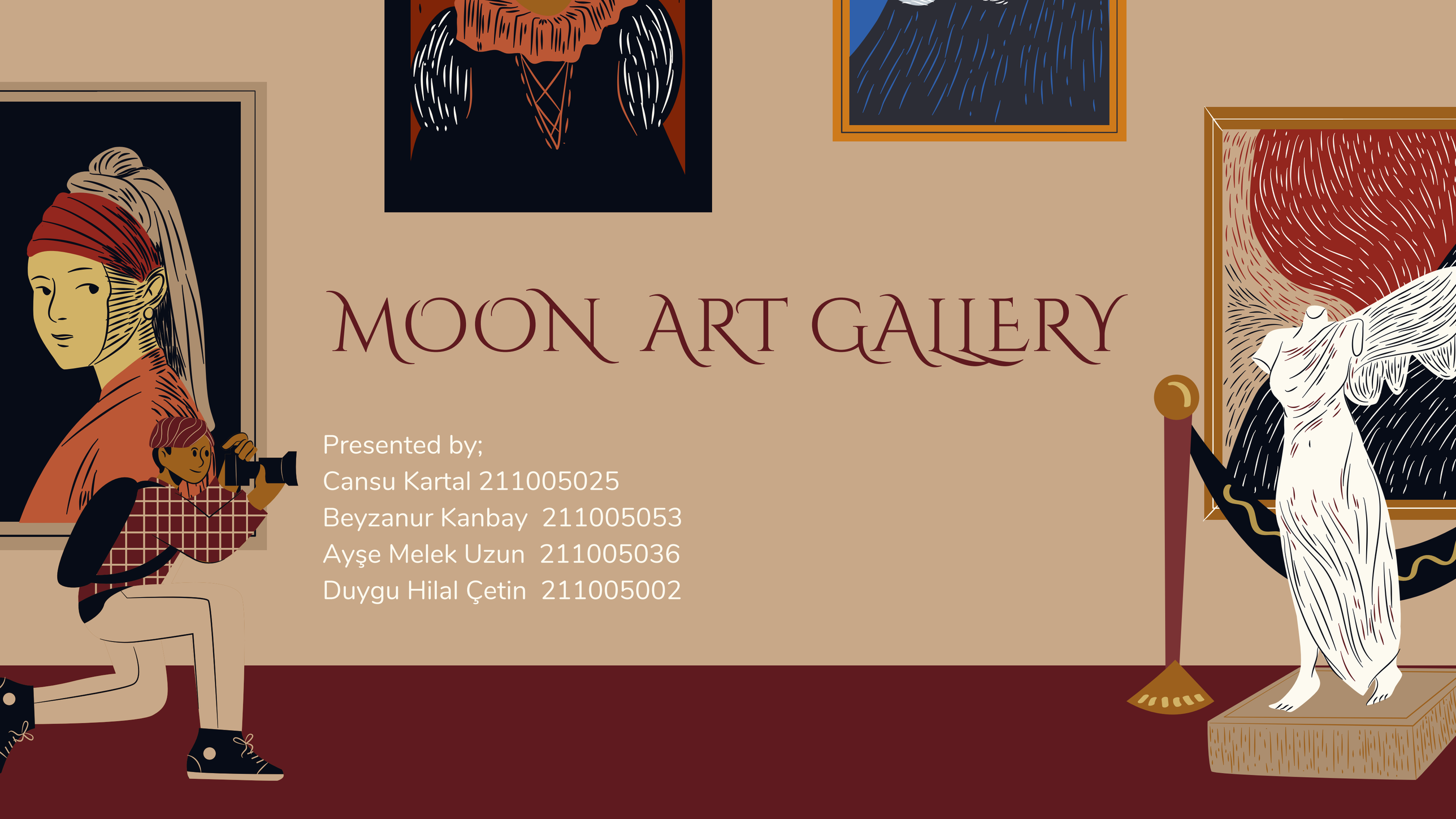
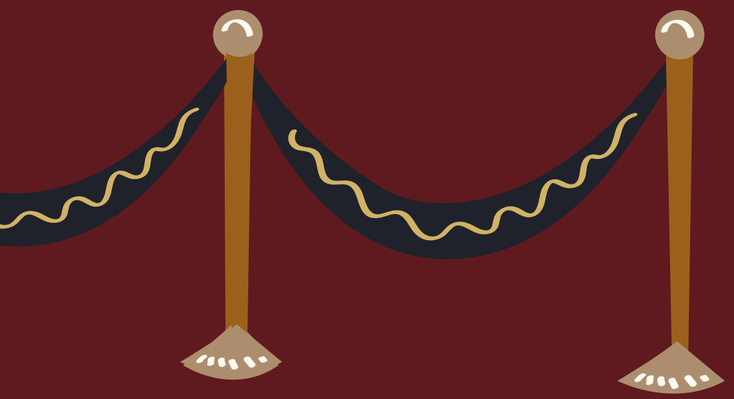


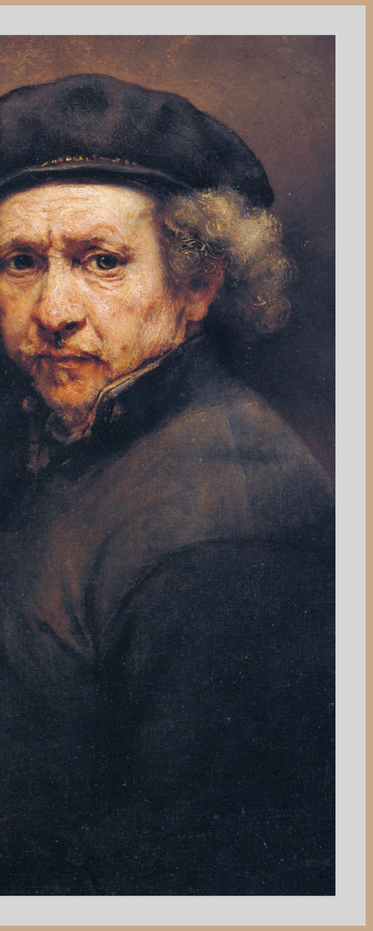
MOON ART GALLERY

Presented by;
Cansu Kartal 211005025
Beyzanur Kanbay 211005053
Ayşe Melek Uzun 211005036
Duygu Hilal Çetin 211005002

TOPIC OUTLINE



1. INTRODUCTION
2. DATA SET
3. ER AND EER MODEL
4. UML CLASS DIAGRAMS
5. DATABASE DESIGN IN MYSQL
6. SQL DIAGRAM



Introduction

Sales Module: It transparently records sales transactions within the gallery and includes information such as transaction details, sold works and date.

