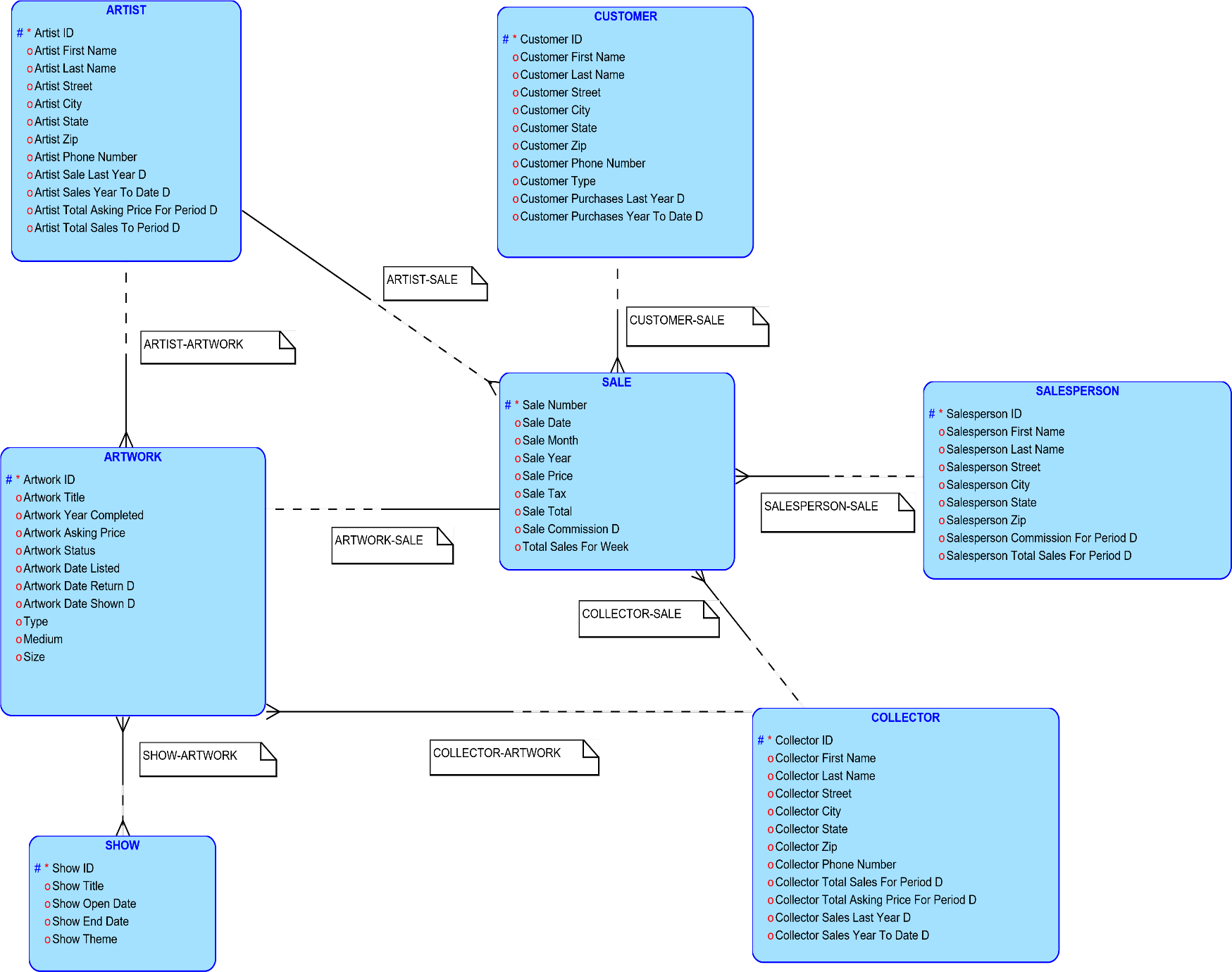
|  |  |
| --- | --- |
| THe ART Gallery TRACKING SYSTEM Consulting PrOJECT REPORT  December 4, 2019 | BYGB-7973-001: Database Management  Dr. W. “RP” Raghupathi, MBA, Ph.D, LL.M  Professor  HAWKGIRL  Annuo Qian (Alice)  Haoyan Ou (Amy)  Bao Ngoc Dinh (Jane)  Tram Ngoc Le (Jennie) |

