TEAM-8

ART GALLERY MANAGEMENT SYSTEM

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Problem Statement:

To create an efficient database management system for an Art Gallery.

Introduction:

This project primarily deals with managing details of paintings, employees, customers and other stakeholders. We can maintain a record of the paintings present in the gallery, details of customers who buy these paintings. We can also enter new paintings available for sale. We can also record the details of the employees who work there.

A few assumptions of our dbms model:

- The mini world is a single gallery
- An exhibition can hold only one auction but the same painting can be put up on several auctions if it's unsold. And in each auction only one painting is sold
- NULL value in the price_fetched column of auction refers to unsold.

Justification for the usage of PostgreSQL as the DBMS software:

- Open Source DBMS
- Diverse indexing techniques
- Flexible Full-text search
- Diverse kinds of replication
- Diversified extension functions
- Supports ACID(Atomicity, Consistency, Isolation, Durability) and Transaction

Mapping from ER model to Relational model:

Step 1: Convert all Strong Entity Sets in to Relations(Tables)

Strong Entity Sets - Artist, Customer, Department, Employee, Exhibition, Painting

Write down the tables for them mentioning all their attributes excluding the multivalued attributes. Only the constituent attributes of the composite attributes are written in the tables.

Step2: Mapping of Weak Entity Types

Weak Entity Types – Auction, Instalments

While creating tables for the Weak entity types, we will add the primary key of the Strong entity to which it is associated as the foreign key.

Step3: Mapping 1:1 Relationship Types

HAS, HEADS

We are using the Foreign Key Approach Method for this; the primary key of one entity is added as the foreign key to the other entity with total participation.

Step4: Mapping 1:N / N:1 Relationship Types

PAYS, BUYS, PAINTS, MANAGES, BELONGS_TO

Add primary key of entity set with cardinality “1” as foreign key to the entity set with cardinality “N”.

Step5: Mapping M:N Relationship Types

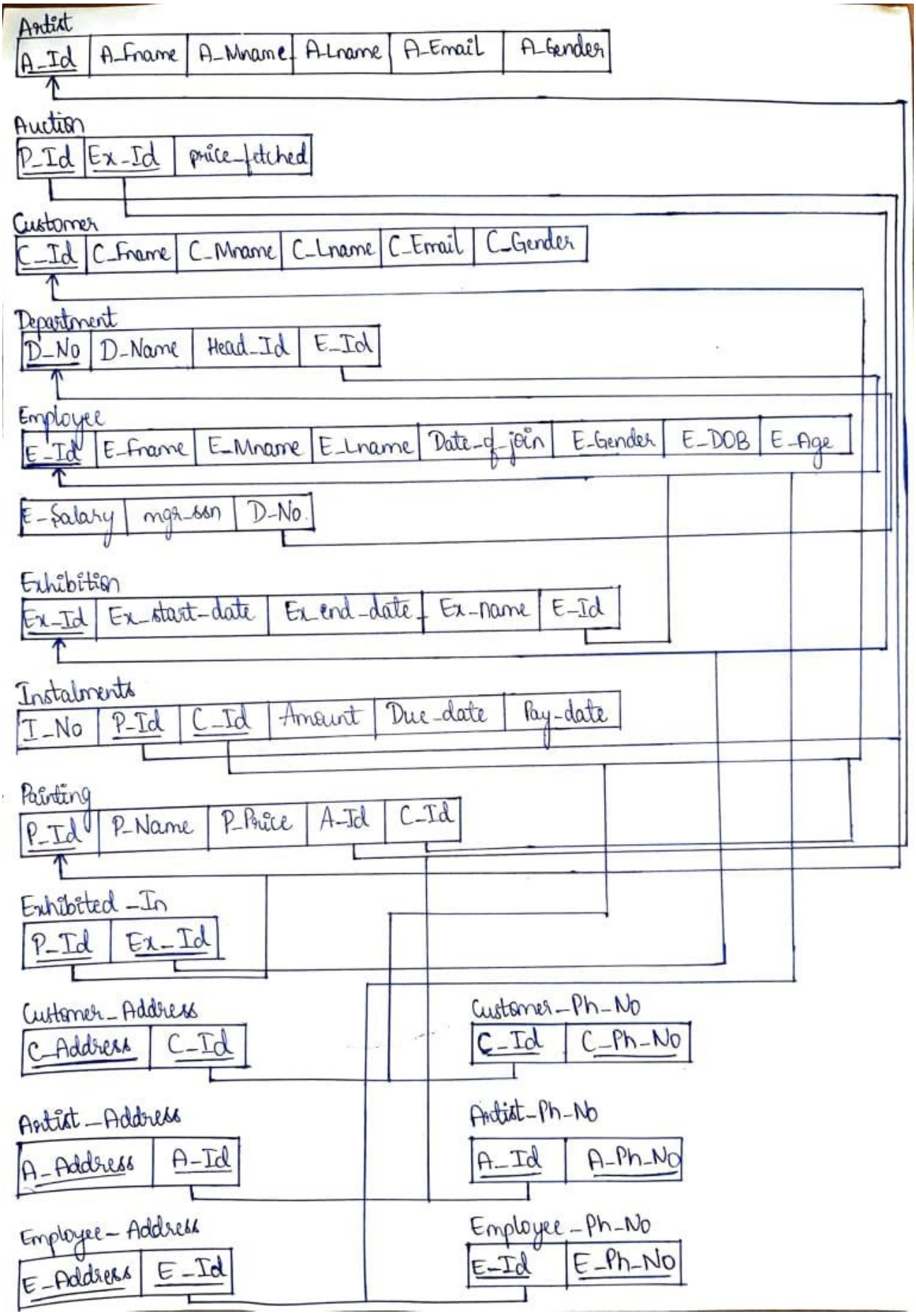
EXHIBITED_IN

Create a new relation/table including primary keys of both the entity sets. Add the descriptive attribute also, if any.