Customer Module: Strengthens customer relationships by recording customer information and managing personalized interactions and transaction history.

Artworks Module: Designed to catalog the gallery collection; It includes details such as titles, artists, sizes and price of the works.

Artist Module: Contains profiles and work portfolios of artists associated with the gallery.

Gallery Module: Centrally manages the gallery's physical locations,

Exhibitions Module: Focuses on the functionality of planning and managing art exhibitions; Contains exhibition organization and participation information.

Art Gallery Data Set

SaleID	ArtworkID	CustomerID	SaleDate	SaleAmount
1	6	1	2023-05-20	27.00
2	11	2	2023-07-02	100.00
3	5	3	2023-07-10	100.00
4	9	3	2023-08-05	75.00
5	10	4	2023-09-12	25.00
6	4	5	2023-10-22	60.00
7	13	6	2023-11-18	80.00
10	3	9	2024-01-10	70.00
11	2	10	2024-02-05	40.00
12	14	11	2024-03-18	90.00
13	15	12	2024-04-22	110.00
14	12	13	2024-05-15	50.00
15	13	14	2023-03-15	80.00
NULL	NULL	NULL	NULL	NULL

Sales Data

ArtistName	ArtistSurname	BirthDate	DeathDate	Country	Sex
Claude	Monet	1840-05-02	1926-06-04	French	M
Edward	Munch	1863	1944	Norwegian	M
Anton Von	Werner	1843	1915	Germany	M
Amedeo	Modigliani	1984	1920	Italian	M
Antonio da	Correggio	1489	1534	Italian	M
Charles	Le Brun	1619	1960	French	M
Edward	Hicks	1780	1849	American	M
Edward Mitchell	Bannister	1828	1901	American	M
Frida	Kahlo	1907	1954	Mexico	F
Gustave	Courbet	1819	1877	French	M
Hans	Hofmann	1880	1966	German	M
Isaac	Levitan	1860	1900	Russian	M
Ilya	Repin	1844	1930	Russian	F
Juan	Gris	1887	1927	Spain	M
Michelangelo	Buonarroti	1475	1564	Italy	M
NULL	NULL	NULL	NULL	NULL	NULL

Artist Data

Result Grid

CustomerID	Name	SurName	Email	Phone	Adress	ArtworkID
1	Edward	Cullen	edwardcullen@gmail.com	123-456-7890	New York	6
2	Akgun	Taskın	akgungokalp@gmail.com	541-467-83-39	Izmir	11
3	Dylan	OBrien	dylanobrien@hotmail.com	112-622-3367	Chicago	5
4	Metin	Akdulger	metinakdulger@gmail.com	532-123-4927	Istanbul	10
5	Melek	Uzun	meljun3467@gmail.com	542-784-4683	Viyana	4
6	Elcin	Sangu	elcinsangu@gmail.com	777-888-9999	Ankara	13
7	Ömer	İplikçi	omeriplikci@hotmail.com	534-572-4465	Sarıyer	1
8	Cansu	Kartal	cansukartal05@gmail.com	537-827-9877	Roma	7
9	Harry	Potter	harryninhedwigi@gmail.com	999-888-7777	Hogwarts	3
10	Sophia	Moore	sophia.moore@example.com	666-444-5555	Denver	2
11	Beyzanur	Kanbay	beyza.mavi61@gmail.com	721-455-6689	Oslo	14
12	Theo	James	uyumsuz@gmail.com	777-999-1111	Paris	15
13	Noah	White	noah.white@example.com	333-222-1111	Dallas	12
14	Duygu	Cetin	cetinduyguhilal.com	888-777-6666	Newyork	13
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Customer Data

Art Gallery Data Set

Result Grid | Filter Rows: | Edit:

GalleryID	GalleryName	Location
100148	Moon Art Gallery	Bostanlı,IZMIR
NULL	NULL	NULL

Gallery Data

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

ArtworkID	ArtName	Current_trend	Size	Creation_date	Price	ArtistID
1	Sunrise	Impression	50*70	1872	100.00	1
2	Water Lilies	Impression	50*70	1897	110.00	1
3	The Vampire	Sembolist	60*80	1893	225.00	2
4	The Scream	Sembolist	70*80	1893	122.00	2
5	Proclamation of the German Empire	Impression	100*110	1871	300.00	3
6	Woman with a Red Necklace	Realism	100*110	1917	320.00	4
7	Jupiter and Io	Surrealism	55*60	1530	400.00	5
8	Apollon ve Thémas	Impression	65*90	1663	250.00	6
9	The Peaceable Kingdom	Realist	150x100	1830	8000.00	7
10	Under the Oaks, Rhode Island	Impressionist	200x150	1875	12000.00	8
11	The Two Fridas	Surrealist	80x60	1930	15000.00	9

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

ArtworkID	ArtName	Current_trend	Size	Creation_date	Price	ArtistID
10	Under the Oaks, Rhode Island	Impressionist	200x150	1875	12000.00	8
11	The Two Fridas	Surrealist	80x60	1930	15000.00	9
12	The Artist's Studio	Realist	180x120	1855	9500.00	10
13	Composition	Abstract	120x90	1950	8500.00	11
14	Above Eternal Peace	Impressionist	100x80	1885	7000.00	12
15	Reply of the Zaporozhian Cossacks	Realist	200x150	1890	9000.00	12
16	Man in the Café	Cubist	60x40	1927	11000.00	14
17	Man in a Cafe	Cubist	127.6x...	1920-01-01	9500.00	14
18	Still Life with Flowers	Cubist	112.1x...	1925-06-12	8200.00	14
19	David	Renaissance	520x230	1501	25000.00	15
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Artworks Data

ExhibitionID	ExhibitionName	StartDate	EndDate	GalleryID
1	Modern Art Showcase	2024-08-01	2024-10-01	100148
2	Renaissance Masterpieces	2024-11-01	2025-01-01	100148
3	Ancient Artifacts	2025-03-01	2025-06-01	100148
4	Abstract Expressions	2025-07-01	2025-09-01	100148
5	Minimalist Art	2025-10-01	2025-12-01	100148
NULL	NULL	NULL	NULL	NULL

Exhibitions Data

Art Gallery Data Set

sult Grid | Filter Rows:

ExhibitionID	SculptureMaterial	SculptureStyle
1	Bronze	Abstract
2	Marble	Realistic
3	Stone	Primitive
4	Metal	Abstract
NULL	NULL	NULL