**Art Gallery Tracking System Revised Entity-Relationship Model Diagram**

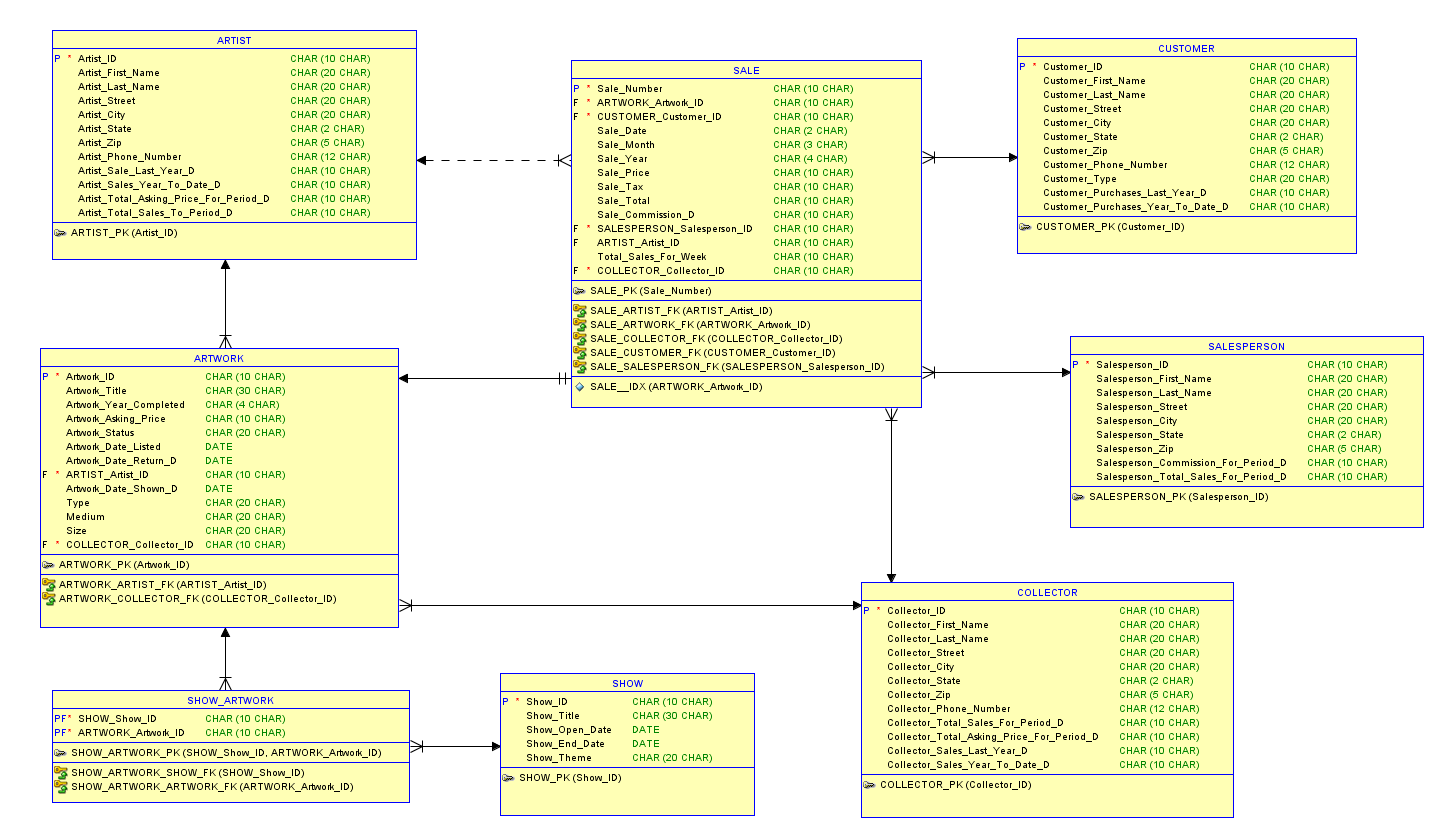


**Entity-Relationship Model Data Dictionary for Art Gallery Tracking System**

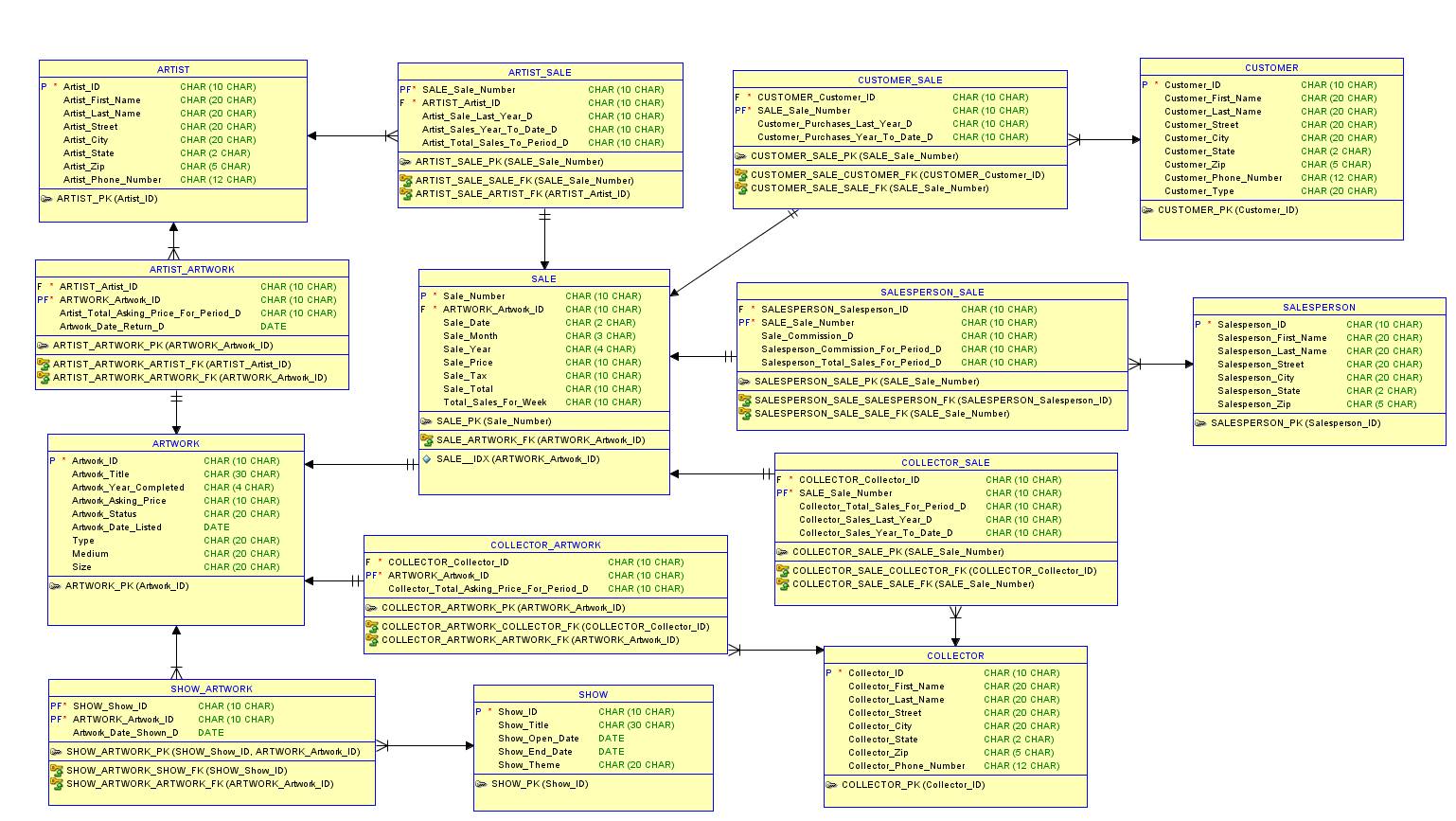
|  |  |  |  |
| --- | --- | --- | --- |
| **Entity** | **Attributes** | **Unique Identifier** | **Data Type** |
| Artist | Artist City |  | CHAR(20) |
|  | Artist First Name |  | CHAR(20) |
|  | Artist ID | Artist ID | CHAR(10) |
|  | Artist Last Name |  | CHAR(20) |
|  | Artist Phone Number |  | CHAR(12) |
|  | Artist Sales Last Year D |  | CHAR(10) |
|  | Artist Sales Year To Date D |  | CHAR(10) |
|  | Artist State |  | CHAR(2) |
|  | Artist Street |  | CHAR(20) |
|  | Artist Total Asking Price For Period D |  | CHAR(10) |
|  | Artist Total Sales To Period D |  | CHAR(10) |
|  | Artist Zip |  | CHAR(5) |
| Artwork | Artwork Asking Price |  | CHAR(10) |
|  | Artwork Date Listed |  | DATE |
|  | Artwork Date Returned D |  | DATE |
|  | Artwork Date Shown D |  | DATE |
|  | Artwork ID | Artwork ID | CHAR(10) |
|  | Artwork Status |  | CHAR(20) |
|  | Artwork Title |  | CHAR(30) |
|  | Artwork Year Completed |  | CHAR(4) |
|  | Medium |  | CHAR(20) |
|  | Size |  | CHAR(20) |
|  | Type |  | CHAR(20) |
| Collector | Collector City |  | CHAR(20) |
|  | Collector First Name |  | CHAR(20) |
|  | Collector ID | Collector ID | CHAR(10) |
|  | Collector Last Name |  | CHAR(20) |
|  | Collector Phone Number |  | CHAR(12) |
|  | Collector Sales Last Year D |  | CHAR(10) |
|  | Collector Sales Year To Date D |  | CHAR(10) |
