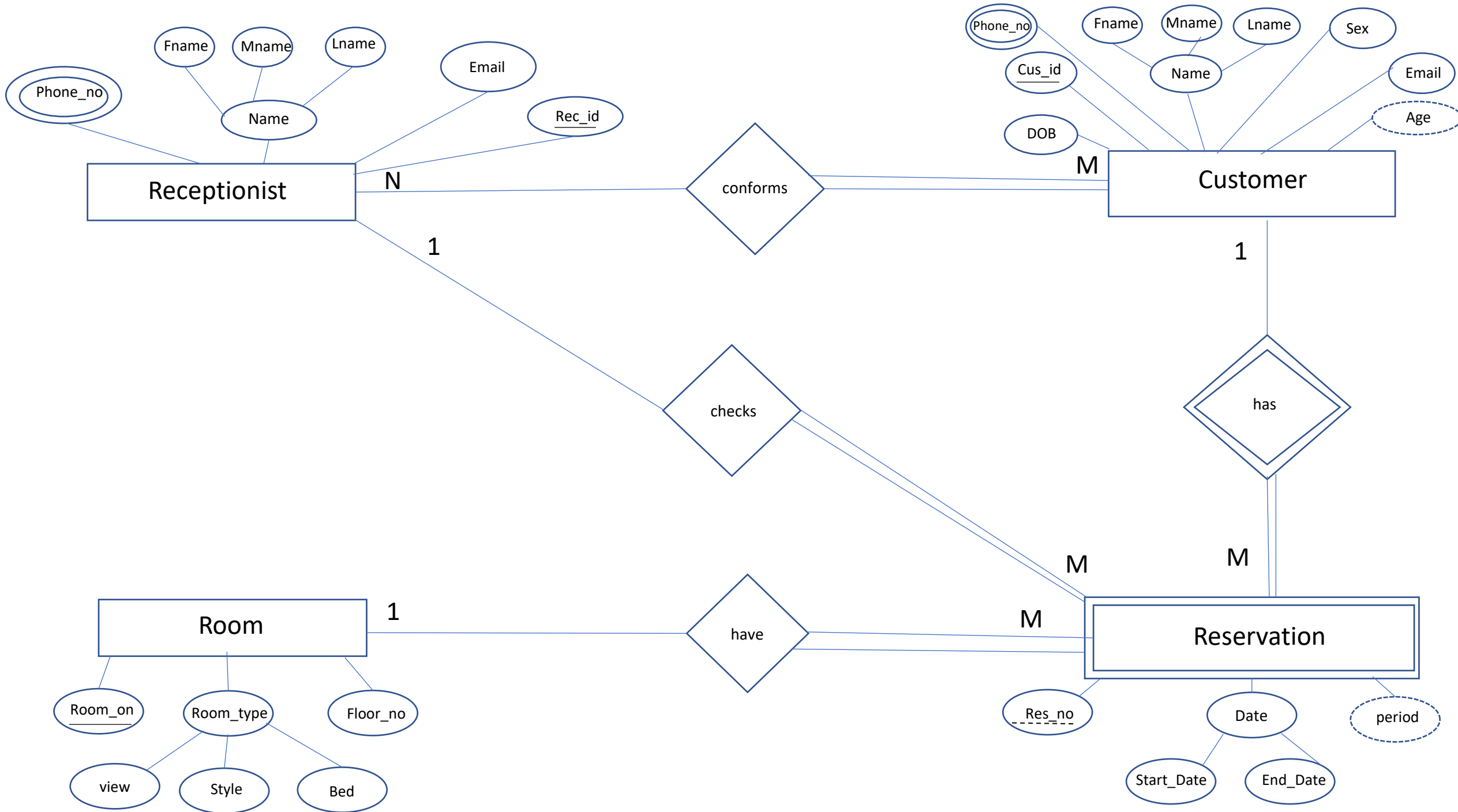


Database project

We choose this idea because it an interesting system to learn about and expand on its details

Design ER Model for Hotel Reservation System. Each Receptionist is described by Phone no, Rec ID, Name(Fname,Mname,Lname), Email, .Each Receptionist Confirms Customer described by Cus ID, Name(Fname,Mname,Lname), Email, Date of birth, age,Sex and Phone no. Each Customer has Reservation described by Res no Date and period. Each Reservation have Room described by Room no, Room Type(view,style,bed) and Floor no



Receptionist

<u>Rec_ID</u>	Email	Fname	Mname	Lname
---------------	-------	-------	-------	-------

Rec_phone

<u>R_ID</u>	<u>R_phone</u>
-------------	----------------

Customer

<u>Cus_ID</u>	Sex	C_Fname	C_Mname	C_Lname	Email	DOB
---------------	-----	---------	---------	---------	-------	-----