Sculpture Data

Result Grid | Filter Rows:

ExhibitionID	PaintType
1	Oil
2	Watercolor
3	Fresco
5	Monochrome
NULL	NULL

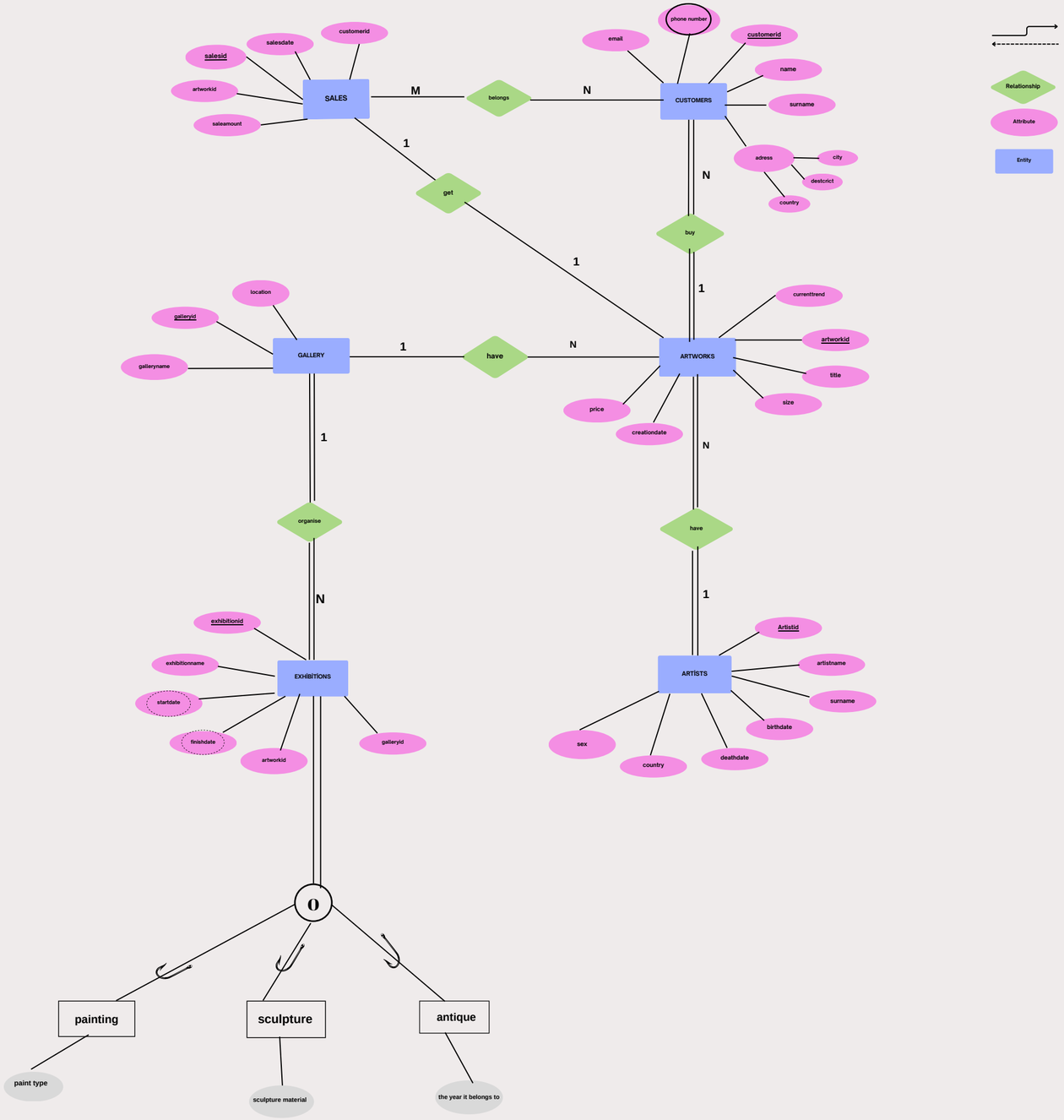
Painting _exhibition Data

Result Grid | Filter Rows:

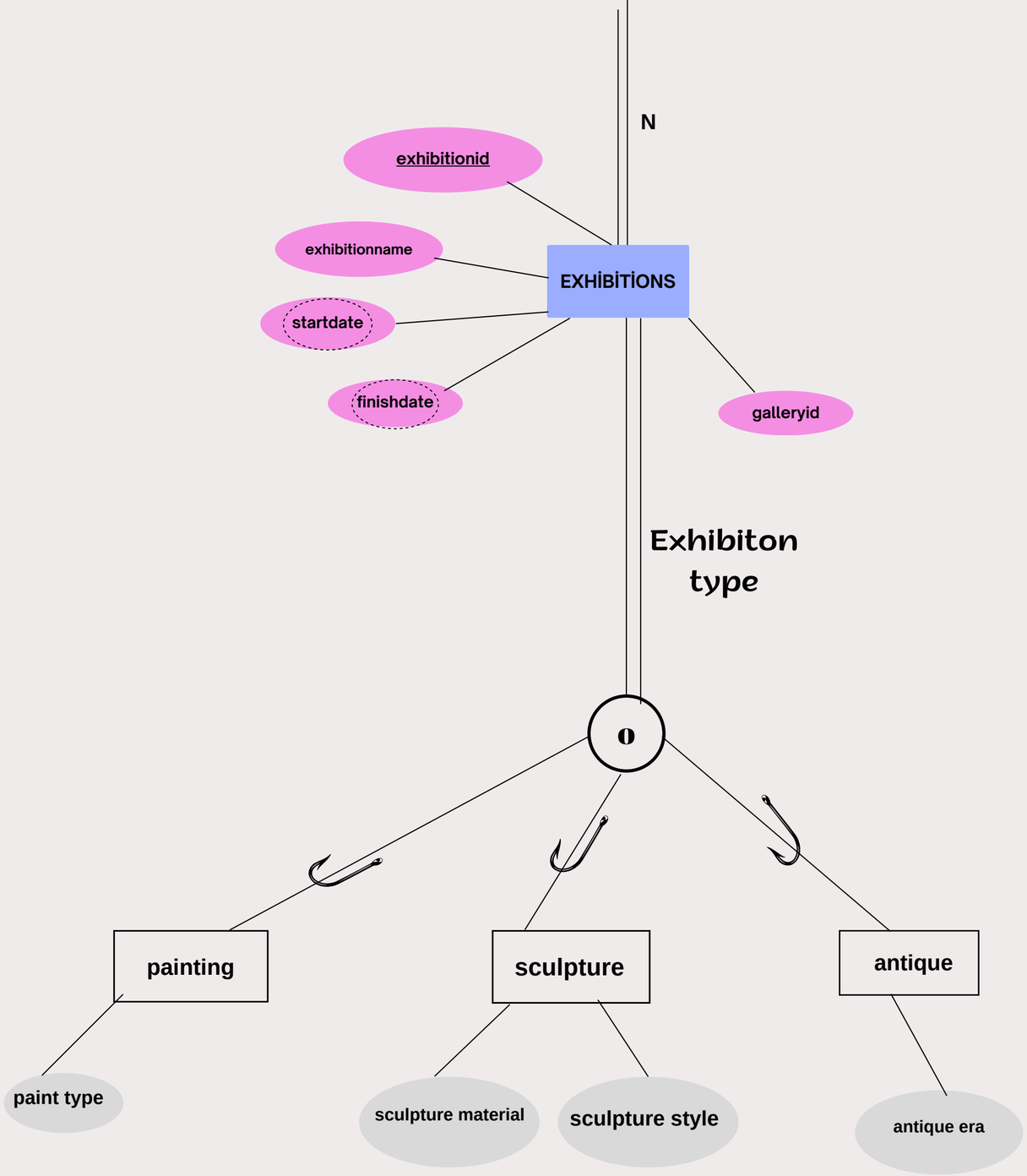
ExhibitionID	AntiqueEra
1	Ancient
2	Renaissance
3	1850
5	1940
NULL	NULL