|  | Collector State |  | CHAR(2) |
|  | Collector Street |  | CHAR(20) |
|  | Collector Total Asking Price For Period D |  | CHAR(10) |
|  | Collector Total Sales To Period D |  | CHAR(10) |
|  | Collector Zip |  | CHAR(5) |
| Customer | Customer City |  | CHAR(20) |
|  | Customer First Name |  | CHAR(20) |
|  | Customer ID | Customer ID | CHAR(10) |
|  | Customer Last Name |  | CHAR(20) |
|  | Customer Phone Number |  | CHAR(12) |
|  | Customer Purchases Last Year D |  | CHAR(10) |
|  | Customer Purchases Year To Date D |  | CHAR(10) |
|  | Customer State |  | CHAR(2) |
|  | Customer Street |  | CHAR(20) |
|  | Customer Type |  | CHAR(20) |
|  | Customer Zip |  | CHAR(5) |
| Sale | Sale Commission D |  | CHAR(10) |
|  | Sale Date |  | CHAR(2) |
|  | Sale Month |  | CHAR(3) |
|  | Sale Number | Sale Number | CHAR(10) |
|  | Sale Price |  | CHAR(10) |
|  | Sale Tax |  | CHAR(10) |
|  | Sale Total |  | CHAR(10) |
|  | Sale Year |  | CHAR(4) |
|  | Total Sales For Week |  | CHAR(10) |
| Salesperson | Salesperson City |  | CHAR(20) |
|  | Salesperson commission For Period D |  | CHAR(10) |
|  | Salesperson First Name |  | CHAR(20) |
|  | Salesperson ID | Salesperson ID | CHAR(10) |
|  | Salesperson Last Name |  | CHAR(20) |
|  | Salesperson State |  | CHAR(2) |
|  | Salesperson Street |  | CHAR(20) |
|  | Salesperson Total Sales For Period D |  | CHAR(10) |
|  | Salesperson Zip |  | CHAR(5) |
| Show | Show End Date |  | DATE |
|  | Show ID | Show ID | CHAR(10) |
|  | Show Open Date |  | DATE |
|  | Show Theme |  | CHAR(20) |
|  | Show Title |  | CHAR(30) |