Step6: Mapping Multivalued Attributes

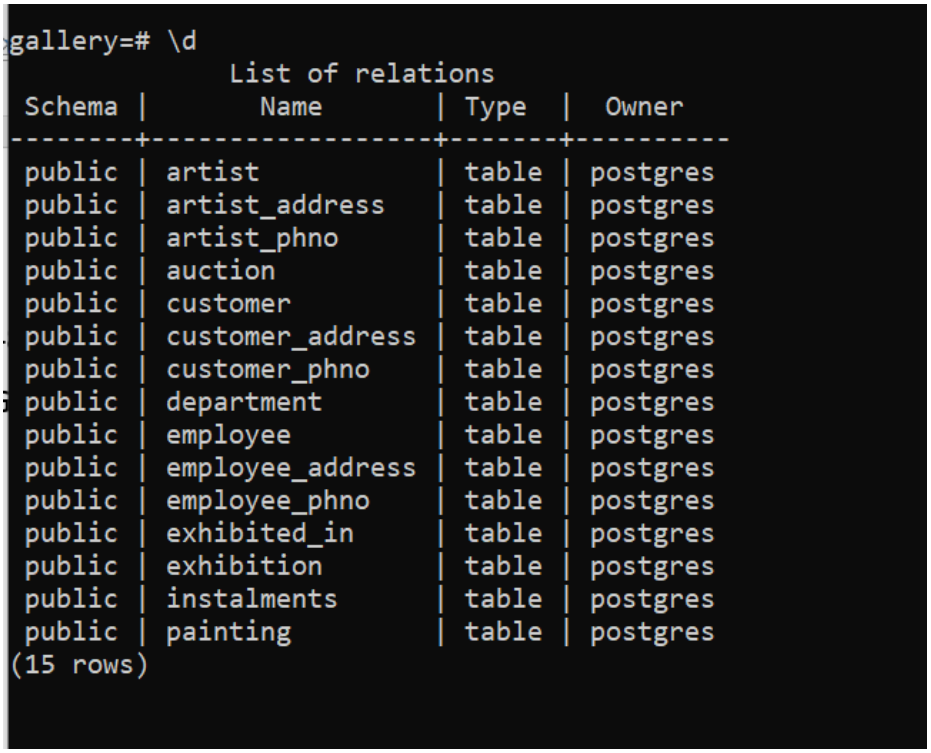
For each Multivalued attribute, create a new separate relation. Add primary key of the entity set in new relation as a foreign key. The foreign key attribute and multivalued attribute both together are called the “composite key” for this relation.

Relational Model:


Artist
A_Id
A_fname
A_Mname
A_Lname
A_Email
A_Gender
Auction
P_Id
Ex_Id
price_fetched
Customer
C_Id
C_fname
C_Mname
C_Lname
C_Email
C_Gender
Department
D_No
D_Name
Head_Id
E_Id
Employee
E_Id
E_fname
E_Mname
E_Lname
Date_of_join
E_Gender
E_DOB
E_Age
E_Salary
mgr_ssn
D_No
Exhibition
Ex_Id
Ex_start_date
Ex_end_date
Ex_name
E_Id
Instalments
I_No
P_Id
C_Id
Amount
Due_date
Pay_date
Painting
P_Id
P_Name
P_Price
A_Id
C_Id
Exhibited_In
P_Id
Ex_Id
Customer_Address
C_Address
C_Id
Customer_Ph_No
C_Id
C_Ph_No
Artist_Address
A_Address
A_Id
Artist_Ph_No
A_Id
A_Ph_No
Employee_Address
E_Address
E_Id
Employee_Ph_No
E_Id
E_Ph_No

Creation and Insertion of relations in PostgreSQL:

List of relations:



```
gallery=# \d
              List of relations
 Schema |       Name       | Type  |  Owner
--------+------------------+-------+----------
 public | artist           | table | postgres
 public | artist_address   | table | postgres
 public | artist_phno      | table | postgres
 public | auction          | table | postgres
 public | customer         | table | postgres
 public | customer_address | table | postgres
 public | customer_phno    | table | postgres
 public | department       | table | postgres
 public | employee         | table | postgres
 public | employee_address | table | postgres
 public | employee_phno    | table | postgres
 public | exhibited_in     | table | postgres
 public | exhibition       | table | postgres
 public | instalments      | table | postgres
 public | painting         | table | postgres
(15 rows)
```

Create statements:

Artist:

create table artist(

a_id varchar(30) not null unique primary key,

a_fname varchar(30) not null default ‘None’,

a_mname varchar(30),

a_lname varchar(30) not null default ‘None’,

a_email varchar(30) not null unique,

a_gender varchar(6) default ‘None’);

```
gallery=# \d+ artist;
                                                Table "public.artist"
  Column  |         Type          | Collation | Nullable |          Default          | Storage  | Stats target | Description
----------+-----------------------+-----------+----------+---------------------------+----------+--------------+-------------
 a_id     | character varying(30) |           | not null |                           | extended |              |
 a_fname  | character varying(30) |           | not null | 'None'::character varying | extended |              |
 a_mname  | character varying(30) |           |          |                           | extended |              |
 a_lname  | character varying(30) |           | not null | 'None'::character varying | extended |              |
 a_email  | character varying(30) |           | not null |                           | extended |              |
 a_gender | character varying(6)  |           |          | 'None'::character varying | extended |              |
Indexes:
    "artist_pkey" PRIMARY KEY, btree (a_id)
    "artist_a_email_key" UNIQUE CONSTRAINT, btree (a_email)
Referenced by:
    TABLE "artist_address" CONSTRAINT "artist_address_a_id_fkey" FOREIGN KEY (a_id) REFERENCES artist(a_id)
    TABLE "artist_phno" CONSTRAINT "artist_phno_a_id_fkey" FOREIGN KEY (a_id) REFERENCES artist(a_id)
    TABLE "painting" CONSTRAINT "painting_a_id_fkey" FOREIGN KEY (a_id) REFERENCES artist(a_id)
Access method: heap
```