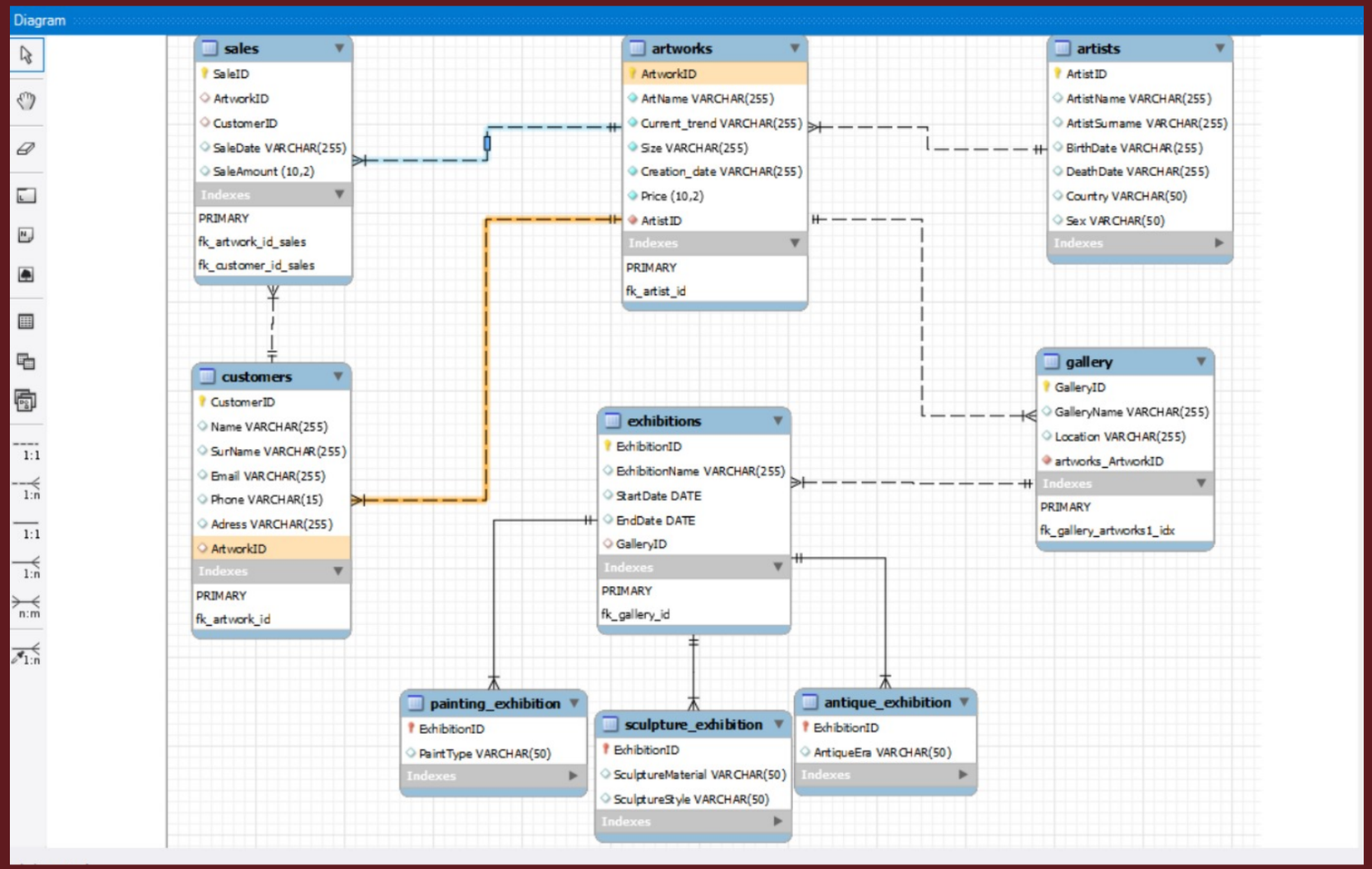
Sculpture_ exhibition Data

ER-EER MODEL


SALES
salesid
salesdate
customerid
artworkid
saleamount
M
belongs
N
CUSTOMERS
phone number
email
customerid
name
surname
adress
city
destcrict
country
1
get
N
buy
1
1
GALLERY
location
galleryid
galleryname
1
have
N
ARTWORKS
currenttrend
artworkid
title
size
price
creationdate
1
organise
N
N
have
1
EXHIBITIONS
exhibitionid
exhibitionname
startdate
finishdate
artworkid
galleryid
ARTISTS
Artistid
artistname
surname
birthdate
deathdate
country
sex
O
painting
sculpture
antique
paint type
sculpture material
the year it belongs to
Relationship
Attribute
Entity

SPECIALIZATION EER MODEL





SQL DIAGRAM

```
CONSTRAINT fk_artwork_id_sales FOREIGN KEY (ArtworkID)
    REFERENCES artworks (ArtworkID),
CONSTRAINT fk_customer_id_sales FOREIGN KEY (CustomerID)
    REFERENCES customers (CustomerID)
```