**Assumptions for Art Gallery Tracking System’s Revised Entity-Relationship Model**

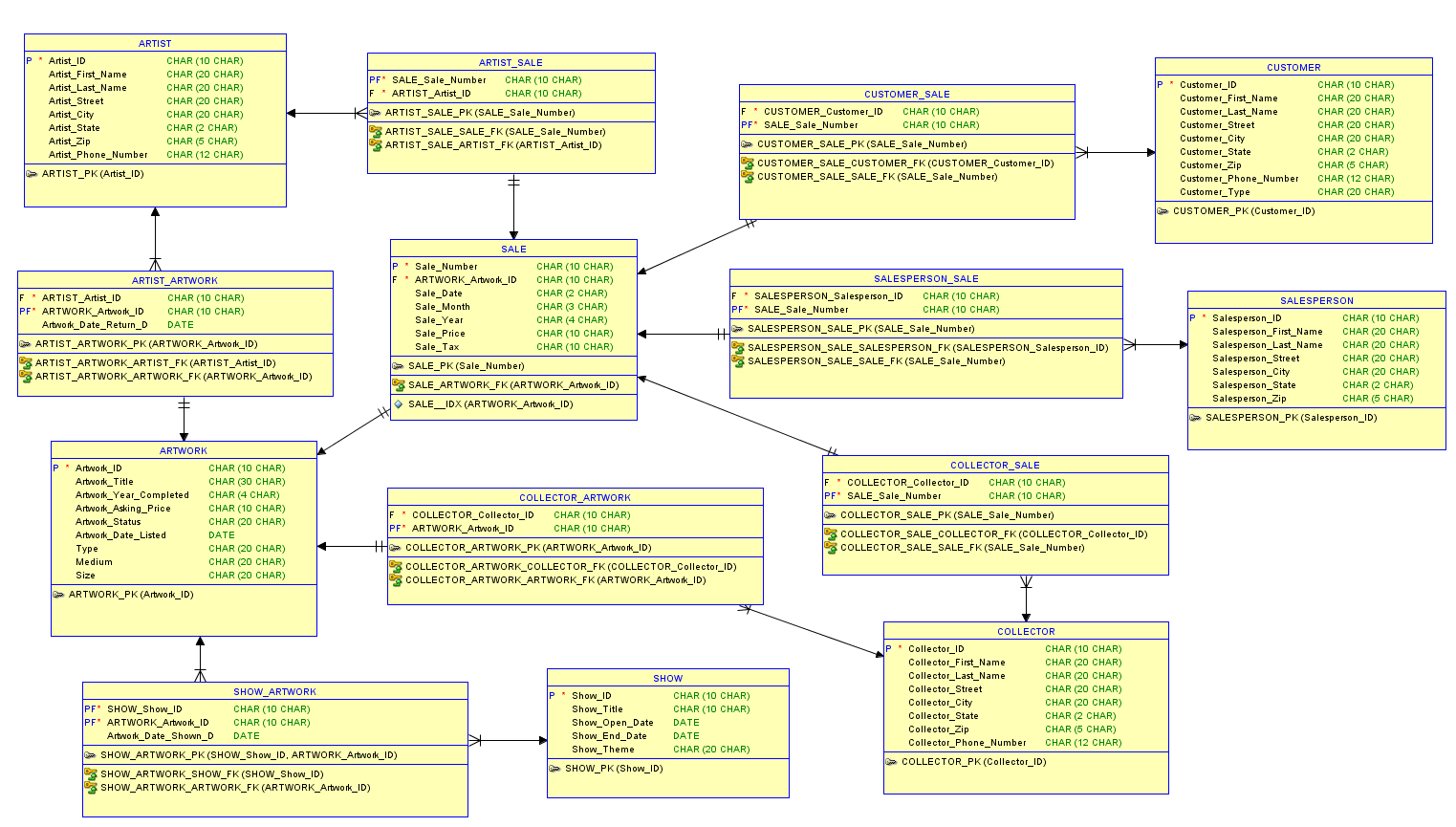
* Artist Sale Last Year D is a descriptive attribute between SALE and ARTIST.
* Artist Sales Year To Date D is a descriptive attribute between SALE and ARTIST.
* Artist Total Asking Price for Period D is a descriptive attribute between ARTWORK and ARTIST.
* Artist Total Sales To Period D is a descriptive attribute between SALE and ARTIST.
* Artwork Date Return D is a descriptive attribute between ARTWORK and SHOW.
* Artwork Date Shown D is a descriptive attribute between ARTWORK and SHOW.
* Collector Total Sales For Period D is the descriptive attribute between SALE and COLLECTOR
* Collector Total Asking Price For Period D is the descriptive attribute between ARTWORK and COLLECTOR
* Collector Sales Last Year D is the descriptive attribute between SALE and COLLECTOR
* Collector Sales Year To Date D is the descriptive attribute between SALE and COLLECTOR
* Customer Type can be a customer who has made a purchase or a potential customer who came to a show and filled out potential customer form.
* Customer Purchases Last Year D is the descriptive attribute between SALE and CUSTOMER
* Customer Purchases Year to Date D is the descriptive attribute between SALE and CUSTOMER
* Salesperson Commission For Period D is the descriptive attribute between SALE and SALES PERSON
* Salesperson Total Sales For Period D is the descriptive attribute between SALE and SALESPERSON
* Sale Commission D is the descriptive attribute between SALE and SALESPERSON.