Artist_address:

create table artist_address(

a_id varchar(30) not null unique,

a_address varchar(100),

foreign key (a_id) references artist(a_id));

```
gallery=# \d+ artist_address;
                                      Table "public.artist_address"
  Column   |          Type          | Collation | Nullable | Default | Storage  | Stats target | Description
-----------+------------------------+-----------+----------+---------+----------+--------------+-------------
 a_id      | character varying(30)  |           | not null |         | extended |              |
 a_address | character varying(100) |           |          |         | extended |              |
Indexes:
    "artist_address_a_id_key" UNIQUE CONSTRAINT, btree (a_id)
Foreign-key constraints:
    "artist_address_a_id_fkey" FOREIGN KEY (a_id) REFERENCES artist(a_id)
Access method: heap


gallery=#
```

Artist_phno:

create table artist_phno(

a_id varchar(30) not null unique,

a_ph_no numeric,

foreign key (a_id) references artist(a_id));

```
gallery=# \d+ artist_phno;
                                        Table "public.artist_phno"
 Column  |         Type          | Collation | Nullable | Default | Storage  | Stats target | Description
---------+-----------------------+-----------+----------+---------+----------+--------------+-------------
 a_id    | character varying(30) |           | not null |         | extended |              |
 a_ph_no | numeric               |           | not null |         | main     |              |
Foreign-key constraints:
    "artist_phno_a_id_fkey" FOREIGN KEY (a_id) REFERENCES artist(a_id)
Access method: heap
```

Auction:

create table Auction(

p_id varchar(30) not null;

ex_id varchar(20) not null unique,

price_fetched float);

```
gallery=# \d+ auction;
                                        Table "public.auction"
    Column     |         Type          | Collation | Nullable | Default | Storage  | Stats target | Description
---------------+-----------------------+-----------+----------+---------+----------+--------------+-------------
 p_id          | character varying(30) |           | not null |         | extended |              |
 ex_id         | character varying(20) |           | not null |         | extended |              |
 price_fetched | double precision      |           |          |         | plain    |              |
Indexes:
    "auction_ex_id_key" UNIQUE CONSTRAINT, btree (ex_id)
Foreign-key constraints:
    "auction_ex_id_fkey" FOREIGN KEY (ex_id) REFERENCES exhibition(ex_id)
    "auction_p_id_fkey" FOREIGN KEY (p_id) REFERENCES painting(p_id)
Access method: heap


gallery=#
```

Customer:

create table customer(

c_id varchar(30) not null unique primary key,

c_fname varchar(30) not null default ‘None’,

c_mname varchar(30),

c_lname varchar(30) not null default ‘None’,

c_email varchar(30) not null unique,

c_gender varchar(6) default ‘None’);

```
gallery=# \d+ customer;
                                             Table "public.customer"
  Column  |         Type          | Collation | Nullable |          Default          | Storage  | Stats target | Description
----------+-----------------------+-----------+----------+---------------------------+----------+--------------+-------------
 c_id     | character varying(30) |           | not null |                           | extended |              |
 c_fname  | character varying(30) |           | not null | 'None'::character varying | extended |              |
 c_mname  | character varying(30) |           |          |                           | extended |              |
 c_lname  | character varying(30) |           | not null | 'None'::character varying | extended |              |
 c_email  | character varying(30) |           | not null |                           | extended |              |
 c_gender | character varying(6)  |           |          | 'None'::character varying | extended |              |
Indexes:
    "customer_pkey" PRIMARY KEY, btree (c_id)
    "customer_c_email_key" UNIQUE CONSTRAINT, btree (c_email)
Referenced by:
    TABLE "customer_address" CONSTRAINT "customer_address_c_id_fkey" FOREIGN KEY (c_id) REFERENCES customer(c_id)
    TABLE "customer_phno" CONSTRAINT "customer_phno_c_id_fkey" FOREIGN KEY (c_id) REFERENCES customer(c_id)
    TABLE "instalments" CONSTRAINT "instalments_c_id_fkey" FOREIGN KEY (c_id) REFERENCES customer(c_id)
    TABLE "painting" CONSTRAINT "painting_c_id_fkey" FOREIGN KEY (c_id) REFERENCES customer(c_id)
Access method: heap


gallery=#
```

Customer_address and Customer_phno:

create table customer_address(

c_id varchar(30) not null unique,

c_address varchar(100),

foreign key (c_id) references customer(c_id));

create table customer_phno(

c_id varchar(30) not null unique,

c_ph_no numeric,

foreign key (c_id) references customer(c_id));

```
gallery=# \d+ customer_address;
                                    Table "public.customer_address"
  Column   |          Type          | Collation | Nullable | Default | Storage  | Stats target | Description
-----------+------------------------+-----------+----------+---------+----------+--------------+-------------
 c_id      | character varying(30)  |           | not null |         | extended |              |
 c_address | character varying(100) |           |          |         | extended |              |
Foreign-key constraints:
    "customer_address_c_id_fkey" FOREIGN KEY (c_id) REFERENCES customer(c_id)
Access method: heap


gallery=# \d+ customer_phno;
                                    Table "public.customer_phno"
 Column  |         Type          | Collation | Nullable | Default | Storage  | Stats target | Description
---------+-----------------------+-----------+----------+---------+----------+--------------+-------------
 c_id    | character varying(30) |           | not null |         | extended |              |
 c_ph_no | numeric               |           | not null |         | main     |              |
Foreign-key constraints:
    "customer_phno_c_id_fkey" FOREIGN KEY (c_id) REFERENCES customer(c_id)
Access method: heap


gallery=#
```