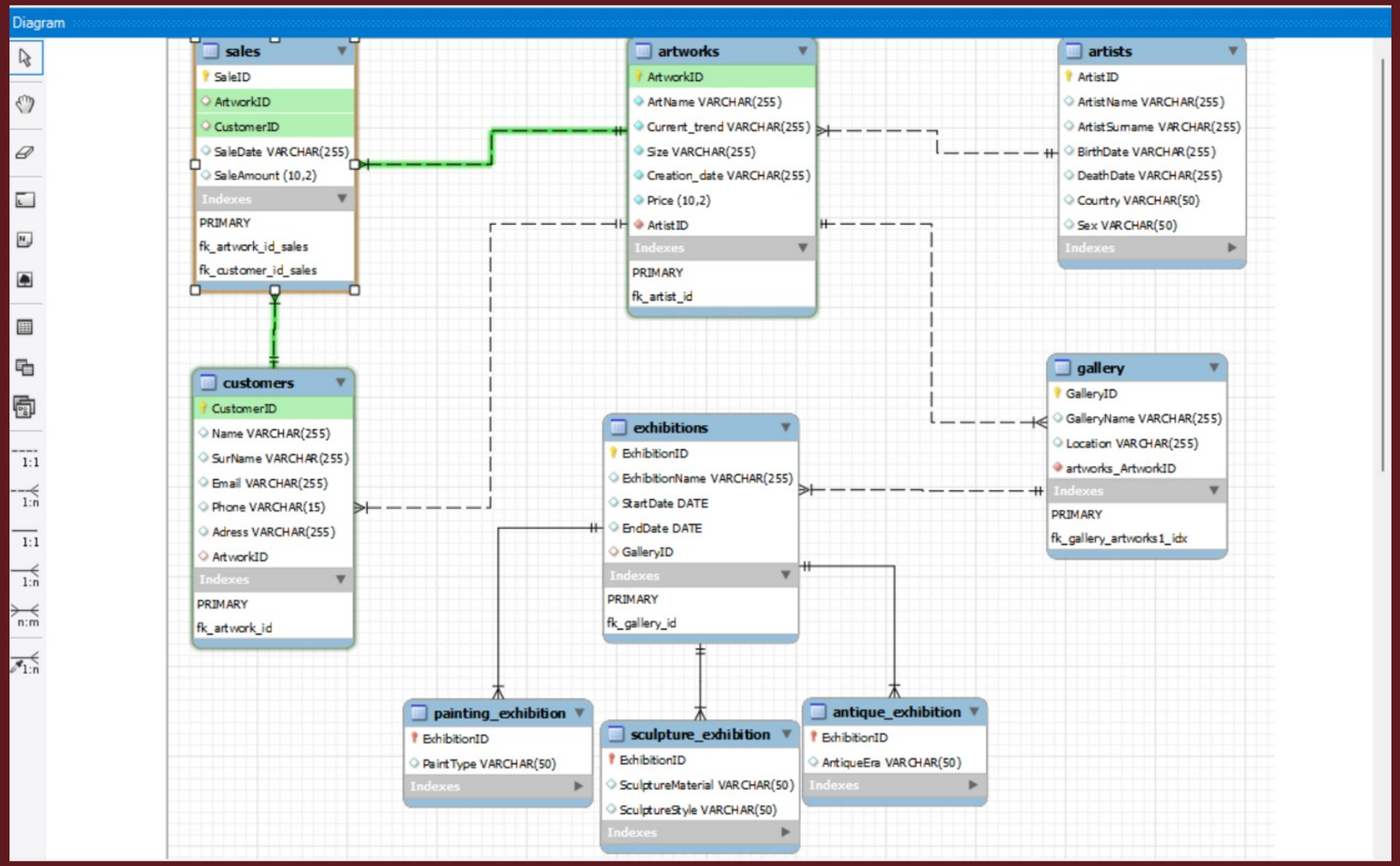


Diagram
sales
SaleID
ArtworkID
CustomerID
SaleDate VARCHAR(255)
SaleAmount (10,2)
Indexes
PRIMARY
fk_artwork_id_sales
fk_customer_id_sales
artworks
ArtworkID
ArtName VARCHAR(255)
Current_trend VARCHAR(255)
Size VARCHAR(255)
Creation_date VARCHAR(255)
Price (10,2)
ArtistID
Indexes
PRIMARY
fk_artist_id
artists
ArtistID
ArtistName VARCHAR(255)
ArtistSurname VARCHAR(255)
BirthDate VARCHAR(255)
DeathDate VARCHAR(255)
Country VARCHAR(50)
Sex VARCHAR(50)
Indexes
customers
CustomerID
Name VARCHAR(255)
SurName VARCHAR(255)
Email VARCHAR(255)
Phone VARCHAR(15)
Adress VARCHAR(255)
ArtworkID
Indexes
PRIMARY
fk_artwork_id
gallery
GalleryID
GalleryName VARCHAR(255)
Location VARCHAR(255)
artworks_ArtworkID
Indexes
PRIMARY
fk_gallery_artworks1_idx
exhibitions
ExhibitionID
ExhibitionName VARCHAR(255)
StartDate DATE
EndDate DATE
GalleryID
Indexes
PRIMARY
fk_gallery_id
painting_exhibition
ExhibitionID
PaintType VARCHAR(50)
Indexes
sculpture_exhibition
ExhibitionID
SculptureMaterial VARCHAR(50)
SculptureStyle VARCHAR(50)
Indexes
antique_exhibition
ExhibitionID
AntiqueEra VARCHAR(50)
Indexes
1:1
1:n
1:1
1:n
n:m
1:n