**Art Gallery Tracking System Default Relational Model**

**Art Gallery Tracking System Revised Relational Model**

****

**Art Gallery Tracking System Normalized Relational Model**

****

**Assumptions for Art Gallery Tracking System’s Normalized Physical Data Model**

**1NF:**

* Each artist, each customer, each salesperson, and each collector only have one known address in the system, including information about street, city, state, zip. Therefore, having the street, city, state, and zip for each entity as non-key attributes is not in violation of the 1NF.
* Each artist, each customer, and each collector only have one known phone number in the system. Therefore, having phone number for each entity as a non-key attribute is not in violation of the 1NF.
* An artwork is only listed once. Therefore, having artwork date listed as a non-key attribute is not in violation of the 1NF.
* An artwork only has one type, one medium, and one size. Therefore, having type, medium, and size as non-key attributes is not in violation of the 1 NF.
* Each show only has one theme and one title. Therefore, having show theme and show title as non-key attributes is not in violation of normal form.

**3NF calculations:**

**Artist:**

* Artist Sale Last Year D is a nested calculation = Sum{Sale Total for the respective artist last year}
* Artist Sales Year To Date D is a nested calculation = Sum{Sale Total for the respective artist year to date}
* Artist Total Asking Price for Period D = Sum{Asking Price for paintings of the respective artist in a certain period}
* Artist Total Sales To Period D is a nested calculation=Sum{Sale Total for the respective artist in a certain period}

**Sale:**

* Sale Commission is a percentage from Sale Price
* Sale Total = Sum{Sale Price, Sale Tax}
* Total Sales for Week is a nested calculated field (Sale Total): Total Sales for Week = Sum{Sale Total} for that week

**Customer:**

* Customer Purchases Last Year D is a nested calculated field (Sale Total): Customer Purchases Last Year D = Sum{Sale Total} that one customer made over last year.
* Customer Purchases Year To Date D is a nested calculated field(Sale Total):Customer Purchases Year To Date = Sum{Sale Total} that one customer made from year to date.

**Salesperson:**

* Salesperson Commision For Period D is a nested calculated field (Sale Commision D): Salesperson Commission For Period D = Sum{Sale Commission D} for the period.
* Salesperson Total Sales For Period D is a nested calculated field (Sale Total): Salesperson Total Sales for Period D   Sum {Sale Total} that the sales person made for the Period.

**Collector:**

* Collector Total Sales For Period D is a nested calculated field (Sale Total): Collector Total Sales For Period D = Sum{Sale Total} that the collector made for the period.
* Collector Total Asking Price For Period D = Sum{Artwork Asking Price} for an artwork that a collector have.
* Collector Sales Last Year D is a nested calculated field (Sale Total): Collector Sales Last Year D = Sum{Sale Total} that a collector made for last year.
* Collector Sales Year To Date D is a nested calculated field (Sale Total): Collector Sales Year To Date D =Sum{Sales Total} that a collector made year to date.

**DDL Script for Art Gallery Tracking System**

-- Generated by Oracle SQL Developer Data Modeler 19.2.0.182.1216

-- at: 2019-11-21 17:33:14 EST

-- site: Oracle Database 11g

-- type: Oracle Database 11g

CREATE TABLE artist (

artist\_id CHAR(10 CHAR) NOT NULL,

artist\_first\_name CHAR(20 CHAR),

artist\_last\_name CHAR(20 CHAR),

artist\_street CHAR(20 CHAR),

artist\_city CHAR(20 CHAR),

artist\_state CHAR(2 CHAR),

artist\_zip CHAR(5 CHAR),

artist\_phone\_number CHAR(12 CHAR)

);

ALTER TABLE artist ADD CONSTRAINT artist\_pk PRIMARY KEY ( artist\_id );

CREATE TABLE artist\_artwork (

artist\_artist\_id CHAR(10 CHAR) NOT NULL,

artwork\_artwork\_id CHAR(10 CHAR) NOT NULL,

artwork\_date\_return\_d DATE

);

ALTER TABLE artist\_artwork ADD CONSTRAINT artist\_artwork\_pk PRIMARY KEY ( artwork\_artwork\_id );

CREATE TABLE artist\_sale (

sale\_sale\_number CHAR(10 CHAR) NOT NULL,

artist\_artist\_id CHAR(10 CHAR) NOT NULL

);

ALTER TABLE artist\_sale ADD CONSTRAINT artist\_sale\_pk PRIMARY KEY ( sale\_sale\_number );

CREATE TABLE artwork (

artwork\_id CHAR(10 CHAR) NOT NULL,

artwork\_title CHAR(30 CHAR),

artwork\_year\_completed CHAR(4),

artwork\_asking\_price CHAR(10 CHAR),

artwork\_status CHAR(20 CHAR),

artwork\_date\_listed DATE,

type CHAR(20 CHAR),

medium CHAR(20 CHAR),

"Size" CHAR(20 CHAR)

);

ALTER TABLE artwork ADD CONSTRAINT artwork\_pk PRIMARY KEY ( artwork\_id );

CREATE TABLE collector (

collector\_id CHAR(10 CHAR) NOT NULL,

collector\_first\_name CHAR(20 CHAR),

collector\_last\_name CHAR(20 CHAR),

collector\_street CHAR(20 CHAR),

collector\_city CHAR(20 CHAR),

collector\_state CHAR(2 CHAR),

collector\_zip CHAR(5 CHAR),

collector\_phone\_number CHAR(12 CHAR)

);

ALTER TABLE collector ADD CONSTRAINT collector\_pk PRIMARY KEY ( collector\_id );

