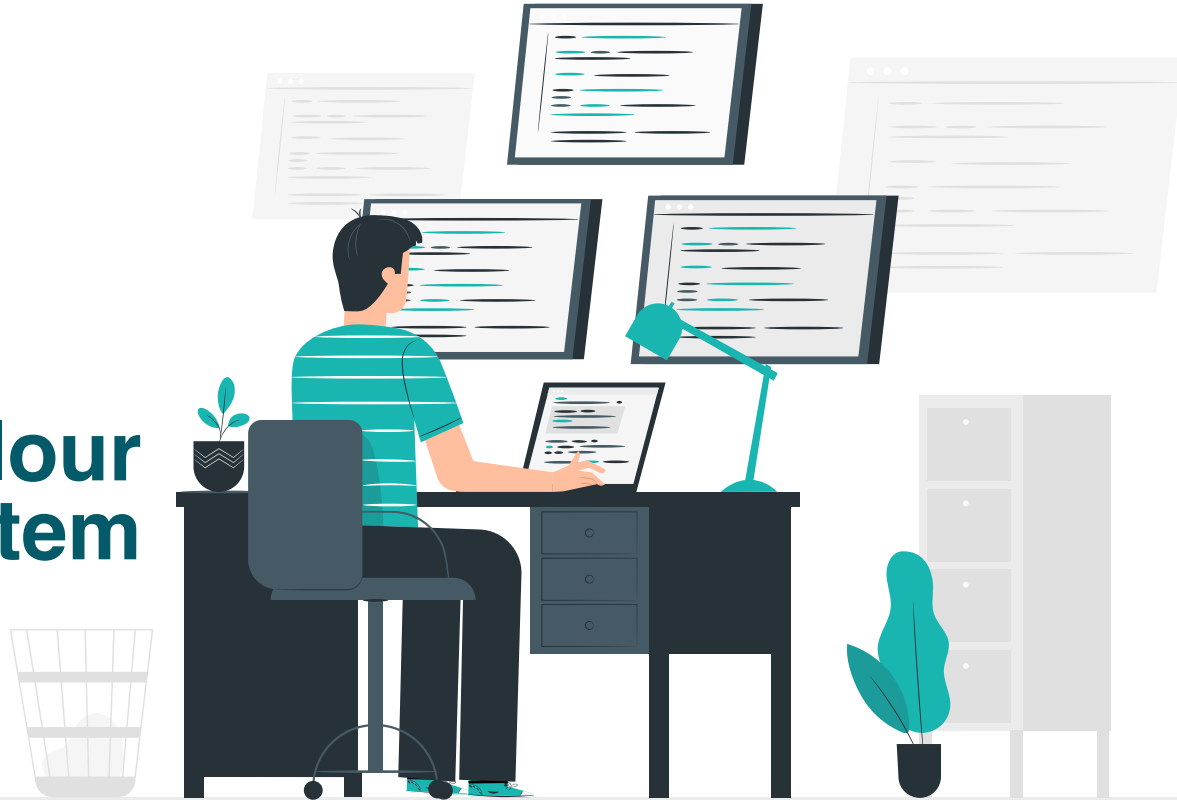
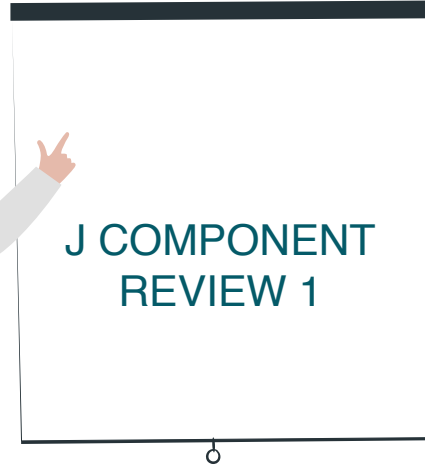


Ice Cream Parlour Management System





DBMS - D2

Under-

Dr. Karthikeyan Jayarama



OUR TEAM



PIYUSH YADAV

19BCE2091



AJIT SINGH

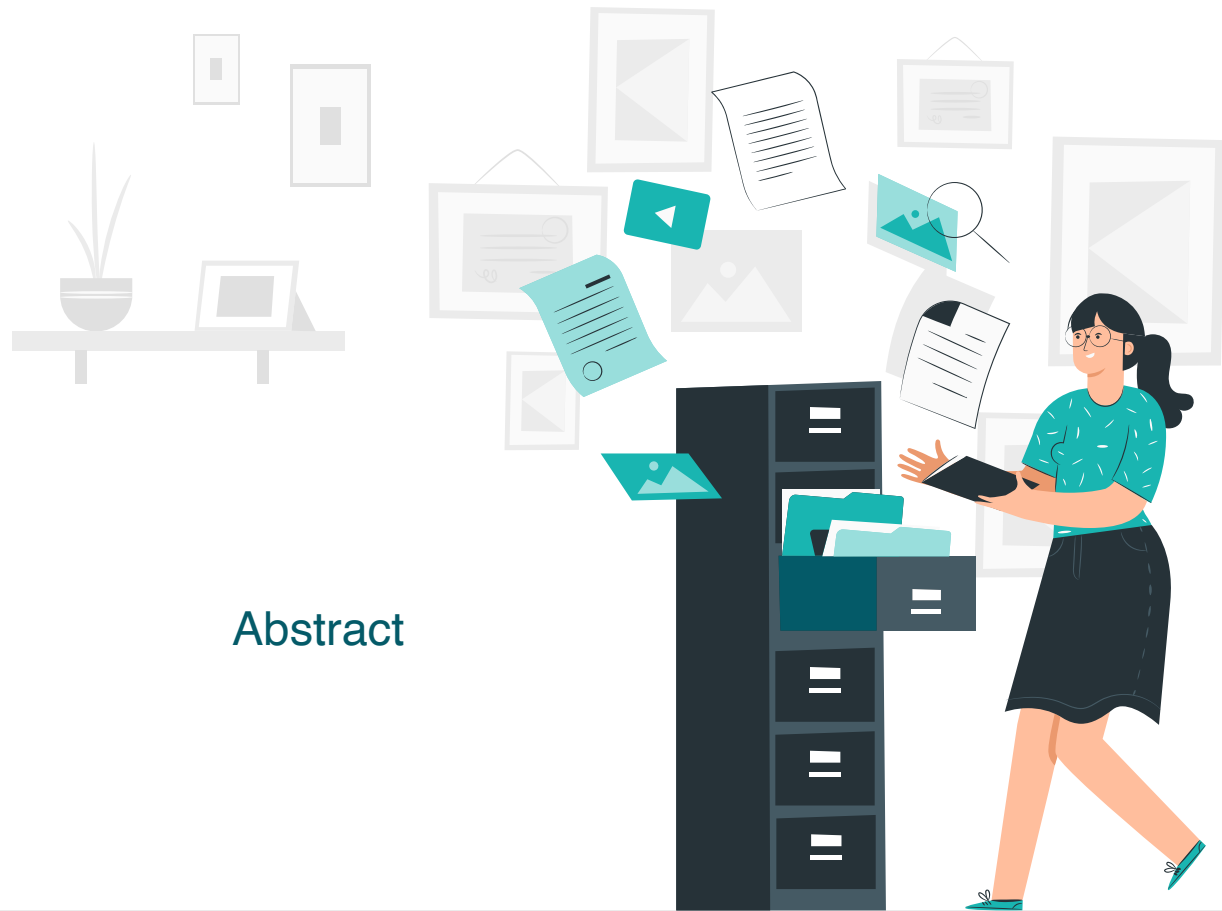
19BCE2096



YASHVARDHAN SINGH BHADURIA

19BCE2129

Abstract



Ice cream is very popular among kids and adults. Employee can also access the company's database for updating the stock, manage order logs and manage and update employee details, view sale analytics, apply for leave, or send mail offers. Customers can also ask for take away or they can order online for the home delivery. A customer can also give feedback of the ice-creams after they are registered in the system. Our system also sends emails of the offers and new flavours that we have made. With our system we expect to improve some of features that are in the existing system.

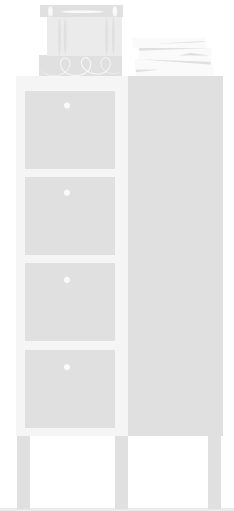
This system can help any Ice Cream Shop owners who doesn't have any computers inside their shop yet. There's a shop in the plaza that are using only pen and paper to get orders so in this way this program can help their shop. It will make the shop or the cashier to do his/her work easily.