SQL DIAGRAM

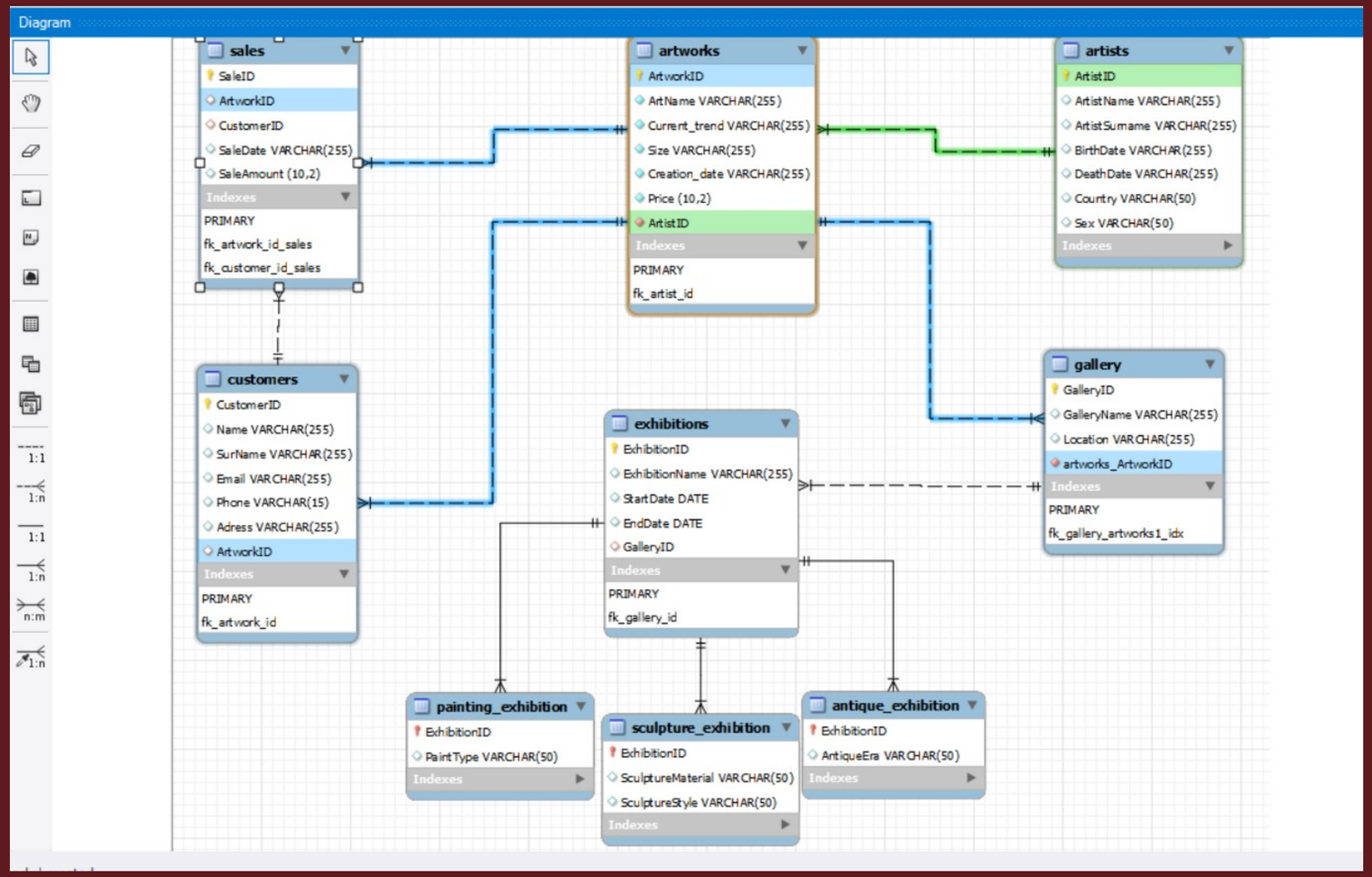
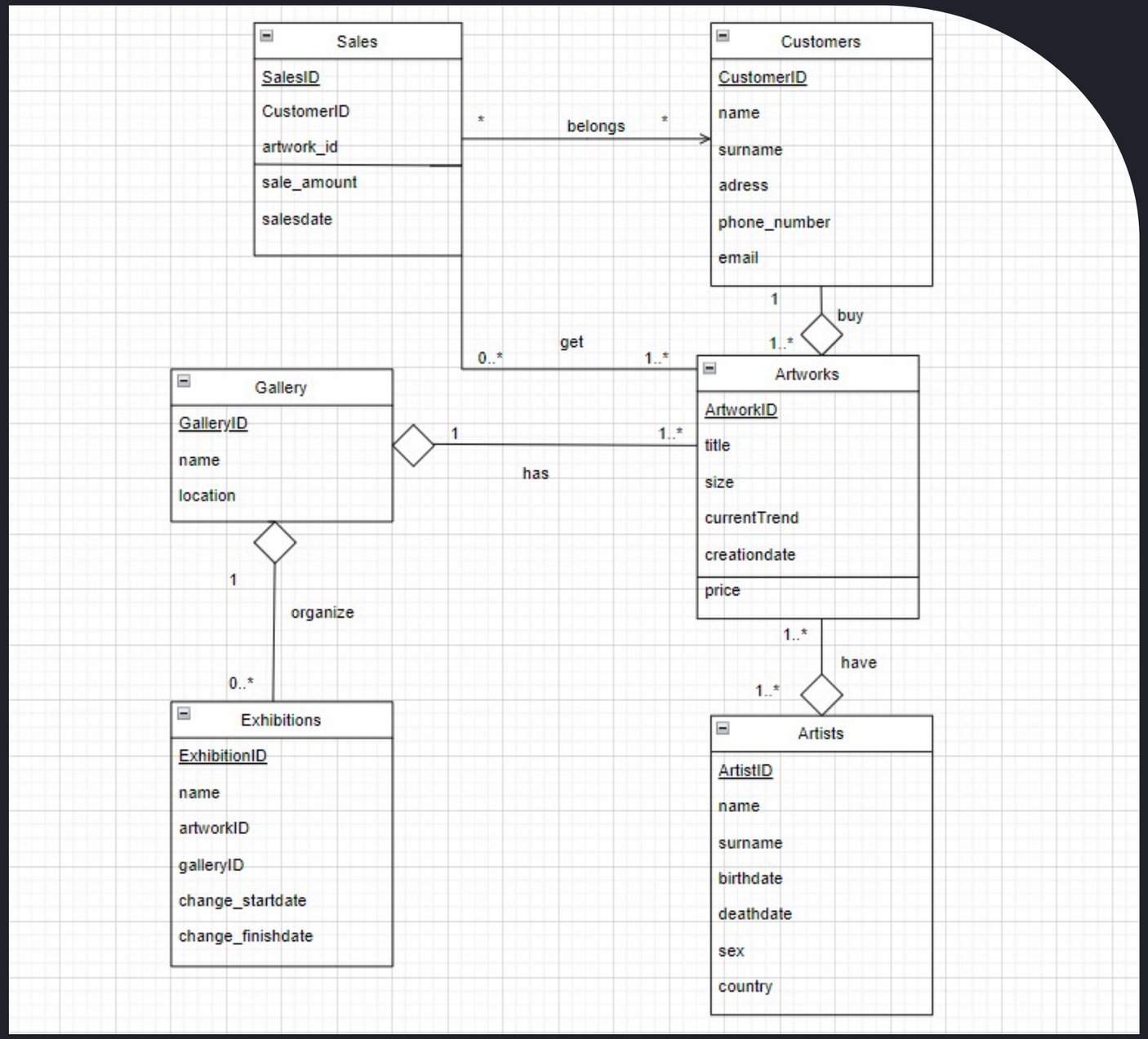