CREATE TABLE collector\_artwork (

collector\_collector\_id CHAR(10 CHAR) NOT NULL,

artwork\_artwork\_id CHAR(10 CHAR) NOT NULL

);

ALTER TABLE collector\_artwork ADD CONSTRAINT collector\_artwork\_pk PRIMARY KEY ( artwork\_artwork\_id );

CREATE TABLE collector\_sale (

collector\_collector\_id CHAR(10 CHAR) NOT NULL,

sale\_sale\_number CHAR(10 CHAR) NOT NULL

);

ALTER TABLE collector\_sale ADD CONSTRAINT collector\_sale\_pk PRIMARY KEY ( sale\_sale\_number );

CREATE TABLE customer (

customer\_id CHAR(10 CHAR) NOT NULL,

customer\_first\_name CHAR(20 CHAR),

customer\_last\_name CHAR(20 CHAR),

customer\_street CHAR(20 CHAR),

customer\_city CHAR(20 CHAR),

customer\_state CHAR(2 CHAR),

customer\_zip CHAR(5 CHAR),

customer\_phone\_number CHAR(12 CHAR),

customer\_type CHAR(20 CHAR)

);

ALTER TABLE customer ADD CONSTRAINT customer\_pk PRIMARY KEY ( customer\_id );

CREATE TABLE customer\_sale (

customer\_customer\_id CHAR(10 CHAR) NOT NULL,

sale\_sale\_number CHAR(10 CHAR) NOT NULL

);

ALTER TABLE customer\_sale ADD CONSTRAINT customer\_sale\_pk PRIMARY KEY ( sale\_sale\_number );

CREATE TABLE sale (

sale\_number CHAR(10 CHAR) NOT NULL,

artwork\_artwork\_id CHAR(10 CHAR) NOT NULL,

sale\_date CHAR(2 CHAR),

sale\_month CHAR(3 CHAR),

sale\_year CHAR(4 CHAR),

sale\_price FLOAT(2),

sale\_tax FLOAT(2)

);

CREATE UNIQUE INDEX sale\_\_idx ON

sale (

artwork\_artwork\_id

ASC );

ALTER TABLE sale ADD CONSTRAINT sale\_pk PRIMARY KEY ( sale\_number );

CREATE TABLE salesperson (

salesperson\_id CHAR(10 CHAR) NOT NULL,

salesperson\_first\_name CHAR(20 CHAR),

salesperson\_last\_name CHAR(20 CHAR),

salesperson\_street CHAR(20 CHAR),

salesperson\_city CHAR(20 CHAR),

salesperson\_state CHAR(2 CHAR),

salesperson\_zip CHAR(5 CHAR)

);

ALTER TABLE salesperson ADD CONSTRAINT salesperson\_pk PRIMARY KEY ( salesperson\_id );

CREATE TABLE salesperson\_sale (

salesperson\_salesperson\_id CHAR(10 CHAR) NOT NULL,

sale\_sale\_number CHAR(10 CHAR) NOT NULL

);

ALTER TABLE salesperson\_sale ADD CONSTRAINT salesperson\_sale\_pk PRIMARY KEY ( sale\_sale\_number );

CREATE TABLE show (

show\_id CHAR(10 CHAR) NOT NULL,

show\_title CHAR(10 CHAR),

show\_open\_date DATE,

show\_end\_date DATE,

show\_theme CHAR(20 CHAR)

);

ALTER TABLE show ADD CONSTRAINT show\_pk PRIMARY KEY ( show\_id );

CREATE TABLE show\_artwork (

show\_show\_id CHAR(10 CHAR) NOT NULL,

artwork\_artwork\_id CHAR(10 CHAR) NOT NULL,

artwork\_date\_shown\_d DATE

);

ALTER TABLE show\_artwork

ADD CONSTRAINT show\_artwork\_pk PRIMARY KEY ( show\_show\_id,

artwork\_artwork\_id);

ALTER TABLE artist\_artwork

ADD CONSTRAINT artist\_artwork\_artist\_fk FOREIGN KEY ( artist\_artist\_id )

REFERENCES artist ( artist\_id );

ALTER TABLE artist\_artwork

ADD CONSTRAINT artist\_artwork\_artwork\_fk FOREIGN KEY ( artwork\_artwork\_id )

REFERENCES artwork ( artwork\_id );

ALTER TABLE artist\_sale

ADD CONSTRAINT artist\_sale\_artist\_fk FOREIGN KEY ( artist\_artist\_id )

REFERENCES artist ( artist\_id );

ALTER TABLE artist\_sale

ADD CONSTRAINT artist\_sale\_sale\_fk FOREIGN KEY ( sale\_sale\_number )

REFERENCES sale ( sale\_number );

ALTER TABLE collector\_artwork

ADD CONSTRAINT collector\_artwork\_artwork\_fk FOREIGN KEY ( artwork\_artwork\_id )

REFERENCES artwork ( artwork\_id );

ALTER TABLE collector\_artwork

ADD CONSTRAINT collector\_artwork\_collector\_fk FOREIGN KEY ( collector\_collector\_id )

REFERENCES collector ( collector\_id );

ALTER TABLE collector\_sale

ADD CONSTRAINT collector\_sale\_collector\_fk FOREIGN KEY ( collector\_collector\_id )

REFERENCES collector ( collector\_id )

ALTER TABLE collector\_sale

ADD CONSTRAINT collector\_sale\_sale\_fk FOREIGN KEY ( sale\_sale\_number )