Department:

create table department(

d_no int unique not null primary key,

d_name varchar(40) not null unique,

head_id varchar(30) not null unique,

foreign key (head_id) references employee mgr_ssn));

```
SQL Shell (psql)
gallery=# \d+ department;
                                    Table "public.department"
 Column  |         Type          | Collation | Nullable | Default | Storage  | Stats target | Description
---------+-----------------------+-----------+----------+---------+----------+--------------+-------------
 d_no    | integer               |           | not null |         | plain    |              |
 d_name  | character varying(40) |           | not null |         | extended |              |
 head_id | character varying(30) |           | not null |         | extended |              |
Indexes:
    "department_pkey" PRIMARY KEY, btree (d_no)
    "department_d_name_key" UNIQUE CONSTRAINT, btree (d_name)
    "department_head_id_key" UNIQUE CONSTRAINT, btree (head_id)
Referenced by:
    TABLE "employee" CONSTRAINT "employee_d_no_fkey" FOREIGN KEY (d_no) REFERENCES department(d_no)
Access method: heap


gallery=#
```

Employee:

create table employee(

e_id varchar(30) not null unique primary key,

e_fname varchar(30) not null default ‘None’,

e_mname varchar(30),

e_lname varchar(30) not null default ‘None’,

date_of_join date not null default CURRENT_DATE,

e_gender varchar(6) default ‘None’,

e_dob date not null default CURRENT_DATE,

e_age int not null default 0,

d_no int not null,

e_salary float not null default 0.0,

mgr_ssn varchar(30) not null,

foreign key(d_no) references department (d_no));

alter table employee add constraint check(age>=18);

```
gallery=# \d+ employee;
                                                Table "public.employee"
    Column    |         Type          | Collation | Nullable |          Default          | Storage  | Stats target | Description
--------------+-----------------------+-----------+----------+---------------------------+----------+--------------+-------------
 e_id         | character varying(30) |           | not null |                           | extended |              |
 e_fname      | character varying(30) |           | not null | 'None'::character varying | extended |              |
 e_mname      | character varying(30) |           |          |                           | extended |              |
 e_lname      | character varying(30) |           | not null | 'None'::character varying | extended |              |
 date_of_join | date                  |           | not null | CURRENT_DATE              | plain    |              |
 e_gender     | character varying(6)  |           |          | 'None'::character varying | extended |              |
 e_dob        | date                  |           | not null | CURRENT_DATE              | plain    |              |
 e_age        | integer               |           | not null | 0                         | plain    |              |
 d_no         | integer               |           | not null |                           | plain    |              |
 e_salary     | double precision      |           | not null | 0.0                       | plain    |              |
 mgr_ssn      | character varying(30) |           | not null | 'unk'::character varying  | extended |              |
Indexes:
    "employee_pkey" PRIMARY KEY, btree (e_id)
Check constraints:
    "int" CHECK (e_age >= 18)
Foreign-key constraints:
    "employee_d_no_fkey" FOREIGN KEY (d_no) REFERENCES department(d_no)
Referenced by:
    TABLE "employee_address" CONSTRAINT "employee_address_e_id_fkey" FOREIGN KEY (e_id) REFERENCES employee(e_id)
    TABLE "employee_phno" CONSTRAINT "employee_phno_e_id_fkey" FOREIGN KEY (e_id) REFERENCES employee(e_id)
Access method: heap
```

Employee_address and Emplyee_phno:

create table employee_address(

e_id varchar(30) not null unique,

e_address varchar(100),

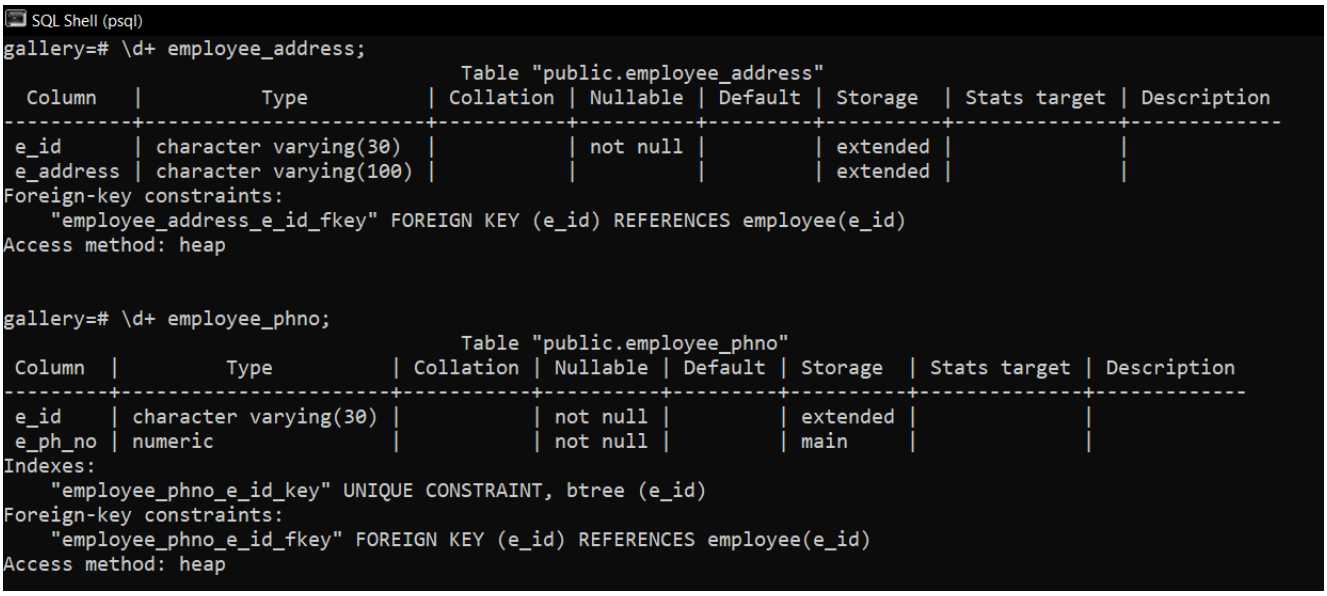
foreign key (e_id) references employee(e_id));

create table employee_phno(

e_id varchar(30) not null unique,

e_ph_no numeric,

foreign key (e_id) references employee(e_id));