This project is entitled "Ice Cream Parlour Management System".





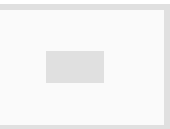
Data Requirements



ENTITY

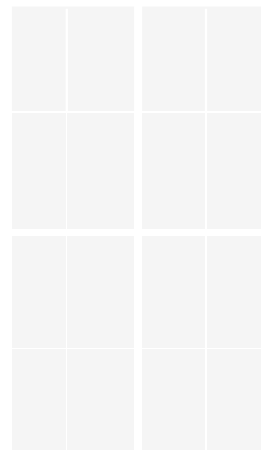
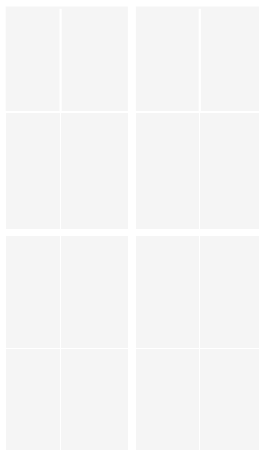
- Parlour
- Order
- Ice Cream
- Employee
- Ingredient
- Customer
- Feedback





ATTRIBUTES





PARLOUR



NAME



PAN_NO.



ADDRESS

PRIMARY KEY

ICE-CREAMS



FLVR_ID

FLVR_NAME

PRIMARY KEY

QTY_LEFT

CALORIES



CUSTOMERS

CUST_NAME

EMAIL ID



CUST_ID

PHONE NO

ADDRESS

PRIMARY KEY

MULTI VALUED





FID



RATE

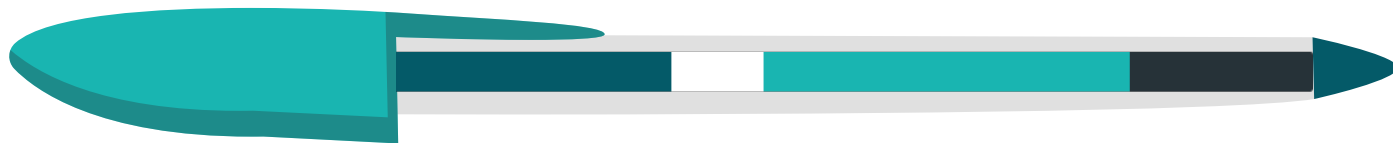


CID



COMMENT

PRIMARY KEY



FEEDBACK

ORDER



ORDER
PRIMARY KEY

ORDER
MULTI VALUED

ORDER

INGREDIENTS



EMPLOYEE

EMP_ID

PRIMARY KEY



EMAIL_ID

MULTI VALUED

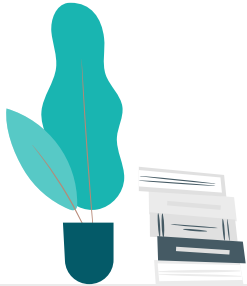


PHONE NO

MULTI VALUED



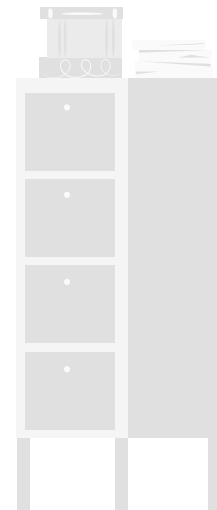
ADDRESS





RELATIONSHIPS

ENTITY	RELATION	ENTITY	CARDINALITY
PARLOUR	HAS	EMPLOYEE	1:N
EMPLOYEE	TAKES	ORDER	N:1
EMPLOYEE	MANAGES	INGREDIENTS	M:N
INGREDIENTS	USED FOR	ICE-CREAMS	M:N
ORDER	CONTAINS	ICE-CREAMS	M:N
PARLOUR	HAS	CUSTOMER	1:N
CUSTOMER	PLACES	ORDER	1:1
CUSTOMER	PROVIDES	FEEDBACK	N:1