Cus_phone

<u>C_ID</u>	<u>C_phone</u>
-------------	----------------

Reservation

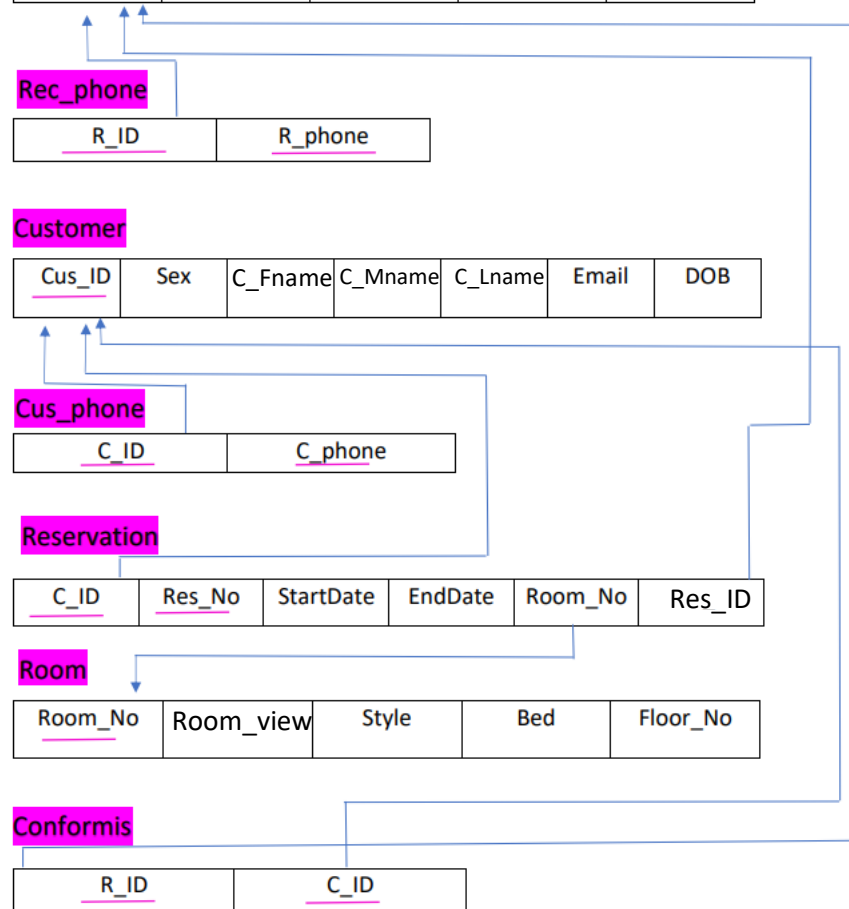
<u>C_ID</u>	<u>Res_No</u>	StartDate	EndDate	Room_No	<u>Res_ID</u>
-------------	---------------	-----------	---------	---------	---------------

Room

<u>Room_No</u>	Room_view	Style	Bed	Floor_No
----------------	-----------	-------	-----	----------

Conformis

<u>R_ID</u>	<u>C_ID</u>
-------------	-------------



```
create schema reservation_system;
```

```
show databases;
```

	Tables_in_reservation_system
►	conformis
	cus_phone
	customer
	rec_phone
	receptionist
	reservation
	room

```
use reservation_system;
```

```
CREATE TABLE receptionist (  
    Rec_ID int NOT NULL,  
    Email varchar(45) NOT NULL,  
    Fname varchar(45) NOT NULL,  
    Mname varchar(45) NOT NULL,  
    Lname varchar(45) NOT NULL,  
    PRIMARY KEY (Rec_ID)  
);
```

```
show tables ;
```

```
insert into receptionist
```

```
values('101','reem@gmail.com','reem','talal','alabbas');
```

```
insert into receptionist
```

```
values('102','sarah@gmail.com','sarah','abdallah','alsulami');
```

```
insert into receptionist
```

```
values('103','renad@gmail.com','renad','hatim','alqarni');
```

```
insert into receptionist
```

```
values('104','afnan@gmail.com','afnan','ambark','alzhrani');
```

```
insert into receptionist
```

```
values('105','deema@gmail.com','deema','abdulhafiz','alhamidan');
```

```
select*from reservation_system.receptionist;
```

	Rec_ID	Email	Fname	Mname	Lname
▶	101	reem@gmail.com	reem	talal	alabbas
	102	sarah@gmail.com	sarah	abdallah	alsulami
	103	renad@gmail.com	renad	hatim	alqarni
	104	afnan@gmail.com	afnan	ambark	alzhrani
	105	deema@gmail.com	deema	abduhafiz	alhamidan

```

create table Rec_phone(
R_ID int NOT NULL,
R_phone int NOT NULL,
PRIMARY KEY (R_ID,R_phone),
FOREIGN KEY (R_ID) REFERENCES receptionist (Rec_ID )
);