Exhibited_in:

create table exhibited_in(

ex_id not null,

p_id not null,

foreign key (ex_id) references exhibition (ex_id),

foreign key (p_id) references painting(p_id));

```
gallery=# \d+ exhibited_in;
                                    Table "public.exhibited_in"
 Column |         Type          | Collation | Nullable | Default | Storage  | Stats target | Description
--------+-----------------------+-----------+----------+---------+----------+--------------+-------------
 ex_id  | character varying(20) |           | not null |         | extended |              |
 p_id   | character varying(30) |           | not null |         | extended |              |
Access method: heap


gallery=#
```

Exhibition:

create table exhibition(

ex_id varchar(20) not null unique;

ex_start_date date not null default CURRENT_DATE,

ex_end_date date not null default CURRENT_DATE,

ex_name varchar(30) not null unique));

```
gallery=# \d+ exhibition;
                                        Table "public.exhibition"
    Column     |         Type          | Collation | Nullable |    Default    | Storage  | Stats target | Description
---------------+-----------------------+-----------+----------+---------------+----------+--------------+-------------
 ex_id         | character varying(20) |           | not null |               | extended |              |
 ex_start_date | date                  |           | not null | CURRENT_DATE  | plain    |              |
 ex_end_date   | date                  |           | not null | CURRENT_DATE  | plain    |              |
 ex_name       | character varying(30) |           | not null |               | extended |              |
Indexes:
    "exhibition_ex_id_key" UNIQUE CONSTRAINT, btree (ex_id)
    "exhibition_ex_name_key" UNIQUE CONSTRAINT, btree (ex_name)
Referenced by:
    TABLE "auction" CONSTRAINT "auction_ex_id_fkey" FOREIGN KEY (ex_id) REFERENCES exhibition(ex_id)
Access method: heap


gallery=#
```

Instalments:

create table instalments(

i_no int not null default 0,

p_id not null,

pay_date date not null default current_date,

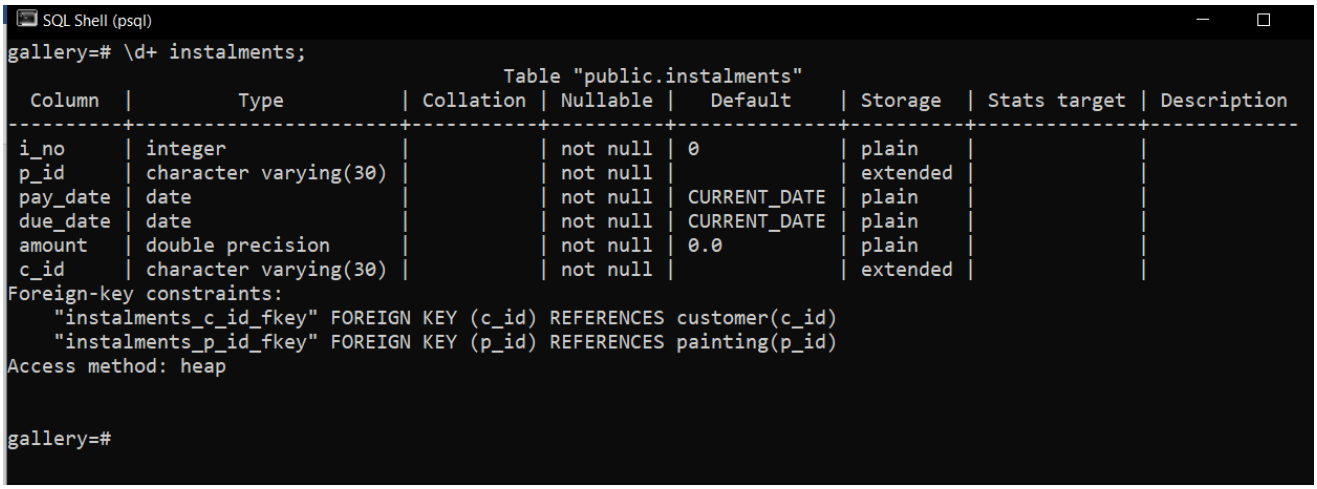
due_date not null default current_date,

amount float not null default 0.0,

c_id varchar(30) not null,

foreign key(p_id) references painting(p_id),

foreign key(c_id) references customer(c_id));



Painting:

create table painting(

p_id varchar(30) not null unique primary key,

p_name varchar(30) not null unique,

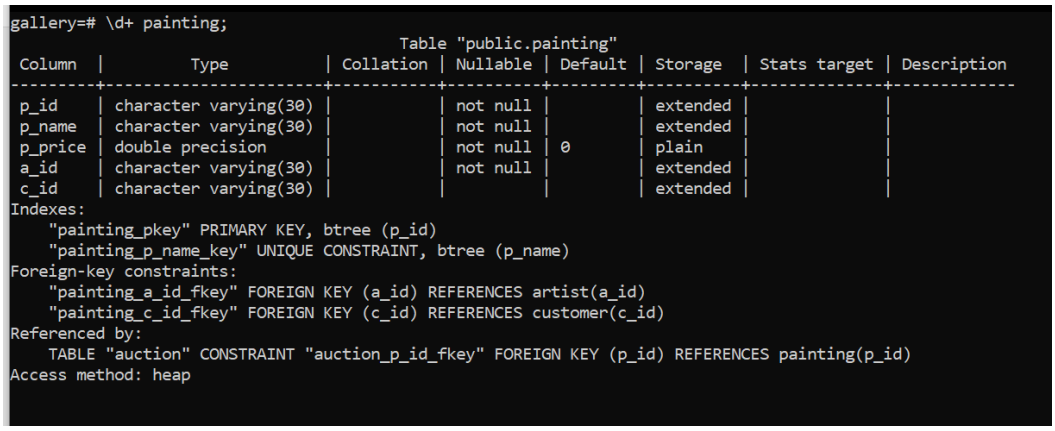
p_price float not null default 0.0,

a_id varchar(30) not null,

c_id varchar(30)

foreign key(a_id) references artist(a_id),

foreign key(c_id) references customer(c_id));



Insert statements:

Artist:

insert into artist values ('a1','john','von','neumann','john@gmail.com', 'Male');

insert into artist values('a2','joanne','','wagner','joanne@gmail.com', 'Female');

insert into artist values('a3','karen','jane','baker','karen@gmail.com', 'Female');

insert into artist values ('a4','deekshitha','','sharma','deekshitha@gmail.com', 'Female');

insert into artist values('a5','seema','singha','fernandes','seema@gmail.com', 'Female');

insert into artist values('a6','kevin','thomas','mathew','kevin@gmail.com' ,'Male');

insert into artist values('a7','karen','diane','jensen','emma@gmail.com', 'Female');

insert into artist values('a8','Edward','willis','jensen','edward@gmail.com', 'Male');

```
gallery=# select * from artist;
 a_id |  a_fname   | a_mname |  a_lname  |       a_email        | a_gender
------+------------+---------+-----------+----------------------+----------
 a1   | john       | von     | neumann   | john@gmail.com       | Male
 a2   | joanne     |         | wagner    | joanne@gmail.com     | Female
 a3   | karen      | jane    | baker     | karen@gmail.com      | Female
 a4   | deekshitha |         | sharma    | deekshitha@gmail.com | Female
 a5   | seema      | singha  | fernandes | seema@gmail.com      | Female
 a6   | kevin      | thomas  | mathew    | kevin@gmail.com      | Male
 a7   | karen      | diane   | jensen    | emma@gmail.com       | Female
 a8   | Edward     | willis  | jensen    | edward@gmail.com     | Male
(8 rows)


gallery=#
```

Artist_address:

insert into artist_address values(‘a1’,'432,Parkview Avenue,London');

insert into artist address values(‘a2’,’ '#52,Baker street,LA');

insert into artist_address values(‘a3’);

insert into artist_address values(‘a4’,'#852,RedFort Road,Delhi’);

insert into artist_address values(‘a5’,’ #673 Booker Street,NYC’);

insert into artist_address values('a6',' #82,MG Road,Bangalore');

insert into artist_address values('a7','#998,Bandra,Mumbai');

insert into artist address,values('a8','#998,Langdown Town, Seoul');

```
gallery=# select * from artist_address;
 a_id |          a_address
------+-----------------------------
 a1   | #432,ParkView Avenue,London
 a2   | #98,Baker Street,LA
 a3   |
 a4   | #852,RedFort Road,Delhi
 a5   | #673 Booker Street,NYC
 a6   | #82,MG Road,Bangalore
 a7   | #998,Bandra,Mumbai
 a8   | #998,Langdon Town,Seoul
(8 rows)


gallery=#
```

Artist_phno:

insert into artist_phno values('a1', 9801234567);

insert into artist_phno values('a2', 9087654310);

insert into artist_phno values('a3', 8901234567);

insert into artist_phno values('a4', 9123450679);

insert into artist_phno values('a5', 9087654123);

insert into artist_phno values('a6', 8756091237);

insert into artist_phno values('a7', 8756091237);

insert into artist_phno values('a8', 9087451236);

```
gallery=# select * from artist_phno;
 a_id |  a_ph_no
------+------------
 a1   | 9801234567
 a2   | 9087654310
 a3   | 8901234567
 a4   | 9123450679
 a5   | 9087654123
 a6   | 8756091237
 a7   | 6509871234
 a8   | 9087451236
(8 rows)
```

Auction:

insert into auction values('p7','ex2');

insert into auction values('p7','ex8', 5000000);

insert into auction values('p3','ex5');

insert into auction values('p2','ex7',1000000);

insert into auction values('p3','ex1',600000);

insert into auction values('p4','ex3');

insert into auction values('p1','ex4');

insert into auction values('p8','ex6',8760000);

```
gallery=# select * from auction;
 p_id | ex_id | price_fetched
------+-------+---------------
 p7   | ex2   |
 p7   | ex8   |       5000000
 p3   | ex5   |
 p2   | ex7   |       1000000
 p3   | ex1   |        600000
 p4   | ex3   |
 p1   | ex4   |       8760000
 p8   | ex6   |
(8 rows)
```

Customer:

insert into customer values('c1','maddie',NULL,'gomez','maddie@hotmail.com','Female');

insert into customer values('c2','niels','atom','bohr','niel@hotmail.com','Male');

insert into customer values('c3','ariana','grande','butera','thunderbolt@gmail.com','Male');

insert into customer values('c4','anamika','','khan','ann@gmail.com', 'Female');

insert into customer values('c5','james','','cerbero,'james@gmail.com', 'Male');

insert into customer values('c6','jengis','','khan','jengis@gmail.com', 'Male','');

insert into customer values('c7','carol','peter','rumero','helloworld@yahoo.com');

insert into customer values('c8','napolean','hansel','hingis','napole@gmail.com', 'Male');

```
gallery=# select * from customer;
 c_id | c_fname  | c_mname | c_lname |        c_email        | c_gender
------+----------+---------+---------+-----------------------+----------
 c1   | maddie   |         | gomez   | maddie@hotmail.com    | Female
 c2   | niels    | atom    | bohr    | niel@hotmail.com      | Male
 c3   | ariana   | grande  | butera  | thunderbolt@gmail.com | Male
 c8   | napolean | hansel  | hingis  | napole@gmail.com      | Male
 c7   | carol    | peter   | rumero  | helloworld@yahoo.com  | None
 c5   | james    |         | cerbero | james@gmail.com       | Male
 c6   | jengis   |         | khan    | jengis@gmail.com      | Male
 c4   | anamika  |         | khan    | ann@gmail.com         | Female
(8 rows)
```