HARDWARE REQUIREMENTS

01



LAPTOP

- with enough space to withhold a database

02



INTERNET

- High speed internet connection preferred



SOFTWARE REQUIREMENTS

01



WAMP Server

02

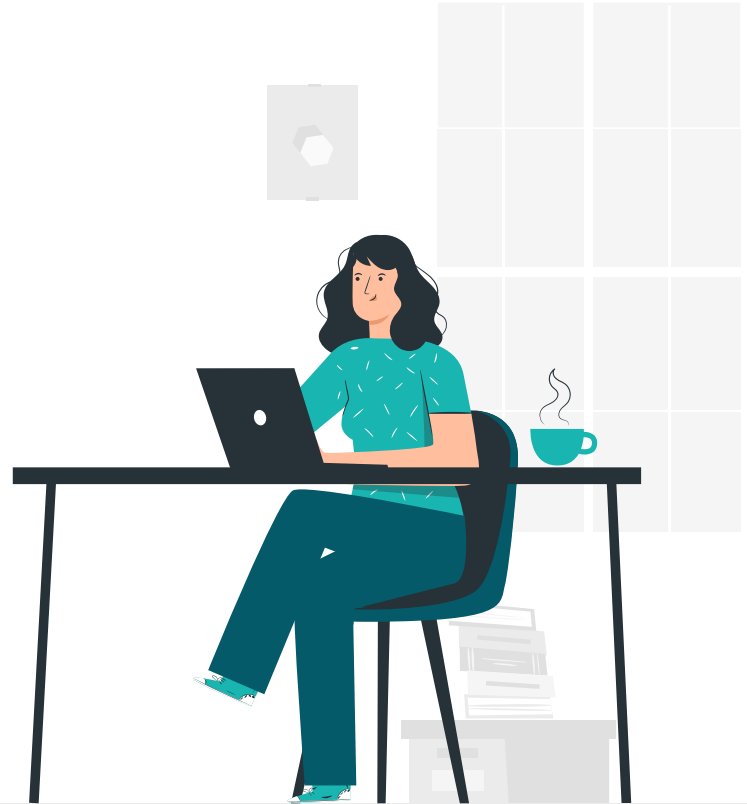


MySQL

03

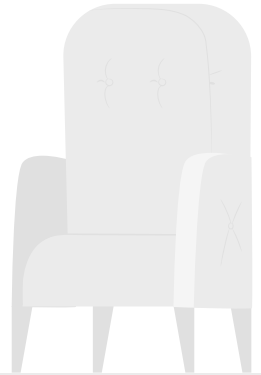


NOTEPAD

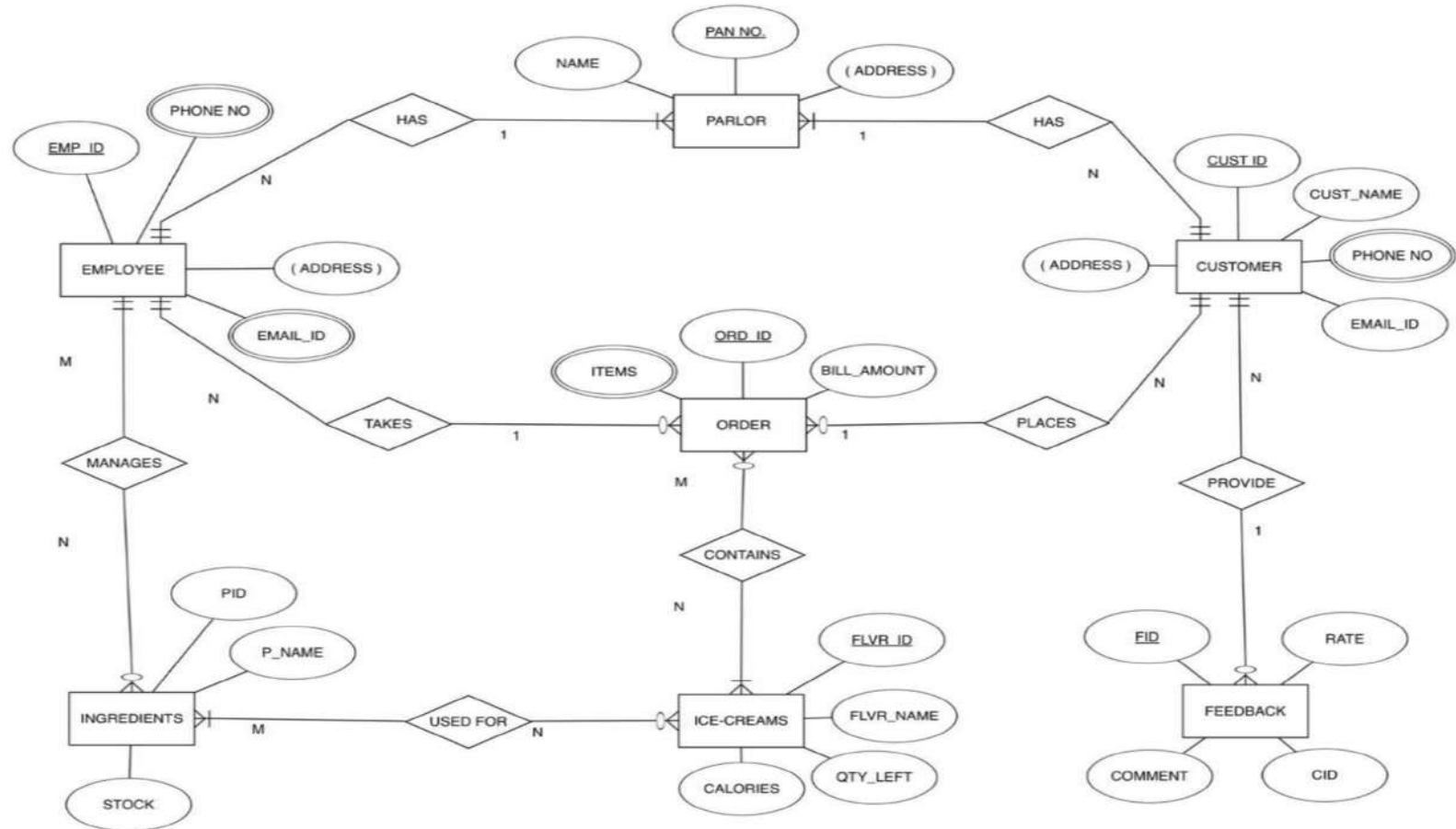




ER DIAGRAM

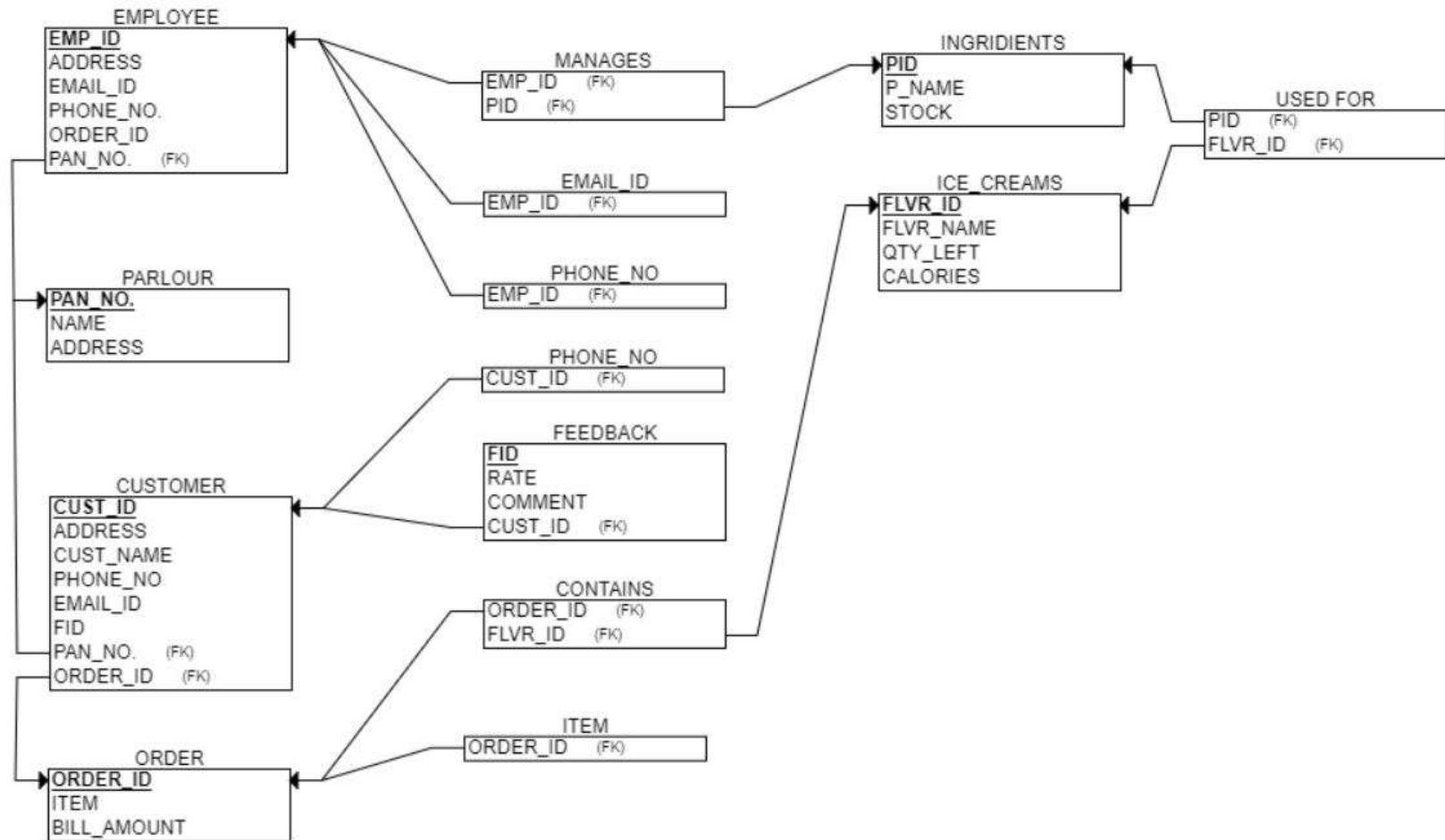


ER Diagram



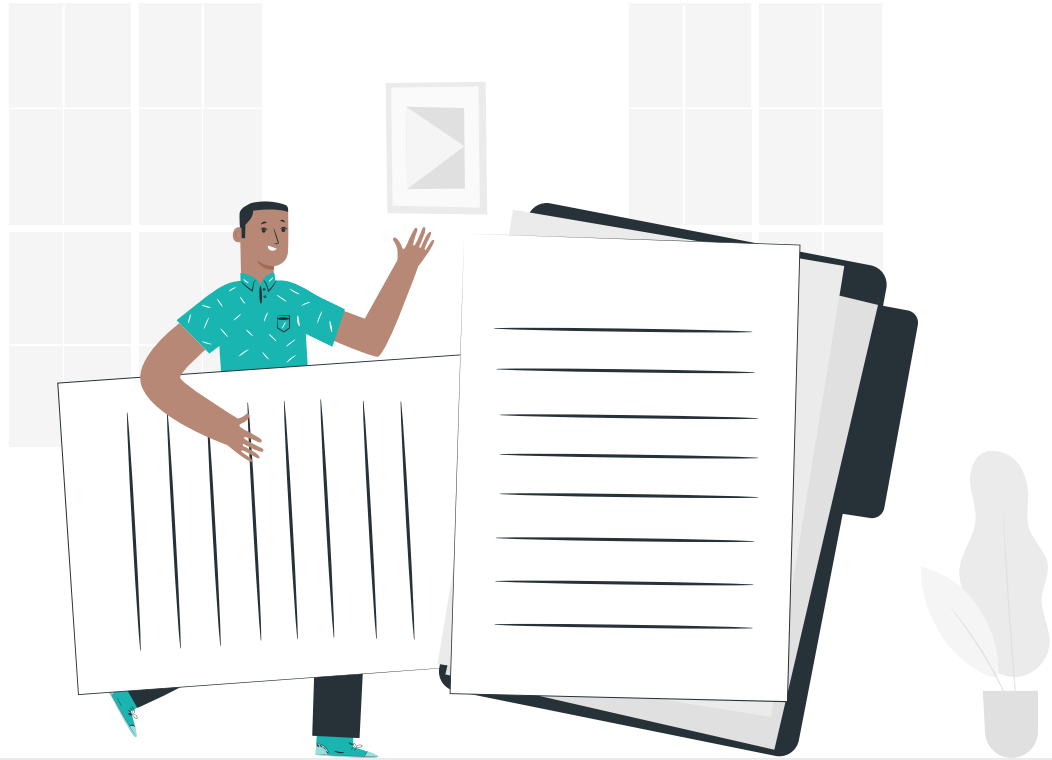
RELATIONAL SCHEMA





THANKS

CREDITS: This presentation template was created by [Slidesgo](#), including icons by [Elaticon](#), and infographics & images by [Freepik](#)



REVIEW 2

Q.1) Functional Dependency of all the relations.