```

show tables;

```

INSERT INTO rec_phone
VALUES ('101', '112233');
INSERT INTO rec_phone
VALUES ('102', '334455');
INSERT INTO rec_phone
VALUES ('103', '556677');
INSERT INTO rec_phone
VALUES ('104', '889900');
INSERT INTO rec_phone
VALUES ('105', '116677');
SELECT * FROM rec_phone;

```

	R_ID	R_phone
▶	101	112233
	102	334455
	103	556677
	104	889900
	105	116677

```

CREATE TABLE Customer(
Cus_ID CHAR(9) NOT NULL,
Sex CHAR,
C_Fname VARCHAR(15) NOT NULL,
C_Mname CHAR,
C_Lname VARCHAR(15) NOT NULL,
Email VARCHAR(30),
DOB DATE,
PRIMARY KEY (Cus_ID));

show tables;

INSERT INTO Customer

VALUES ('657995243' , 'F' , 'sara' , 'h' , 'Declan' , 'saraDeclan@gmailcom' , '1981-05-8');

INSERT INTO Customer

VALUES ('765439876' , 'F' , ' mary' , 'l' , 'Ayden' , 'maryAyden@gmailcom' , '1987-07-19');

INSERT INTO Customer

VALUES ('875463782' , 'M' , ' Wesley' , 'P ' , ' Luca' , ' WesleyLuca@gmailcom' , '1998-09-14');

INSERT INTO Customer

VALUES ('764398765' , 'F' , ' Olivia' , 'U ' , ' Silas' , ' OliviaSilas@gmailcom' , '1995-01-18');

INSERT INTO Customer

VALUES ('865498734' , 'M' , ' Vincent' , 'P ' , ' Damian ' , ' VincentDamian@gmailcom' , '1999-03-20');

SELECT * FROM reservation_system.Customer;

```

	Cus_ID	Sex	C_Fname	C_Mname	C_Lname	Email	DOB
►	657995243	F	sara	h	Declan	saraDeclan@gmailcom	1981-05-08
	764398765	F	Olivia	U	Silas	OliviaSilas@gmailcom	1995-01-18
	765439876	F	mary	l	Ayden	mary Ayden@gmailcom	1987-07-19
	865498734	M	Vincent	P	Damian	VincentDamian@gmailcom	1999-03-20
	875463782	M	Wesley	P	Luca	Wesley Luca@gmailcom	1998-09-14

```

CREATE TABLE Cus_phone(
C_ID    CHAR(9)    NOT NULL,
C_phone INT        NOT NULL,
PRIMARY KEY (C_ID , C_phone),
FOREIGN KEY (C_ID) REFERENCES Customer (Cus_ID ) );

show tables;

INSERT INTO Cus_phone
VALUES ('657995243' , '88736487');

INSERT INTO Cus_phone
VALUES ('765439876' , '83875427');

INSERT INTO Cus_phone
VALUES ('875463782' , '86539856');

INSERT INTO Cus_phone
VALUES ('764398765' , '87643980');

INSERT INTO Cus_phone
VALUES ('865498734' , '87390775');

SELECT * FROM reservation_system.Cus_phone;

```

	C_ID	C_phone
►	657995243	88736487
	764398765	87643980
	765439876	83875427
	865498734	87390775
	875463782	86539856

```

CREATE TABLE reservation (
C_ID    char(9) NOT NULL,
Res_No  int    NOT NULL,
Start_Date DATE  NOT NULL,
EndDate  DATE  NOT NULL,
Room_No  int    NOT NULL,
Res_ID  int    NOT NULL,
primary key(C_ID,Res_No)

);

INSERT INTO reservation
VALUES ('657995243', '1', '2021-11-01', '2021-11-05', '1', '101');
INSERT INTO reservation
VALUES ('765439876', '2', '2021-11-06', '2021-11-09', '2', '102');
INSERT INTO reservation
VALUES ('875463782', '3', '2021-11-10', '2021-11-14', '3', '103');
INSERT INTO reservation
VALUES ('764398765', '4', '2021-11-15', '2021-11-19', '4', '104');
INSERT INTO reservation
VALUES ('865498734', '5', '2021-11-20', '2021-11-25', '5', '105');
select*from reservation_system.reservation;

```

	C_ID	Res_No	Start_Date	EndDate	Room_No	Res_ID
▶	657995243	1	2021-11-01	2021-11-05	1	101
	764398765	4	2021-11-15	2021-11-19	4	104
	765439876	2	2021-11-06	2021-11-09	2	102
	865498734	5	2021-11-20	2021-11-25	5	105
	875463782	3	2021-11-10	2021-11-14	3	103


```

CREATE TABLE Room(
Room_No    int          NOT NULL,
Room_view  varchar(45)  NOT NULL,
style      varchar(45)  NOT NULL,
Bed        varchar(45)  NOT NULL,
Floor_No   int          NOT NULL,
PRIMARY KEY(Room_No)
);

show tables;

insert into Room
value('1','on_beach','classic','single_bed','1');

insert into Room
value('2','on_street','modern','double_bed','2');

insert into Room
value('3','on_beach','classic','double_bed','3');

insert into Room
value('4','on_beach','modern','single_bed','4');

insert into Room
value('5','on_street','classic','double_bed','5');

select*from reservation_system.room;