Customer_address:

insert into customer_address values(‘c1’);

insert into customer_address values(‘c2’, ‘#583,street,alabama’);

insert into customer_address values(‘c3’,’ #457,7th street,NewJersey’);

insert into customer_address values(‘c4’,’ #49,church street,NYC’);

insert into customer_address values(‘c5’,’ #984,Morata Street Madrid’);

insert into customer_address values(‘c6’);

insert into customer_address values(‘c7’);

insert into customer_address values(‘c8’,’ #123,Doll street, Tokyo’);

```
gallery=# select * from customer_address;
 c_id |         c_address
------+---------------------------
 c1   |
 c2   | #583,street,alabama
 c3   | #457,7th street,NewJersey
 c4   | #49,church street,NYC
 c5   | #984,Morata Street Madrid
 c6   |
 c7   |
 c8   | #123,Doll street, Tokyo
(8 rows)
```

Customer_phno:

insert into customer_phno values(‘c1’, 987654321);

insert into customer_phno values(‘c2’, 9083421091);

insert into customer_phno values(‘c3’, 9879309872);

insert into customer_phno values(‘c4’, 1234567890);

insert into customer_phno values(‘c5’, 9867542310);

insert into customer_phno values(‘c6’, 8967452310);

insert into customer_phno values(‘c7’, 6789012345);

insert into customer_phno values(‘c8’, 789012345);

```
gallery=# select * from customer_phno;
 c_id |  c_ph_no
------+------------
 c1   |  987654321
 c2   | 9083421091
 c3   | 9879309872
 c4   | 1234567890
 c5   | 9867542310
 c6   | 8967452310
 c7   | 6789012345
 c8   |  789012345
(8 rows)


gallery=#
```

Department:

insert into department values(1,’Management’,’e2’);

insert into department values(2,’Marketing’,’e7);

insert into department values(3,’Sales’,’e4);

insert into department values(4,’Maintainance’,’e5’)

```
gallery=# select * from department;
 d_no |   d_name    | head_id
------+-------------+---------
    1 | Management  | e2
    2 | Marketing   | e7
    3 | Sales       | e4
    4 | Maintenance | e5
(4 rows)


gallery=#
```

Employee:

insert into employee values('e1','helen','','saleste','12-08-2020','Female','12-9-2000',21,01,190000,’e2’);

insert into employee values(‘e2’,’bhoomika’,’P’,’sharma’,’2001-08-12’,’female,36,1,200000,’e2’);

insert into employee values(‘e3’,‘Kevin ‘,’R ‘,‘Matthew ‘,‘2012-08-12’,’ Male ‘,’1990-07-13’, 32, 2 ,60000,‘e7’)

insert into employee values(e4, ‘Raman ‘,‘M’, ‘Chaudary’, ‘2000-05-13 ‘,‘Male,’1967-10-27’, 53,3 ,250000 , ‘e4’)

insert into employee values(‘e5‘,‘Anupama’ ,‘M ‘,‘Parameshwar’,’2015-05-13’,‘Female’,‘1988-10-17 ‘,33 ,4 ,220000,‘e5’);

insert into employee values (‘e6 ‘,‘Rahul’,‘E ‘,‘Chawla’,‘2019-05-19 ‘,‘Male’,‘1995-10-17’, 26 ,3, 90000, ‘e6’);

inset into employee values(‘e7 ,’Sana,’I’ , ‘Sheikh’ ,’2009-05-13’,‘Male’ ,‘1969-01-18’ ,52,2, 190000, ‘e7’);

insert into employee values(‘e8’ , ‘Pedri’,‘M’ ,‘Coetez’ ,‘2019-04-01’,‘Male ‘,1992-02-19, 29,4,80000, ‘e5’);

```
gallery=# select * from employee;
 e_id | e_fname  | e_mname |   e_lname    | date_of_join | e_gender |   e_dob    | e_age | d_no | e_salary | mgr_ss
------+----------+---------+--------------+--------------+----------+------------+-------+------+----------+-------
 e1   | helen    |         | saleste      | 2020-08-12   | Female   | 2000-09-12 |    21 |    1 |   190000 | e2
 e2   | bhoomika | P       | sharma       | 2001-08-12   | Female   | 1985-04-14 |    36 |    1 |   200000 | e2
 e3   | Kevin    | R       | Matthew      | 2012-08-12   | Male     | 1990-07-13 |    32 |    2 |    60000 | e7
 e4   | Raman    | M       | Chaudary     | 2000-05-13   | Male     | 1967-10-27 |    53 |    3 |   250000 | e4
 e5   | Anupama  | M       | Parameshwar  | 2015-05-13   | Female   | 1988-10-17 |    33 |    4 |   220000 | e5
 e6   | Rahul    | E       | Chawla       | 2019-05-19   | Male     | 1995-10-17 |    26 |    3 |    90000 | e6
 e7   | Sana     | I       | Sheikh       | 2009-05-13   | Male     | 1969-01-18 |    52 |    2 |   190000 | e7
 e8   | Pedri    | M       | Coetez       | 2019-04-01   | Male     | 1992-02-19 |    29 |    4 |    80000 | e5
(8 rows)


gallery=#
```

Employee_address:

insert into employee_address values(‘e1’,’ #456,Langdon town, Bangalore’);

insert into employee_address values(‘e2’,’ #46,Richmond Circle, Bangalore’);

insert into employee_address values(‘e3’,’ #189,MG Road,Bangalore’);

insert into employee_address values(‘e4’,’ #289,Malleshwaram,Bangalore’);

insert into employee_address values(‘e5’,’ #45,Jayanagar,Bangalore’);

insert into employee_address values(‘e6’,’ #91,JP Nagar,Bangalore’);

insert into employee_address values(‘e7’,’ #109,Kormanagala,Bangalore’);

insert into employee_address values(‘e8’,’ #760,Shivajinagar,Bangalore’);

```
gallery=# select * from employee_address;
 e_id |           e_address
------+-------------------------------
 e1   | #456,Langdon town, Bangalore
 e2   | #46,Richmond Circle, Bangalore
 e3   | #189,MG Road,Bangalore
 e4   | #289,Malleshwaram,Bangalore
 e5   | #45,Jayanagar,Bangalore
 e6   | #91,JP Nagar,Bangalore
 e7   | #109,Kormanagala,Bangalore
 e8   | #760,Shivajinagar,Bangalore
(8 rows)
```