Diagram
sales
SaleID
ArtworkID
CustomerID
SaleDate VARCHAR(255)
SaleAmount (10,2)
Indexes
PRIMARY
fk_artwork_id_sales
fk_customer_id_sales
artworks
ArtworkID
ArtName VARCHAR(255)
Current_trend VARCHAR(255)
Size VARCHAR(255)
Creation_date VARCHAR(255)
Price (10,2)
ArtistID
Indexes
PRIMARY
fk_artist_id
artists
ArtistID
ArtistName VARCHAR(255)
ArtistSurname VARCHAR(255)
BirthDate VARCHAR(255)
DeathDate VARCHAR(255)
Country VARCHAR(50)
Sex VARCHAR(50)
Indexes
customers
CustomerID
Name VARCHAR(255)
SurName VARCHAR(255)
Email VARCHAR(255)
Phone VARCHAR(15)
Adress VARCHAR(255)
ArtworkID
Indexes
PRIMARY
fk_artwork_id
gallery
GalleryID
GalleryName VARCHAR(255)
Location VARCHAR(255)
artworks_ArtworkID
Indexes
PRIMARY
fk_gallery_artworks1_idx
exhibitions
ExhibitionID
ExhibitionName VARCHAR(255)
StartDate DATE
EndDate DATE
GalleryID
Indexes
PRIMARY
fk_gallery_id
painting_exhibition
ExhibitionID
PaintType VARCHAR(50)
Indexes
sculpture_exhibition
ExhibitionID
SculptureMaterial VARCHAR(50)
SculptureStyle VARCHAR(50)
Indexes
antique_exhibition
ExhibitionID
AntiqueEra VARCHAR(50)
Indexes
1:1
1:n
1:1
1:n
n:m
1:n

SQL DIAGRAM

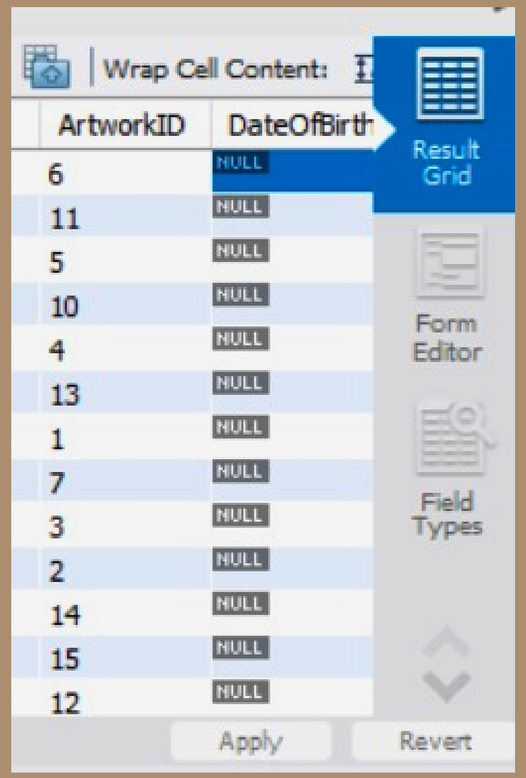


UML CLASS DIAGRAMS

DATABASE DESIGN IN MYSQL

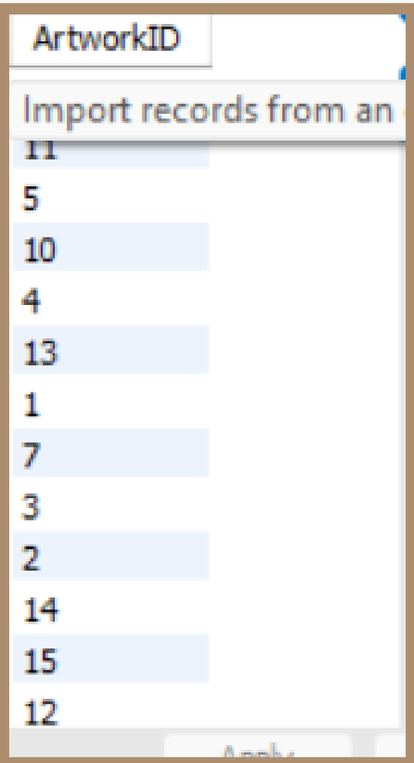
ALTER TABLE

```
SELECT * FROM db_artgallery.customers;
ALTER TABLE customers
ADD DateOfBirth DATE;
```



DROP COLUMN

```
SELECT * FROM db_artgallery.customers;
ALTER TABLE customers
DROP COLUMN DateOfBirthS;
```



ORDER BY

```
SELECT * FROM Artists
ORDER BY BirthDate DESC;
```

Result Grid

ArtistID	ArtistName	ArtistSurname	BirthDate	DeathDate	Country	Sex
4	Amedeo	Modigliani	1984	1920	Italian	M
9	Frida	Kahlo	1907	1954	Mexico	F
14	Juan	Gris	1887	1927	Spain	M
11	Hans	Hofmann	1880	1966	German	M
2	Edward	Munch	1863	1944	Norwegian	M
12	Isaac	Levitan	1860	1900	Russian	M
13	Ilya	Repin	1844	1930	Russian	F
3	Anton Von	Werner	1843	1915	Germany	M
1	Claude	Monet	1840-05-02	1926-06-04	French	M
8	Edward Mitchell	Bannister	1828	1901	American	M
10	Gustave	Courbet	1819	1877	French	M
7	Edward	Hicks	1780	1849	American	M
6	Charles	Le Brun	1619	1960	French	M

```
SELECT * FROM Artists
ORDER BY ArtistName DESC, ArtistSurname DESC;
```