```

	Room_No	Room_view	style	Bed	Floor_No
►	1	on_beach	classic	single_bed	1
	2	on_street	modern	double_bed	2
	3	on_beach	classic	double_bed	3
	4	on_beach	modern	single_bed	4
	5	on_street	classic	double_bed	5

```

create table Conformis(
R_ID int NOT NULL,
C_ID CHAR(9) not null,
primary key(R_ID,C_ID)
);

show tables;

insert into Conformis
values('101','657995243');

insert into Conformis
values('102',765439876);

insert into Conformis
values('103',875463782);

insert into Conformis
values('104',764398765);

insert into Conformis
values('105',865498734);

select*from reservation_system.conformis;

```

	R_ID	C_ID
▶	101	657995243
	102	765439876
	103	875463782
	104	764398765
	105	865498734

/*Retrieve all the attribute values of Room tuple*/

```
select *
```

```
from Room;
```

	Room_No	Room_view	style	Bed	Floor_No
▶	1	on_beach	classic	single_bed	1
	2	on_street	modern	double_bed	2
	3	on_beach	classic	double_bed	3
	4	on_beach	modern	single_bed	4
	5	on_street	classic	double_bed	5

```
/*Retrieve Cus_ID and DOB of the customer whose first name is 'sara'*/
```

```
select Cus_ID , DOB
```

```
from Customer
```

```
where C_Fname='sara';
```

	Cus_ID	DOB
▶	657995243	1981-05-08

```
/*Retrieve Rec_ID and Email of the receptionist whose name is 'renad hatim alqarni' */
```

```
select Rec_ID,Email
```

```
from receptionist
```

```
where Fname='renad'AND Mname='hatim'AND Lname='alqarni';
```

	Rec_ID	Email
▶	103	renad@gmail.com

```
/* Retrieve the start and end date of the customer who have this ID="657995243"*/
```

```
select Start_Date,EndDate
```

```
from reservation,Customer
```

```
where Cus_ID ='657995243'AND Cus_ID =C_ID;
```

	Start_Date	EndDate
▶	2021-11-01	2021-11-05

/* for every start_Date='2021-11-01' list the Reservation number and the customer ID for

this Reservation and the first name of the Responsible Receptionist */

select Res_No,C_ID , Fname

from reservation,Customer,receptionist

where C_ID=Cus_ID and Res_ID=Rec_ID and Start_Date='2021-11-01';

	Res_No	C_ID	Fname
▶	1	657995243	reem

/*only distinct tuples should remain in the result*/

select distinct DOB

from Customer;

	DOB
▶	1981-05-08
	1995-01-18
	1987-07-19
	1999-03-20
	1998-09-14

/* retrieve all Room which it style is classic */

select Room_view

from Room

where style like '%classic%';

	Room_view
▶	on_beach
	on_beach
	on_street

/* the result. combines the information into one table*/

```
(select distinct Room_No
from Room
where Room_view='on_beach')
union
(select distinct Room_No
from Room
where Room_view='on_street');
```

	Room_No
▶	1
	3
	4
	2
	5

/* this practice is recommended since it results in queries that are easier to comprehend*/

```
select C.c_Fname , C.c_Mname
from Customer AS C;
```

	c_Fname	c_Mname
▶	sara	h
	Olivia	U
	mary	I
	Vincent	P
	Wesley	P

/* to see the FName and LName of the Customer whose second digit is number 6*/

```
select C_Fname, C_Lname
from Customer
where Cus_ID like '_6_____';
```

	C_Fname	C_Lname
▶	Olivia	Silas
	mary	Ayden
	Vincent	Damian

/* to see the FName and LName of the receptionist whose Rec_ID between 102 and 104 */

```
select FName , Lname
from receptionist
where (Rec_ID between 102 and 104);
```

	Fname	Lname
▶	sarah	alsulami
	renad	alqarni
	afnan	alzhrani

/*to see the the FName and LName in descending order */

```
select C_Fname, C_Lname ,Cus_ID
from Customer
order by Cus_ID desc ;
```

	C_Fname	C_Lname	Cus_ID
▶	Wesley	Luca	875463782
	Vincent	Damian	865498734
	mary	Ayden	765439876
	Olivia	Silas	764398765
	sara	Declan	657995243

ريم العباس
أفنان الزهراني
ديمه آل حميدان
شادن الشهري