<u>Functional Dependencies</u>	
<u>Tables</u>	<u>Dependencies</u>
1) FLWR-ID = A FLWR-Name = B QTY-LEFT = C CAL = D	$A \rightarrow B, A \rightarrow C$ $A \rightarrow D$ $B \rightarrow C, B \rightarrow D$ $B \rightarrow A$
2) CUST-ID = E CUST-Name = F Phone = G Email = H Add = I	$E \rightarrow F, E \rightarrow G$ $E \rightarrow H, E \rightarrow I$ $F \rightarrow E, F \rightarrow G, F \rightarrow H$ $F \rightarrow I, G \rightarrow E, G \rightarrow F$ $G \rightarrow H, G \rightarrow I$
3) F-ID = J Rate = K CatID = C Comment = M	$J \rightarrow K, J \rightarrow L, J \rightarrow M$
4) P-ID = Q P-Name = R Stock = S	$Q \rightarrow R, Q \rightarrow S$ $R \rightarrow Q$ $R \rightarrow S$

	Tables	FDs
5)	ORD-ID = N Itemp = O Bill = P	$N \twoheadrightarrow O, N \twoheadrightarrow P$ $O \twoheadrightarrow P$
6)	EMP-ID = T Emp_email = U E_Phone = V E_addr = W	$T \twoheadrightarrow U, T \twoheadrightarrow V, T \twoheadrightarrow W$ $U \twoheadrightarrow T, U \twoheadrightarrow V, U \twoheadrightarrow W$
7)	Par-on = X P-name = Y P-addr = Z	$X \twoheadrightarrow Y, X \twoheadrightarrow Z$

Normalization

① Normalise to 2NF

$$A \rightarrow aBdb$$

$$B \rightarrow CDA$$

$$E \rightarrow G$$

$$F \rightarrow G$$

$$G \rightarrow EFHI$$

$$J \rightarrow KLM$$

$$Q \rightarrow R$$

$$R \rightarrow QS$$

$$N \rightarrow OP$$

$$T \rightarrow U$$

$$V \rightarrow TW$$

$$U \rightarrow V$$

$$X \rightarrow YZ$$

Q.2) Normalize the relations till BCNF.

Normalise to 3NF

① Attributes:

A, b, d, B, a

FD:

$A \rightarrow B$

$B \rightarrow Abda$

② Attributes:

B, A, D, C

FD:

$B \rightarrow ADC$

$A \rightarrow B$

③ Attributes:

E, G

FD:

$E \rightarrow G$

$G \rightarrow E$

④ Attributes:

F, G

FDs:

$F \rightarrow G$

$G \rightarrow F$

⑤ Attributes: G, H, F, E

FDs: $E \rightarrow F$

$G \rightarrow E, H$

$F \rightarrow G$

Table ①

Table 2

⑥ attributes: JMLK
FDs: $J \rightarrow MLK$

} Table 3

⑦ attributes: QR
FDs: $Q \rightarrow R$
 $R \rightarrow Q$

⑧ attributes: RSQ
FDs: $R \rightarrow QS$
 $Q \rightarrow R$

} Table 4

⑨ attributes: NPO
FD: $N \rightarrow PO$

} Table 5

⑩ attributes: TU
FDs: $T \rightarrow U$
 $U \rightarrow T$

⑪ attributes: VWT
FDs: $V \rightarrow TW$
 $T \rightarrow V$

} Table 6

⑫ attributes: UV
FDs: $U \rightarrow V$
 $V \rightarrow U$

⑬ attributes: XYZ
FD: $X \rightarrow ZY$

} Table 7

Normalize to 3NF

Table ①

attributes: ABCD
FDs: $A \rightarrow B$
 $B \rightarrow ACD$

Table ②

attributes: EFGHI
FDs: $E \rightarrow F$
 $F \rightarrow G$
 $G \rightarrow EHI$

Table ③

attributes: JKLM
FD: $J \rightarrow KLM$

Table ④

attributes: NOP
FD: $N \rightarrow OP$

Table ⑤

attributes: TUVW
FDs: $T \rightarrow V$
 $U \rightarrow V$
 $V \rightarrow UTW$

Table ⑥

attributes: XYZ
FD: $X \rightarrow YZ$

Table ⑦

① attributes: QS
FD: $Q \rightarrow S$
② attributes: RS
FD: $R \rightarrow S$

CODE USED TILL NOW:

```
create database parlour;
```

```
use parlour;
```

```
create table parlor(pan_no varchar(10),name varchar(25),streetname varchar(10),
```

```
country varchar(8),pin_code varchar(6),constraint pk1 primary key(pan_no));
```

```
insert into parlor values('ARLPA0061H','Kwality Ice-creams','Vellore','India',632014);
```

```
create table employee(emp_id int AUTO_INCREMENT,name varchar(25),join_date date,streetname  
varchar(15),
```

```
city varchar(10),constraint pk2 primary key(emp_id));
```

```
insert into employee (name,join_date,streetname,city)values('Abhineet  
Chaudhary','2014-01-13','Murli','Birgunj');
```

```
insert into employee (name,join_date,streetname,city)values('Simant  
Shrestha','2015-01-18','Adarshnagar','Surkhet');
```

```
insert into employee (name,join_date,streetname,city)values('Bibek  
Sharma','2015-02-19','Bhaktapur','Kathmandu');
```

```
insert into employee (name,join_date,streetname,city)values('Kedar  
Bhatt','2015-12-28','Thankot','Kathmandu');
```

```
insert into employee (name,join_date,streetname,city)values('Suman  
Mondal','2016-01-13','Gandhinagar','Kolkata');
```

```
insert into employee (name,join_date,streetname,city)values('Bipin  
Dubey','2017-01-15','ramnujnagr','Chennai');
```

```
create table emp_mail(mail varchar(30),emp_id int,constraint pk3 primary key(mail));
```

```
insert into emp_mail values('abhineet.adm09@gmail.com',1);
```

```
insert into emp_mail values('abhineetnuts@gmail.com',1);
```

```
insert into emp_mail values('simant@gmail.com',2);
```

```
insert into emp_mail values('bibek_08@gmail.com',3);
```

```
insert into emp_mail values('bhatt_kedar@gmail.com',4);
```

```
insert into emp_mail values('kedarrocks@yahoo.com',4);
```

```
insert into emp_mail values('mithu_mondal@gmail.com',5);
```

```
insert into emp_mail values('bipu_dabu@gmail.com',6);
```

```
create table emp_phone(phone numeric(30),emp_id int,constraint pk4 primary key(phone));
```

```
insert into emp_phone values(7530007447,1);
```

```
insert into emp_phone values(7530007443,2);
```

```
insert into emp_phone values(9832432232,2);
```

```
insert into emp_phone values(7530452411,3);
```

```
insert into emp_phone values(8743009823,4);
```

```
insert into emp_phone values(9012317449,4);
```

```
insert into emp_phone values(9832362178,5);
```

```
insert into emp_phone values(9856325475,6);
```

```
create table authentication(emp_id varchar(5),password varchar(10),constraint pk5 primary key(emp_id));
```

```
insert into authentication values(1,'hellomac');
```

```
insert into authentication values(2,'motog');
```

```
insert into authentication values(3,'bond007');
```

```
insert into authentication values(4,'tes98la');
```

```
insert into authentication values(5,'alpha2char');
```

```
insert into authentication values(6,'bipunagar5');
```

```
create table customer(cust_id int AUTO_INCREMENT,name varchar(20),hno numeric(5),streetname  
varchar(15),
```

```
city varchar(10),constraint pk6 primary key(cust_id));
```

```
insert into customer (name,streetname,city)values('Vaibhav','Hoyota','Banglore');
```

```
insert into customer (name,streetname,city)values('Arin','Ring Road','Shilong');
```

```
insert into customer (name,streetname,city)values('Priyanshu','Prasad Marg','Patna');
```

```
insert into customer (name,streetname,city)values('Shivam','Thane','Lucknow');
```

```
insert into customer (name,streetname,city)values('Ashish','Gandhi Road','Dehradun');
```



```
create table house(cust_id int,hno varchar(5));
```

```
insert into house values(1,21);
```

```
insert into house values(2,12);
```

```
insert into house values(3,22);
```

```
insert into house values(4,43);
```

```
insert into house values(5,101);
```

```
create table cust_mail(mail varchar(30),cust_id int,constraint pk7 primary key(mail));
```

```
insert into cust_mail values('vaibhow@gmail.com',1);
```

```
insert into cust_mail values('rhitom@gmail.com',2);
```

```
insert into cust_mail values('arin@gmail.com',2);
```

```
insert into cust_mail values('priyansh@gmail.com',3);
```

```
insert into cust_mail values('shiv@gmail.com',4);
```

```
insert into cust_mail values('ashish_cool@gmail.com',5);
```

```
create table cust_phone(phone numeric(30),cust_id int,constraint pk8 primary key(phone));
```

```
insert into cust_phone values(7530534534,1);
```

```
insert into cust_phone values(6423724821,2);
```

```
insert into cust_phone values(9876723655,3);
```

```
insert into cust_phone values(8273452142,4);
```

```
insert into cust_phone values(9777678142,5);
```

```
insert into cust_phone values(7530218421,5);
```

```
create table order_details(ord_id int AUTO_INCREMENT,dt_ord date,constraint pk9 primary key(ord_id));
```

```
insert into order_details (dt_ord)values('2014-12-23');
```

```
insert into order_details (dt_ord)values('2014-12-23');
```

```
insert into order_details (dt_ord)values('2015-01-01');
```

```
insert into order_details (dt_ord)values('2015-02-01');
```



```
insert into order_details (dt_ord)values('2015-03-01');
```

```
create table order_qty(ord_id int,flvr_id varchar(4),cust_id varchar(5),qty numeric(3),constraint pk10  
primary key(ord_id,flvr_id,cust_id));
```

```
insert into order_qty values(1,'CC01',1,1);
```

```
insert into order_qty values(1,'CB12',1,2);
```

```
insert into order_qty values(2,'PS77',2,3);
```

```
insert into order_qty values(2,'JP31',2,2);
```

```
insert into order_qty values(3,'PS77',3,5);
```

```
insert into order_qty values(6,'CC01',3,2);
```

```
create table order_asc(ord_id varchar(8),flvr_id varchar(4),cust_id varchar(5),constraint pk16 primary  
key(ord_id,flvr_id,cust_id));
```

```
insert into order_asc values(1,'CC01',1);
```

```
insert into order_asc values(1,'CB12',1);
```

```
insert into order_asc values(2,'PS77',2);
```

```
insert into order_asc values(2,'JP31',2);
```

```
insert into order_asc values(3,'PS77',3);
```

```
insert into order_asc values(5,'CC01',4);
```

```
create table icecream(flvr_id varchar(4),flvr_name varchar(20),constraint pk11 primary key(flvr_id));
```

```
insert into icecream values('CC01','Choclote Corneto');
```

```
insert into icecream values('CB12','Butterscotch Corneto');
```

```
insert into icecream values('NP01','Nashviile Fresh');
```

```
insert into icecream values('SB45','Sizzling Burrito');
```

```
insert into icecream values('PS77','Pista Badam');
```

```
insert into icecream values('JP31','Jakartian Spl');
```

```
create table icecream_details(flvr_id varchar(4),calorie numeric(3),cost numeric(4),constraint pk12 primary  
key(flvr_id));
```

```
insert into icecream_details values('CC01',25,91);
```

```
insert into icecream_details values('CB12',255,101);  
insert into icecream_details values('NP01',35,21);  
insert into icecream_details values('SB45',96,71);  
insert into icecream_details values('PS77',113,91);  
insert into icecream_details values('JP31',67,21);
```

```
create table ingredient(pid varchar(4),pname varchar(15),constraint pk13 primary key(pid));  
insert into ingredient values('KT01','Chocolate');  
insert into ingredient values('KT02','Pista');  
insert into ingredient values('KT03','Jkt Cheese');  
insert into ingredient values('KT04','Sizzle');  
insert into ingredient values('KT05','Nashville');  
insert into ingredient values('KT06','Buttercotch');
```

```
create table ingredient_detail(pid varchar(4),stock numeric(3),constraint pk14 primary key(pid));  
insert into ingredient_detail values('KT01',10);  
insert into ingredient_detail values('KT02',0);  
insert into ingredient_detail values('KT03',71);  
  
insert into ingredient_detail values('KT04',32);  
insert into ingredient_detail values('KT05',4);  
insert into ingredient_detail values('KT06',10);
```

```
create table reqd(pid varchar(4),flvr_id varchar(4),qty_reqd numeric(3),constraint pk15 primary  
key(pid,flvr_id));  
insert into reqd values('KT01','CC01',3);  
insert into reqd values('KT06','CB12',2);  
insert into reqd values('KT05','JP31',1);  
insert into reqd values('KT05','NP01',1);  
insert into reqd values('KT02','SB45',2);
```

```
insert into reqd values('KT03','PS77',3);
```

```
create table feedback(fid int NOT NULL AUTO_INCREMENT,cust_id int,constraint pk17 primary key(fid));
```

```
create table comments(fid int NOT NULL,comments varchar(100),ranks numeric(4),constraint pk18 primary key(fid));
```

```
insert into feedback (cust_id) values(1);
```

```
insert into feedback (cust_id) values(2);
```

```
insert into feedback (cust_id) values(5);
```

```
insert into feedback (cust_id) values(4);
```

```
insert into feedback (cust_id) values(1);
```

```
insert into feedback (cust_id) values(3);
```

```
delete from feedback where fid = 5;
```

```
insert into comments value (2,'more chocolate needed',1);
```

```
insert into comments value (1,'amazing',2);
```

```
insert into comments values(3,'best ice-cream we ever had',5);
```

```
insert into comments values(4,'Americas finest',4);
```

```
insert into comments values(5,'improved',3);
```

```
create table order_status(ord_id int primary key,inlock int);
```

```
insert into order_status values(1,0);
```

```
insert into order_status values(2,0);
```

```
insert into order_status values(3,0);
```

```
insert into order_status values(4,0);
```

```
insert into order_status values(24,1);
```

```
create table ord_type(ord_id int primary key,type varchar(15));
```

```
insert into ord_type values(1,'takeaway');
```

```
insert into ord_type values(2,'home-delivery');
```

```
insert into ord_type values(3,'takeaway');
```

```
insert into ord_type values(4,'home-delivery');
```

```
insert into ord_type values(5,'takeaway');
```

```
create table ord_num(ord_id int primary key,phone varchar(15));
```

```
alter table emp_phone add constraint fk1 foreign key(emp_id) references employee(emp_id);
```

```
alter table emp_mail add constraint fk2 foreign key(emp_id) references employee(emp_id);
```

```
alter table cust_phone add constraint fk3 foreign key(cust_id) references customer(cust_id);
```

```
alter table cust_mail add constraint fk4 foreign key(cust_id) references customer(cust_id);
```

```
alter table order_qty add constraint fk5 foreign key(ord_id) references order_details(ord_id);
```

```
alter table order_qty add constraint fk6 foreign key(flvr_id) references icecream(flvr_id);
```

```
alter table icecream_details add constraint fk7 foreign key(flvr_id) references icecream(flvr_id);
```

```
alter table ingredient_detail add constraint fk8 foreign key(pid) references ingredient(pid);
```

```
alter table reqd add constraint fk9 foreign key(pid) references ingredient(pid);
```

```
alter table reqd add constraint fk10 foreign key(flvr_id) references icecream(flvr_id);
```

```
alter table feedback add constraint fk11 foreign key(cust_id) references customer(cust_id);
```

```
alter table comments add constraint fk12 foreign key(fid) references feedback(fid);
```

```
Alter table icecream_details add constraint ck1 check(cost IS NOT NULL);
```

```
Alter table ingredient_detail add constraint ck2 check(stock IS NOT NULL);
```

Q.3)Creating the Tables with constraints and inserting the tuples.