Employee_phno:

insert into employee_phno values('e1', 9876543210);

insert into employee_phno values('e2', 9038372999);

insert into employee_phno values('e3', 8897655432);

insert into employee_phno values('e4', 6789012345);

insert into employee_phno values('e5', 9087564321);

insert into employee_phno values('e6', 9987654320);

insert into employee_phno values('e7', 9876540123);

insert into employee_phno values('e8', 7890123456);

```
gallery=# select * from employee_phno;
 e_id |  e_ph_no
------+------------
 e1   | 9876543210
 e2   | 9038372999
 e3   | 8897655432
 e4   | 6789012345
 e5   | 9087564321
 e6   | 9987654320
 e7   | 9876540123
 e8   | 7890123456
(8 rows)
```

Exhibited_in:

insert into exhibited_in values('ex1','p2');

insert into exhibited_in values('ex3','p3');

insert into exhibited_in values('ex1','p3');

insert into exhibited_in values('ex3','p4');

insert into exhibited_in values('ex7,'p5');

insert into exhibited_in values('ex7','p8');

insert into exhibited_in values('ex6','p2');

insert into exhibited_in values('ex5','p7');

```
gallery=# select * from exhibited_in;
 ex_id | p_id
-------+------
 ex1   | p2
 ex3   | p3
 ex1   | p3
 ex3   | p4
 ex7   | p5
 ex7   | p8
 ex6   | p2
 ex5   | p7
(8 rows)


gallery=#
```

Exhibition:

insert into exhibition values('ex1','12-02-2019','14-02-2019','Nature and the Wild');

insert into exhibition values('ex2','12-08-2014','19-08-2014','Firing rage');

insert into exhibition values('ex3','20-01-2020','23-01-2020','View of the mind');

insert into exhibition values('ex4','17-03-2021','23-03-2021','Fly low');

insert into exhibition values('ex5','04-07-2020','07-07-2020','Beautiful Lies');

insert into exhibition values('ex6','04-06-2018','08-06-2018','Hues of the Heart');

insert into exhibition values('ex7','13-04-2019','17-04-2019','Blank Minds');

insert into exhibition values('ex8','7-05-2017','7-05-2017','The dead drop era');

```
gallery=# select * from exhibition;
 ex_id | ex_start_date | ex_end_date |       ex_name
-------+---------------+-------------+---------------------
 ex1   | 2019-02-12    | 2019-02-14  | Nature and the Wild
 ex2   | 2014-08-12    | 2014-08-19  | Firing rage
 ex3   | 2020-01-20    | 2020-01-23  | View of the mind
 ex4   | 2021-03-17    | 2021-03-23  | Fly low
 ex5   | 2020-07-04    | 2020-07-07  | Beautiful Lies
 ex6   | 2018-06-04    | 2018-06-08  | Hues of the Heart
 ex7   | 2019-04-13    | 2019-04-17  | Blank Minds
 ex8   | 2017-05-07    | 2017-05-07  | The dead drop era
(8 rows)


gallery=#
```

Instalments:

insert into instalments values(1,'p1','12-02-2019','14-02-2019',10000,'c3');

insert into instalments values(2,'p1','14-02-2019','14-03-2019',10000,'c3');

insert into instalments values(1,'p5','17-07-2021','17-05-2021',30000.98,'c8');

insert into instalments values(2,'p7','14-06-2020','18-07-2020',15000,'c7');

insert into instalments values(1,'p7','14-05-2020','18-06-2020',15000,'c7');

insert into instalments values(1,'p3','24-06-2020','18-07-2020',450000,'c4');

insert into instalments values(2,'p3','27-07-2020','18-08-2020',450000,'c4');

insert into instalments values(3,'p3','31-08-2020','18-09-2020',34983,'c4');

```
gallery=# select * from instalments;
 i_no | p_id |  pay_date  |  due_date  |  amount  | c_id
------+------+------------+------------+----------+------
    1 | p1   | 2019-02-12 | 2019-02-14 |    10000 | c3
    2 | p1   | 2019-02-14 | 2019-03-14 |    10000 | c3
    1 | p5   | 2021-07-17 | 2021-05-17 | 30000.98 | c8
    2 | p7   | 2020-06-14 | 2020-07-18 |    15000 | c7
    1 | p7   | 2020-05-14 | 2020-06-18 |    15000 | c7
    1 | p3   | 2020-06-24 | 2020-07-18 |   450000 | c4
    2 | p3   | 2020-07-27 | 2020-08-18 |   450000 | c4
    3 | p3   | 2020-08-31 | 2020-09-18 |    34983 | c4
(8 rows)
```

Painting:

insert into painting values('p1','sulking river',120000,'a2','c3');

insert into painting values('p2','the imperfectly perfect',120000,'a2','c4');

insert into painting values('p3','world though this eyes',934983,'a5','c4');

insert into painting values('p4','world without me',999999.99,'a6','c5');

insert into painting values('p5','moves like jagger',198295.643,'a1','c8');

insert into painting values('p6','STAY',69696969.69,'a4','c4');

insert into painting values('p7','my view',75587686,'a3','c7');

insert into painting values('p8','into the wild',345678,'a5','c3');

```
gallery=# select * from painting;
 p_id |         p_name          |   p_price   | a_id | c_id
------+-------------------------+-------------+------+------
 p1   | sulking river           |      120000 | a2   | c3
 p2   | the imperfectly perfect |      120000 | a2   | c4
 p3   | world though this eyes  |      934983 | a5   | c4
 p5   | moves like jagger       |  198295.643 | a1   | c8
 p6   | STAY                    | 69696969.69 | a4   | c4
 p7   | my view                 |    75587686 | a3   | c7
 p8   | into the wild           |      345678 | a5   | c3
 p4   | world without me        |   999999.99 | a6   | c5
(8 rows)
```

Contribution of each member:

Deekshitha- Relational diagram, Insert statements for customer relation, Report of the relational diagram

Deepa-Create and Insert commands, report for the insert and create statements