Result Grid

ArtistID	ArtistName	ArtistSurname	BirthDate	DeathDate	Country	Sex
15	Michelangelo	Buonarroti	1475	1564	Italy	M
14	Juan	Gris	1887	1927	Spain	M
12	Isaac	Levitan	1860	1900	Russian	M
13	Ilya	Repin	1844	1930	Russian	F
11	Hans	Hofmann	1880	1966	German	M
10	Gustave	Courbet	1819	1877	French	M
9	Frida	Kahlo	1907	1954	Mexico	F
8	Edward Mitchell	Bannister	1828	1901	American	M
2	Edward	Munch	1863	1944	Norwegian	M
7	Edward	Hicks	1780	1849	American	M
1	Claude	Monet	1840-05...	1926-06-04	French	M
6	Charles	Le Brun	1619	1960	French	M
5	Antonio da	Correggio	1489	1534	Italian	M

DATABASE DESIGN IN MYSQL

NESTED QUERİES

```sql
SELECT * FROM db_artgallery.artists;
SELECT
    A.ArtistName,
    A.ArtistSurname,
    AW.ArtName,
    AW.Price,
    C.Name AS CustomerName,
    C.Email
FROM
    artists A
        JOIN
    artworks AW ON A.ArtistID = AW.ArtistID
        JOIN
    sales S ON AW.ArtworkID = S.ArtworkID
        JOIN
    customers C ON S.CustomerID = C.CustomerID;
```

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

ArtistName	ArtistSurname	ArtName	Price	CustomerName	Email
Amedeo	Modigliani	Woman with a Red Necklace	320.00	Edward	edwardcullen@gmail.com
Frida	Kahlo	The Two Fridas	15000.00	Akgun	akgungokalp@gmail.com
Anton Von	Werner	Proclamation of the German Empire	300.00	Dylan	dylanobrien@hotmail.com
Edward	Hicks	The Peaceable Kingdom	8000.00	Dylan	dylanobrien@hotmail.com
Edward Mitchell	Bannister	Under the Oaks, Rhode Island	12000.00	Metin	metinakdulger@gmail.com
Edward	Munch	The Scream	1893.00	Melek	meljun3467@gmail.com
Hans	Hofmann	Composition	8500.00	Elcin	elcinsangu@gmail.com
Edward	Munch	The Vampire	1893.00	Harry	harryninhedwigi@gmail.com
Claude	Monet	Water Lilies	1897.00	Sophia	sophia.moore@example.com
Isaac	Levitan	Above Eternal Peace	7000.00	Beyzanur	beyza.mavi61@gmail.com
Isaac	Levitan	Reply of the Zaporozhian Cossacks	9000.00	Theo	uyumsuz@gmail.com
Gustave	Courbet	The Artist's Studio	9500.00	Noah	noah.white@example.com
Hans	Hofmann	Composition	8500.00	Duygu	cetinduyguhilal.com

DATABASE DESIGN IN MYSQL

```sql
SELECT * FROM db_artgallery.customers;
SELECT
    c.CustomerID,
    c.Name,
    c.SurName,
    COUNT(s.SaleID) AS TotalSalesAmount
FROM
    customers c
JOIN
    sales s ON c.CustomerID = s.CustomerID
GROUP BY
    c.CustomerID, c.Name, c.SurName;
```

CustomerID	Name	SurName	TotalSalesAmount
1	Edward	Cullen	1
2	Akgun	Taskın	1
3	Dylan	OBrien	2
4	Metin	Akdulger	1
5	Melek	Uzun	1
6	Elcin	Sangu	1
9	Harry	Potter	1
10	Sophia	Moore	1
11	Beyzanur	Kanbay	1
12	Theo	James	1
13	Noah	White	1
14	Duygu	Cetin	1

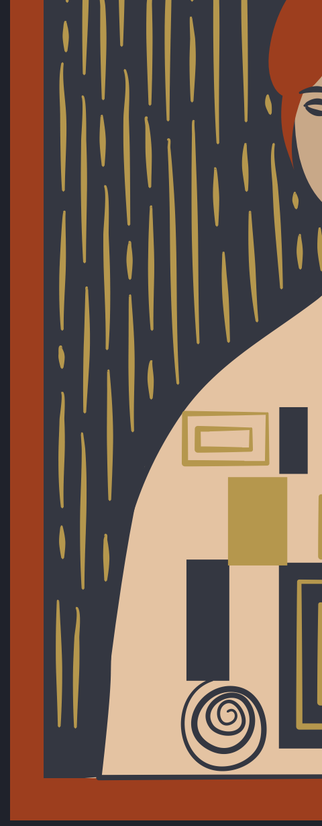
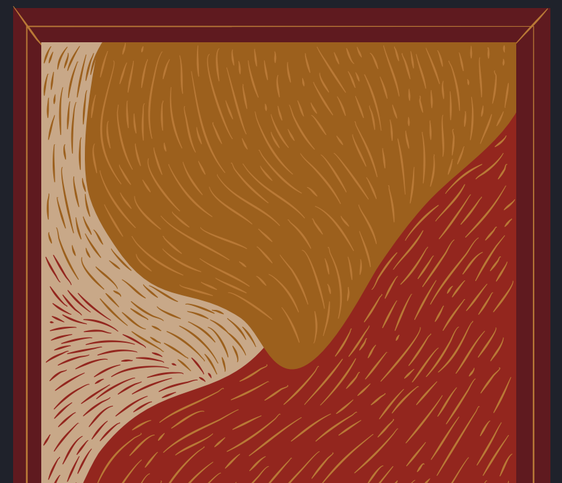
DATABASE DESIGN IN MYSQL

GROUP BY

```sql
SELECT * FROM db_artgallery.artworks;
SELECT
    a.ArtworkID,
    a.ArtName,
    a.Current_trend,
    SUM(s.SaleAmount) AS TotalSalesAmount
FROM
    artworks a
JOIN
    sales s ON a.ArtworkID = s.ArtworkID
GROUP BY
    a.ArtworkID, a.ArtName, a.Current_trend;
```

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

ArtworkID	ArtName	Current_trend	TotalSalesAmount
6	Woman with a Red Necklace	Impression	27.00
11	The Two Fridas	Surrealist	100.00
5	Proclamation of the German Empire	Impression	100.00
9	The Peaceable Kingdom	Realist	75.00
10	Under the Oaks, Rhode Island	Impressionist	25.00
4	The Scream	Sembolizm	60.00
13	Composition	Abstract	160.00
3	The Vampire	Sembolizm	70.00
2	Water Lilies	Impression	40.00
14	Above Eternal Peace	Impressionist	90.00
15	Reply of the Zaporozhian Cossacks	Realist	110.00
12	The Artist's Studio	Realist	50.00



THANK YOU FOR LISTENING!