NO. OF TABLES -

176 • show tables;

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
Tables_in_parlour			
authentication			
comments			
cust_mail			
cust_phone			
customer			
emp_mail			
emp_phone			
employee			
feedback			
house			
icecream			
icecream_details			
ingredient			
ingredient_detail			
ord_num			
ingredient_detail			
ord_num			
ord_type			
order_asc			
order_details			
order_qty			
order_status			
parlor			
reqd			

TABLES -

```
190 • select * from cust_phone;
```

Result Grid			Filter Rows:
	phone	cust_id	
▶	7530534534	1	
	6423724821	2	
	9876723655	3	
	8273452142	4	
	7530218421	5	
	9777678142	5	
*	NULL	NULL	

```
189 • select * from cust_mail;
```

Result Grid			Filter Rows:	Ed
	mail	cust_id		
▶	vaibhow@gmail.com	1		
	arin@gmail.com	2		
	rhitom@gmail.com	2		
	priyansh@gmail.com	3		
	shiv@gmail.com	4		
	ashish_cool@gmail.com	5		
*	NULL	NULL		

```
189 • select * from comments;
```

Result Grid				Filter Rows:
	fid	comments	ranks	
▶	1	amazing	2	
	2	more chodate needed	1	
	3	best ice-cream we ever had	5	
	4	Americas finest	4	
	5	improved	3	
	6	chocolaty	6	
*	NULL	NULL	NULL	

205 • `select * from order_status;`

<

Result Grid   Filter Rows:

	ord_id	inlock
	1	0
	2	0
	3	0
	4	0
▶	5	1
•	NULL	NULL

204 • `select * from order_qty;`



<

Result Grid   Filter Rows: E

	ord_id	flvr_id	cust_id	qty
▶	1	CB12	1	2
	1	CC01	1	1
	2	JP31	2	2
	2	PS77	2	3
	3	PS77	3	5
	6	CC01	3	2
•	NULL	NULL	NULL	NULL

203 • `select * from order_asc;`



<

Result Grid   Filter Rows:

	ord_id	flvr_id	cust_id
▶	1	CB12	1
	1	CC01	1
	2	JP31	2
	2	PS77	2
	3	PS77	3
	5	CC01	4
•	NULL	NULL	NULL

202 • `select * from ord_type;`

Result Grid



Filter Rows:

	ord_id	type
▶	1	takeaway
	2	home-delivery
	3	takeaway
	4	home-delivery
	5	takeaway
•	NULL	NULL

201 • `select * from order_details;`

Result Grid



Filter Rows:

Edit:

	ord_id	dt_ord
▶	1	2014-12-23
	2	2014-12-23
	3	2015-01-01
	4	2015-02-01
	5	2015-03-01
	6	2015-03-01
✱	NULL	NULL

200 • `select * from ingredient_detail;`

Result Grid

  Filter Rows: Edit:

	pid	stock
▶	KT01	10
	KT02	0
	KT04	32
	KT05	4
	KT06	10
•	NULL	NULL

199 • `select * from ingredient;`

Result Grid

Filter Rows:

	pid	pname
▶	KT01	Chodate
	KT02	Pista
	KT03	Jkt Cheese
	KT04	Sizzle
	KT05	Nashville
	KT06	Buttercotch
	NULL	NULL

198 • `select * from icecream_details;`

Result Grid			
Filter Rows: <input type="text"/>			
	flvr_id	calorie	cost
▶	CB12	255	101
	CC01	25	91
	JP31	67	21
	NP01	35	21
	PS77	113	91
	SB45	96	71
•	NULL	NULL	NULL

197 • `select * from icecream;`

Result Grid		
Filter Rows: <input type="text"/>		
	flvr_id	flvr_name
▶	CB12	Butterscotch Corneto
	CC01	Chodate Corneto
	JP31	Jakartian Spl
	NP01	Nashville Fresh
	PS77	Pista Badam
	SB45	Sizzling Burrito
•	NULL	NULL

196 • `select * from house;`

Result Grid		
Filter Rows: <input type="text"/>		
	cust_id	hno
▶	1	21
	2	12
	3	22
	4	43
	5	101

195 • `select * from feedback;`

	fid	cust_id
▶	1	1
	7	1
	2	2
	8	3
	4	4
	3	5
*	NULL	NULL

194 • `select * from employee;`

	emp_id	name	join_date	streetname	city
▶	1	Suman Mondal	2016-01-13	Gandhinagar	Kolkata
	2	Kedar Bhatt	2015-12-28	Thankot	Kathmandu
	3	Bibek Sharma	2015-02-19	Bhaktapur	Kathmandu
	4	Simant Shrestha	2015-01-18	Adarshnagar	Surkhet
	5	Abhineet Chaudhary	2014-01-13	Murli	Birgunj
	6	Bipin Dubey	2017-01-15	ramnujnagr	Chennai
*	NULL	NULL	NULL	NULL	NULL

193 • `select * from emp_phone;`

	phone	emp_id
▶	7530007447	1
	7530007443	2
	9832432232	2
	7530452411	3
	8743009823	4
	9012317449	4
	9832362178	5
	9856325475	6
*	NULL	NULL

192 • `select * from emp_mail;`

	mail	emp_id
▶	abhineet.adm09@gmail.com	1
	abhineetnuts@gmail.com	1
	simant@gmail.com	2
	bibek_08@gmail.com	3
	bhatt_kedar@gmail.com	4
	kedarrocks@yahoo.com	4
	mithu_mondal@gmail.com	5
	bipu_dabu@gmail.com	6
*	NULL	NULL

191 • `select * from customer;`

< **Result Grid**   Filter Rows: Edit: 

	cust_id	name	hno	streetname	city
▶	1	Vaibhav	NULL	Hoyota	Banglore
	2	Arin	NULL	Ring Road	Shilong
	3	Priyanshu	NULL	Prasad Marg	Patna
	4	Shivam	NULL	Thane	Lucknow
	5	Ashish	NULL	Gandhi Road	Dehradun
•	NULL	NULL	NULL	NULL	NULL

Q.4) Generate the set operators and SQL functions queries.

1. List of employees from Kathmandu

```
209 • select name from employee where city = 'Kathmandu';
```

210

Result Grid

name
Kedar Bhatt
Bibek Sharma

2. Display dates of takeaway orders

```
210 • select ord_id from ord_type where type = 'takeaway';
```

```
211 • select dt_ord from order_details where ord_id in(1,3,5);
```

Result Grid

dt_ord
2014-12-23
2015-01-01
2015-03-01

3. Display types of ice cream whose flavour id starts with c

```
212 • select * from icecream where flvr_id like 'C%';
```

Result Grid

flvr_id	flvr_name
CB12	Butterscotch Corneto
CC01	Chocolate Corneto
NULL	NULL

4. Flavours whose quantity has been more than or equal to 3 in a single order

```
213 • select * from order_qty where qty >= 3;
```

Result Grid

ord_id	flvr_id	cust_id	qty
2	PS77	2	3
3	PS77	3	5
NULL	NULL	NULL	NULL

5. Ingredients whose stock is 10

```
214 • select * from ingredient_detail where stock = 10;
```

Result Grid

	pid	stock
▶	KT01	10
	KT06	10
•	NULL	NULL

6. DETAILS OF ICE CREAM WITH MAX COST

```
3 • select *,max(cost) from icecream_details;
4
```

Result Grid

	flvr_id	calorie	cost	max(cost)
▶	CB12	255	101	101

Q.5)Generate the Join queries inner and outer.

1 Display all details of customer including house no.

```
236 • select * from customer inner join house
237 on customer.cust_id= house.cust_id;
```

Result Grid

	cust_id	name	hno	streetname	city	cust_id	hno
▶	1	Vaibhav	NULL	Hoyota	Banglore	1	21
	2	Arin	NULL	Ring Road	Shilong	2	12
	3	Priyanshu	NULL	Prasad Marg	Patna	3	22
	4	Shivam	NULL	Thane	Lucknow	4	43
	5	Ashish	NULL	Gandhi Road	Dehradun	5	101

2 display cost of each flavour of ice cream

```
240 • select icecream.flvr_name , icecream_details.cost from icecream inner join icecream_details
241 on icecream.flvr_id = icecream_details.flvr_id;
```

flvr_name	cost
Butterscotch Corneto	101
Chodate Corneto	91
Jakartaian Spl	21
Nashville Fresh	21
Pista Badam	91
Sizzling Burrito	71

3 Display feed backs from various customers

```
243 • select comments.* , feedback.cust_id from comments inner join feedback
244 on feedback.fid= comments.fid;
```

fid	comments	rank	cust_id
1	amazing	2	1
2	more chodate needed	1	2
3	best ice-cream we ever had	5	5
4	Americas finest	4	4
5	improved	3	1
6	chocolaty	6	3

4 display required amount and stock left of each flavour

```
246 • select reqd.*, ingredient_detail.stock from reqd inner join ingredient_detail
247 on reqd.pid=ingredient_detail.pid;
```

pid	flvr_id	qty_reqd	stock
KT01	CC01	3	10
KT02	SB45	2	0
KT05	JP31	1	4
KT05	NP01	1	4
KT06	CB12	2	10

5.Details of all employee along with their place of work

```
5 • select * from parlor cross join employee;
```

pan_no	name	streetname	country	pin_code	emp_id	name	join_date	streetname	city
ARLPA0061H	Kwality Ice-creams	Vellore	India	632014	1	Suman Mondal	2016-01-13	Gandhinagar	Kolkata
ARLPA0061H	Kwality Ice-creams	Vellore	India	632014	2	Kedar Bhatt	2015-12-28	Thankot	Kathmandu
ARLPA0061H	Kwality Ice-creams	Vellore	India	632014	3	Bibek Sharma	2015-02-19	Bhaktapur	Kathmandu
ARLPA0061H	Kwality Ice-creams	Vellore	India	632014	4	Simant Shrestha	2015-01-18	Adarshnagar	Surkhet
ARLPA0061H	Kwality Ice-creams	Vellore	India	632014	5	Abhineet Chaudhary	2014-01-13	Murl	Birgunj
ARLPA0061H	Kwality Ice-creams	Vellore	India	632014	6	Bipin Dubey	2017-01-15	ramnujnagr	Chennai

Q.6 Generate the queries using Group by and having clause.

1. Count the total no of employees

```
216 • select count(emp_id) from employee;
```

```
217
```

count(emp_id)
6

2. count the no of diff types of order

```
217 • select type, count(ord_id)
218 from ord_type
219 group by type ;
```

```
220
```

type	count(ord_id)
takeaway	3
home-delivery	2

3. count no of different mails of each customer

```
222 • select cust_id, count(cust_id)
223     from cust_mail
224     group by cust_id;
```

Result Grid		Filter Rows:	Export:	Wrap Cell C
	cust_id	count(cust_id)		
▶	1	1		
	2	2		
	3	1		
	4	1		
	5	1		

4. count no of order whose inlock is 0

```
226 • select inlock, count(ord_id)
227     from order_status
228     group by inlock
229     having inlock = 0;
```

Result Grid		Filter Rows:
	inlock	count(ord_id)
▶	0	4

5 count no of feedback from each customer

```
232 • select cust_id , count(fid)
233     from feedback
234     group by cust_id;
```

Result Grid		Filter Rows:
	cust_id	count(fid)
▶	1	2
	2	1
	3	1
	4	1
	5	1

NESTED QUERIES!

Q.1) Display the employee mail of employee with name 'bibek sharma'.

Select emp_id from employee where employee.name = "Bibek Sharma" ;

Select mail from emp_mail where emp_id IN

(Select emp_id from employee where employee.name = "Bibek Sharma");

The screenshot displays a database query editor interface. At the top, a toolbar includes icons for saving, undo, redo, and other standard functions. Below the toolbar, three SQL queries are listed:

- 1 • `Select emp_id from employee where employee.name = "Bibek Sharma" ;`
- 2 • `Select mail from emp_mail where emp_id IN`
- 3 • `(Select emp_id from employee where employee.name = "Bibek Sharma");`

Below the queries, a "Result Grid" section shows the results of the queries. The first query returns a single row with the value "bibek_08@gmail.com". The second query returns a single row with the value "mail".

At the bottom, an "Output" section shows the execution log. It includes a table with columns for #, Time, Action, and Message. The log shows two actions:

#	Time	Action	Message
1	15:51:56	Select emp_id from employee where employee.name = "Bibek Sharma" LIMIT 0, 1000	1 row(s) returned
2	15:51:56	Select mail from emp_mail where emp_id IN (Select emp_id from employee where employee.name = "Bibek Sharma") LIMIT 0, 1000	1 row(s) returned

Q,2) Display the cost of icecream with flvr_name 'Chocolate Corneto'.

Select flvr_id from icecream where icecream.flvr_name = "Chocolate Corneto" ;

Select cost from icecream_details where flvr_id IN

(Select flvr_id from icecream where icecream.flvr_name =

"Chocolate Corneto");

The screenshot shows a database query editor with three lines of SQL code:

```
1 • Select flvr_id from icecream where icecream.flvr_name = "Chocolate Corneto" ;
2 • Select cost from icecream_details where flvr_id IN
3 • (Select flvr_id from icecream where icecream.flvr_name = "Chocolate Corneto" );
```

Below the editor, the 'Result Grid' shows a single column 'cost' with a value of 91.

The 'Output' window shows the execution log:

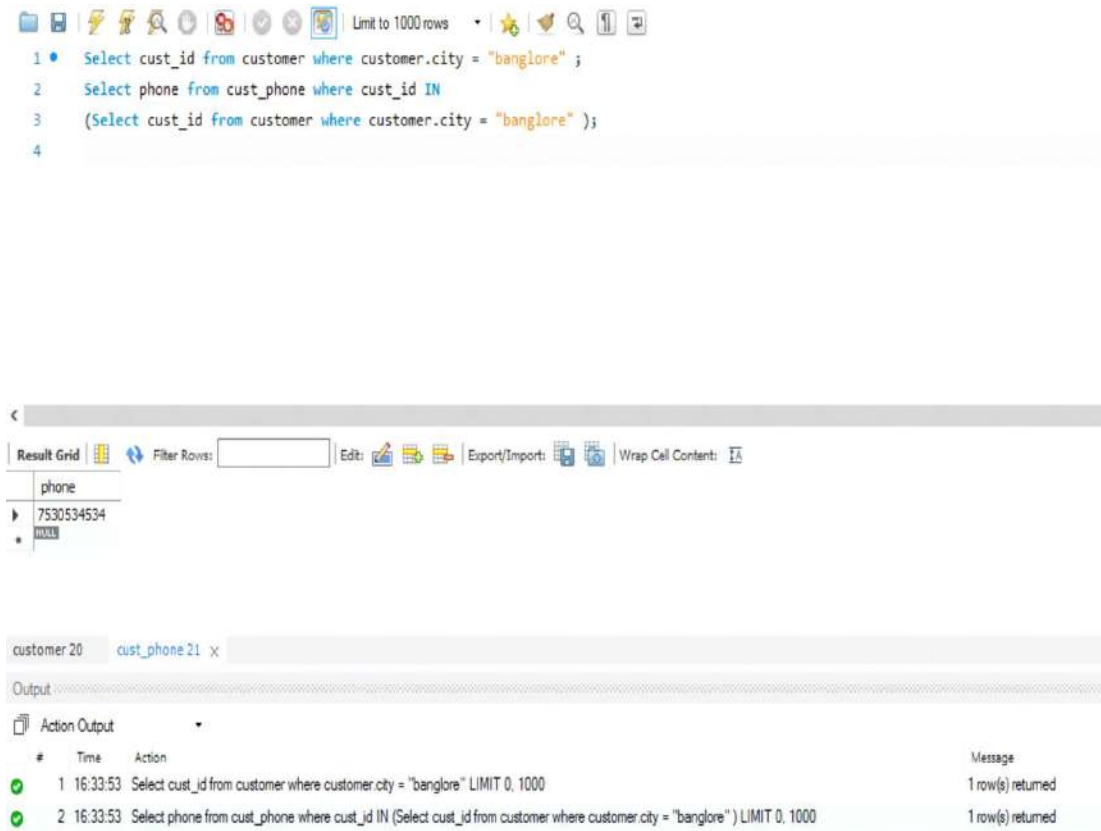
#	Time	Action	Message
1	16:06:46	Select flvr_id from icecream where icecream.flvr_name = "Chocolate Corneto" LIMIT 0, 1000	1 row(s) returned
2	16:06:46	Select cost from icecream_details where flvr_id IN (Select flvr_id from icecream where icecream.flvr_name = "Chocolate Corneto") LIMIT 0, 1000	1 row(s) returned

Q.3) Display the phone.no of customer who lives in city named 'Bangalore' .

Select cust_id from customer where customer.city = "bangalore" ;

Select phone from cust_phone where cust_id IN

(Select cust_id from customer where customer.city = "bangalore");



Limit to 1000 rows

```

1 • Select cust_id from customer where customer.city = "banglore" ;
2   Select phone from cust_phone where cust_id IN
3   (Select cust_id from customer where customer.city = "banglore" );
4

```

Result Grid

phone
7530534534

customer 20 cust_phone 21

Output

Action Output

#	Time	Action	Message
✓ 1	16:33:53	Select cust_id from customer where customer.city = "banglore" LIMIT 0, 1000	1 row(s) returned
✓ 2	16:33:53	Select phone from cust_phone where cust_id IN (Select cust_id from customer where customer.city = "banglore") LIMIT 0, 1000	1 row(s) returned

Q.4) Display weather the order with flvr_id 'JP31' is an takeaway or home - delivery.

Select ord_id from order_asc where order_asc.flvr_id = "JP31" ;

Select type from ord_type where ord_id IN

(Select ord_id from order_asc where order_asc.flvr_id = "JP31");

Limit to 1000 rows

```

1 • Select ord_id from order_asc where order_asc.flvr_id = "JP31" ;
2   Select type from ord_type where ord_id IN
3   (Select ord_id from order_asc where order_asc.flvr_id = "JP31" );
4

```

Result Grid

type
home-delivery

order_asc 24 ord_type 25 x

Output

Action Output

#	Time	Action	Message
1	16:39:01	Select ord_id from order_asc where order_asc.flvr_id = "JP31" LIMIT 0, 1000	1 row(s) returned
2	16:39:01	Select type from ord_type where ord_id IN (Select ord_id from order_asc where order_asc.flvr_id = "JP31") LIMIT 0, 1000	1 row(s) returned

Q.5) Display the stock of icecream with pname 'Sizzle'.

Select pid from ingredient where ingredient.pname = "Sizzle" ;

Select stock from ingredient_Detail where pid IN

(Select pid from ingredient where ingredient.pname = "Sizzle");

Limit to 1000 rows

```

1 • Select pid from ingredient where ingredient.pname = "Sizzle" ;
2   Select stock from ingredient_Detail where pid IN
3   (Select pid from ingredient where ingredient.pname = "Sizzle" );
4

```

Result Grid

stock
32

ingredient 26 ingredient_Detail 27 x

Output

Action Output

#	Time	Action	Message
1	16:42:33	Select pid from ingredient where ingredient.pname = "Sizzle" LIMIT 0, 1000	1 row(s) returned
2	16:42:33	Select stock from ingredient_Detail where pid IN (Select pid from ingredient where ingredient.pname = "Sizzle") LIMIT 0, 1000	1 row(s) returned

Correlated queries!

Q.1) Find details of all order which are either takeaway or home-delivery.

select * from order_qty where

**exists(select * from ord_type where ord_type.ord_id =
order_qty.ord_id);**

```

1 • select * from order_qty where
2 exists( select * from ord_type where ord_type.ord_id = order_qty.ord_id);
3 |

```

Result Grid

ord_id	fivr_id	cust_id	qty
1	CB12	1	2
1	CC01	1	1
2	JP31	2	2
2	PS77	2	3
3	PS77	3	5
•	NULL	NULL	NULL

order_qty 52 x

Output

Action Output

#	Time	Action	Message
1	17:26:51	select * from order_qty where exists(select * from ord_type where ord_type.ord_id = order_qty.ord_id) LIMIT 0, 1000	5 row(s) returned

Q.2) Find details of all employees whose mail ids are known.

select * from employee where
exists(select * from emp_mail where emp_mail.emp_id
= employee.emp_id);

Limit to 1000 rows

```

1 select * from employee where
2 exists( select * from emp_mail where emp_mail.emp_id = employee.emp_id);
3
4
5

```

Result Grid

emp_id	name	join_date	streetname	city
1	Abhineet Chaudhary	2014-01-13	Murli	Birgunj
2	Simant Shrestha	2015-01-18	Adarshnagar	Surkhet
3	Bibek Sharma	2015-02-19	Bhaktapur	Kathmandu
4	Kedar Bhatt	2015-12-28	Thankot	Kathmandu
5	Suman Mondal	2016-01-13	Gandhinagar	Kolkata
6	Bipin Dubey	2017-01-15	ramnujnagr	Chennai
NULL	NULL	NULL	NULL	NULL

employee 62 x

Output

Action Output

#	Time	Action	Message
1	17:49:12	select * from employee where exists(select * from emp_mail where emp_mail.emp_id = employee.emp_id) LIMIT 0, 1000	6 row(s) returned

Function and Procedures

Adjust the comment of customer of amazing if fid and rank is given as input parameters

```
SQL> create or replace procedure coments(a in number, b in number) is
  2  com comments%ROWTYPE;
  3  begin
  4  update comments set comments = 'amazing' where fid = a and ranks = b;
  5  dbms_output.put_line('feedbackid: ' || com.fid || ' ' || 'rank: ' || com.ranks || ' ' || 'comments: ' || com.comments);
  6  End;
  7  /

Procedure created.
```

SQL> select * from comments;

 is using

FID

COMMENTS

RANKS

3
best ice-cream we ever had
5

4
Americas finest
4

FID

COMMENTS

RANKS

5
improved
3
2
more choclate needed

FID

COMMENTS

RANKS

1
1
amazing
2

SQL> execute coments(4,4)

PL/SQL procedure successfully completed.

```
SQL> select * from comments;
```

```
      FID
-----
COMMENTS
-----
      RANKS
-----
          3
best ice-cream we ever had
          5
          4
amazing
          4

      FID
-----
COMMENTS
-----
      RANKS
-----
          5
improved
          3
          2
more choclate needed

      FID
-----
COMMENTS
-----
      RANKS
-----
          1
          1
amazing
          2
```

Cursor

Change name of city from Kathmandu to chennai for all employess from kathmandu

```
SQL> Select * from employee;
```

EMP_ID	NAME	JOIN_DATE	STREETNAME	CITY
1	Abhineet Chaudhary	13-JAN-14	Murli	Birgunj
2	Simant Shrestha	18-JAN-15	Adarshnagar	Surkhet
3	Bibek Sharma	19-FEB-15	Bhaktapur	Kathmandu
4	Kedar bhaat	28-DEC-15	Thankot	Kathmandu
5	Suman Mondal	13-JAN-16	Gandhinagar	Kolkata
6	Bipin Dubey	15-JAN-17	ramnujnagr	Chennai

6 rows selected.

```

SQL> Declare
  2  city_var employee.city%type;
  3  CURSOR e is select city from employee where city= 'Kathmandu';
  4  BEGIN
  5  Open e;
  6  LOOP
  7  FETCH e into city_var;
  8  EXIT when e%notfound;
  9  update employee
 10  set city='Chennai'
 11  where city= city_var;
 12  END LOOP;
 13  END;
 14  /

```

PL/SQL procedure successfully completed.

```

SQL> Select * from employee;

```

EMP_ID	NAME	JOIN_DATE	STREETNAME	CITY
1	Abhineet Chaudhary	13-JAN-14	Murli	Birgunj
2	Simant Shrestha	18-JAN-15	Adarshnagar	Surkhet
3	Bibek Sharma	19-FEB-15	Bhaktapur	Chennai
4	Kedar bhaat	28-DEC-15	Thankot	Chennai
5	Suman Mondal	13-JAN-16	Gandhinagar	Kolkata
6	Bipin Dubey	15-JAN-17	ramnujnagr	Chennai

6 rows selected.

Change all order quantities to 3

```
SQL> select * from order_qty;
```

ORD_ID	FLVR	CUST_	QTY
1	CC01	1	1
1	CB12	1	2
2	PS77	2	3
2	JP31	2	2
3	PS77	3	5
6	CC01	3	2

```
6 rows selected.
```

```

SQL> Declare
  2 qty_var order_qty.qty%type;
  3 id order_qty.flvr_id%type;
  4 CURSOR s is select flvr_id,qty from order_qty where flvr_id= 'CC01';
  5 BEGIN
  6 Open s;
  7 LOOP
  8 FETCH s into id, qty_var;
  9 EXIT when s%notfound;
10 update order_qty
11 set qty=3
12 where qty= qty_var;
13 END LOOP;
14 END;
15 /

```

PL/SQL procedure successfully completed.

```
SQL> Select * from order_qty;
```

ORD_ID	FLVR	CUST_	QTY
1	CC01	1	3
1	CB12	1	3
2	PS77	2	3
2	JP31	2	3
3	PS77	3	3
6	CC01	3	3

5 rows selected.

TRIGGERS

Calculate experience of each employee

```
SQL> delete employee;
```

```
6 rows deleted.
```

```
SQL> create or replace trigger exp_calc before insert on employee for each row
  2  begin
  3    :new.exp := floor(months_between(sysdate,:new.join_date)/12);
  4  End;
  5  /
```

```
Trigger created.
```

```
SQL> select * from employee;
```

EMP_ID	NAME	JOIN_DATE	STREETNAME	CITY
1	Abhineet Chaudhary	13-JAN-14	Murli	Birgunj
6				
3	Bibek Sharma	19-FEB-15	Bhaktapur	Kathmandu
5				
4	Kedar Bhatt	28-DEC-15	Thankot	Kathmandu
4				

EMP_ID	NAME	JOIN_DATE	STREETNAME	CITY
5	Suman Mondal	13-JAN-16	Gandhinagar	Kolkata
4				
6	Bipin Dubey	15-JAN-17	ramnujnagr	Chennai
3				