REFERENCES sale ( sale\_number );

ALTER TABLE customer\_sale

ADD CONSTRAINT customer\_sale\_customer\_fk FOREIGN KEY ( customer\_customer\_id )

REFERENCES customer ( customer\_id );

ALTER TABLE customer\_sale

ADD CONSTRAINT customer\_sale\_sale\_fk FOREIGN KEY ( sale\_sale\_number )

REFERENCES sale ( sale\_number );

ALTER TABLE sale

ADD CONSTRAINT sale\_artwork\_fk FOREIGN KEY ( artwork\_artwork\_id )

REFERENCES artwork ( artwork\_id );

ALTER TABLE salesperson\_sale

ADD CONSTRAINT salesperson\_sale\_sale\_fk FOREIGN KEY ( sale\_sale\_number )

REFERENCES sale ( sale\_number );

-- ERROR: FK name length exceeds maximum allowed length(30)

ALTER TABLE salesperson\_sale

ADD CONSTRAINT salesperson\_sale\_salesperson\_fk FOREIGN KEY ( salesperson\_salesperson\_id )

REFERENCES salesperson ( salesperson\_id );

ALTER TABLE show\_artwork

ADD CONSTRAINT show\_artwork\_artwork\_fk FOREIGN KEY ( artwork\_artwork\_id )

REFERENCES artwork ( artwork\_id );

ALTER TABLE show\_artwork

ADD CONSTRAINT show\_artwork\_show\_fk FOREIGN KEY ( show\_show\_id )

REFERENCES show ( show\_id );

-- Oracle SQL Developer Data Modeler Summary Report:

--

-- CREATE TABLE 14

-- CREATE INDEX 1

-- ALTER TABLE 29

-- CREATE VIEW 0

-- ALTER VIEW 0

-- CREATE PACKAGE 0

-- CREATE PACKAGE BODY 0

-- CREATE PROCEDURE 0

-- CREATE FUNCTION 0

-- CREATE TRIGGER 0

-- ALTER TRIGGER 0

-- CREATE COLLECTION TYPE 0

-- CREATE STRUCTURED TYPE 0

-- CREATE STRUCTURED TYPE BODY 0

-- CREATE CLUSTER 0

-- CREATE CONTEXT 0

-- CREATE DATABASE 0

-- CREATE DIMENSION 0

-- CREATE DIRECTORY 0

-- CREATE DISK GROUP 0

-- CREATE ROLE 0

-- CREATE ROLLBACK SEGMENT 0

-- CREATE SEQUENCE 0

-- CREATE MATERIALIZED VIEW 0

-- CREATE MATERIALIZED VIEW LOG 0

-- CREATE SYNONYM 0

-- CREATE TABLESPACE 0

-- CREATE USER 0

--

-- DROP TABLESPACE 0

-- DROP DATABASE 0

--

-- REDACTION POLICY 0

--

-- ORDS DROP SCHEMA 0

-- ORDS ENABLE SCHEMA 0

-- ORDS ENABLE OBJECT 0

--

-- ERRORS 2

-- WARNINGS 0

**Table Structure for Art Gallery Tracking System**

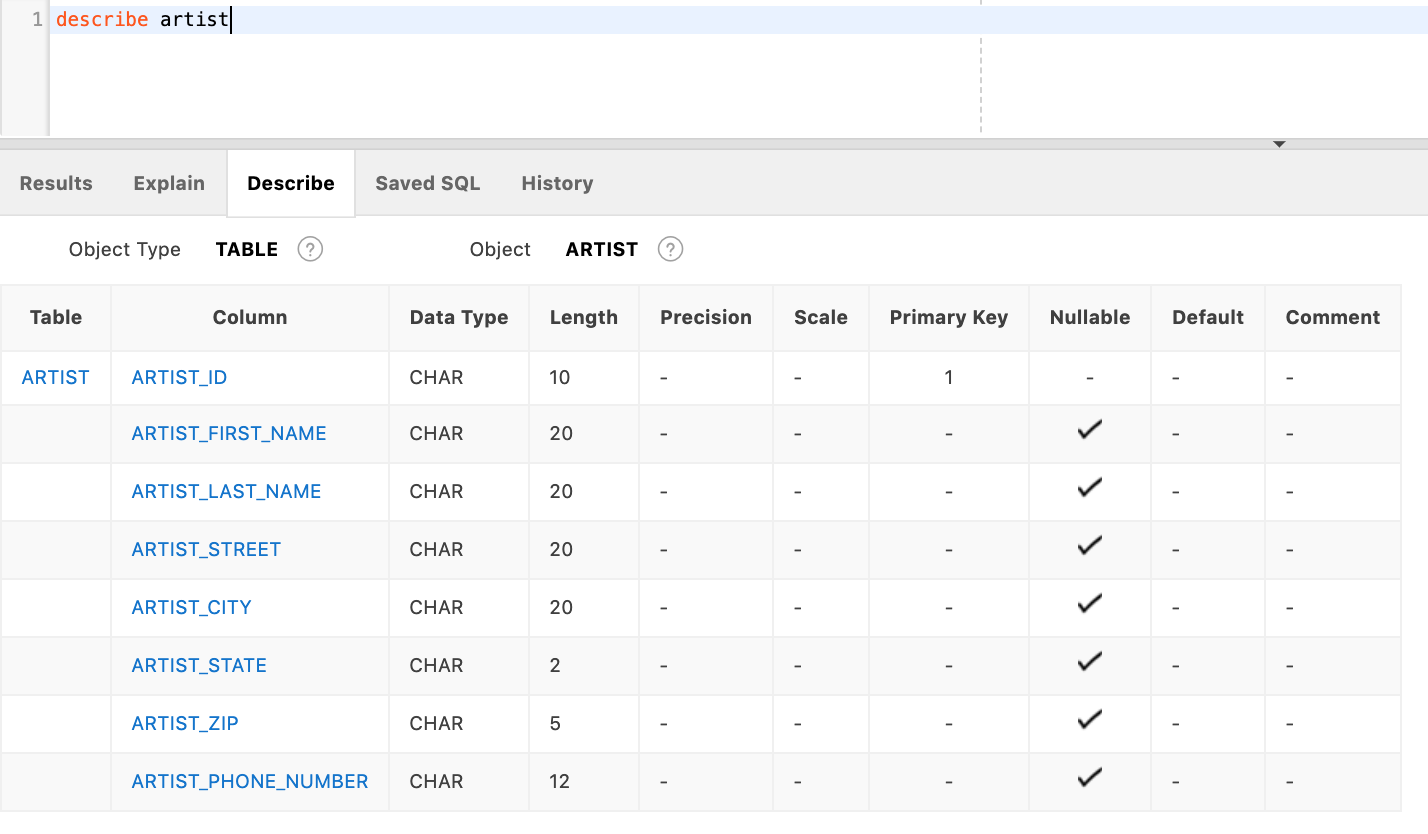


Table 1. ARTIST

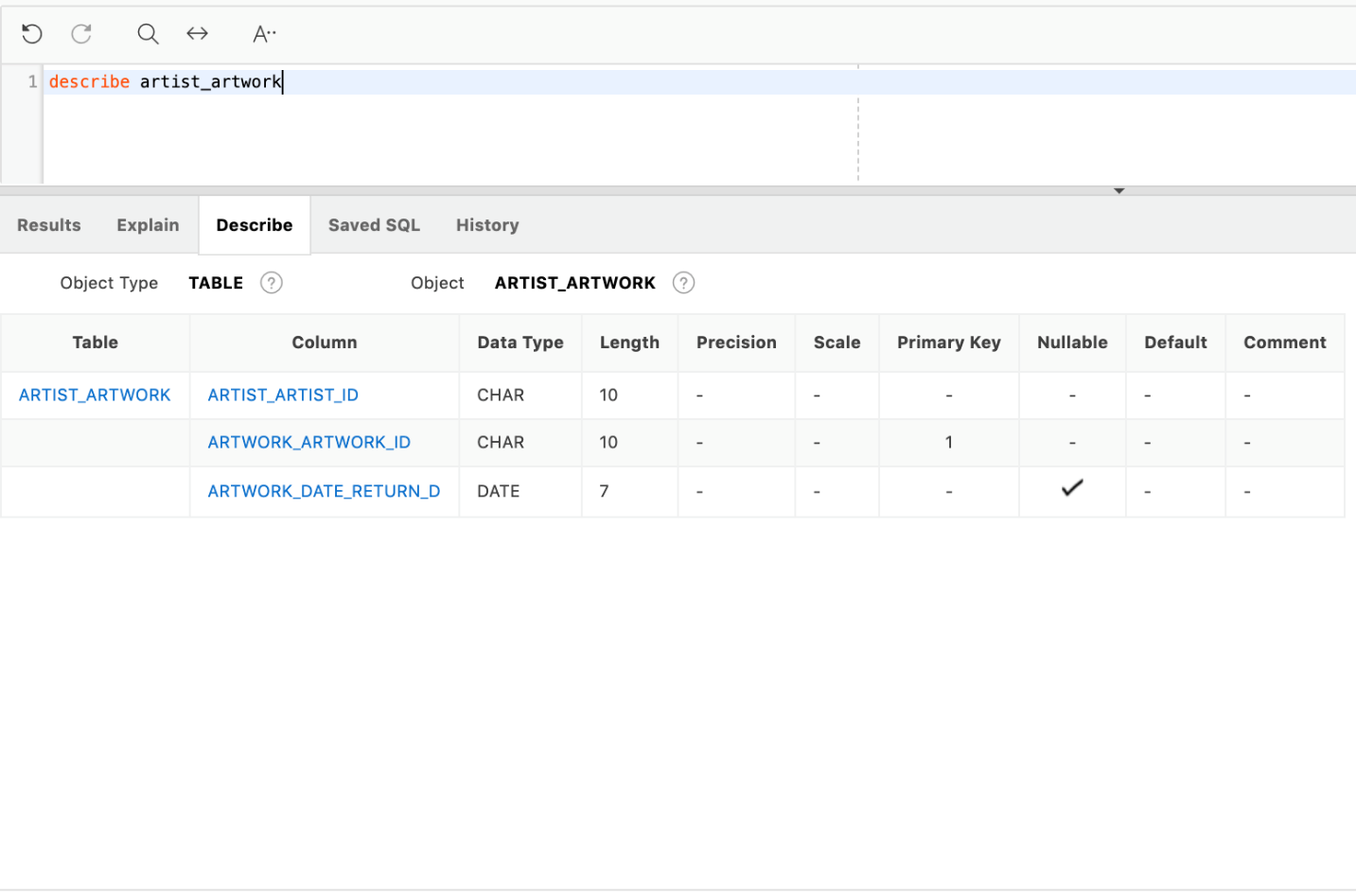


Table 2. ARTIST\_ARTWORK

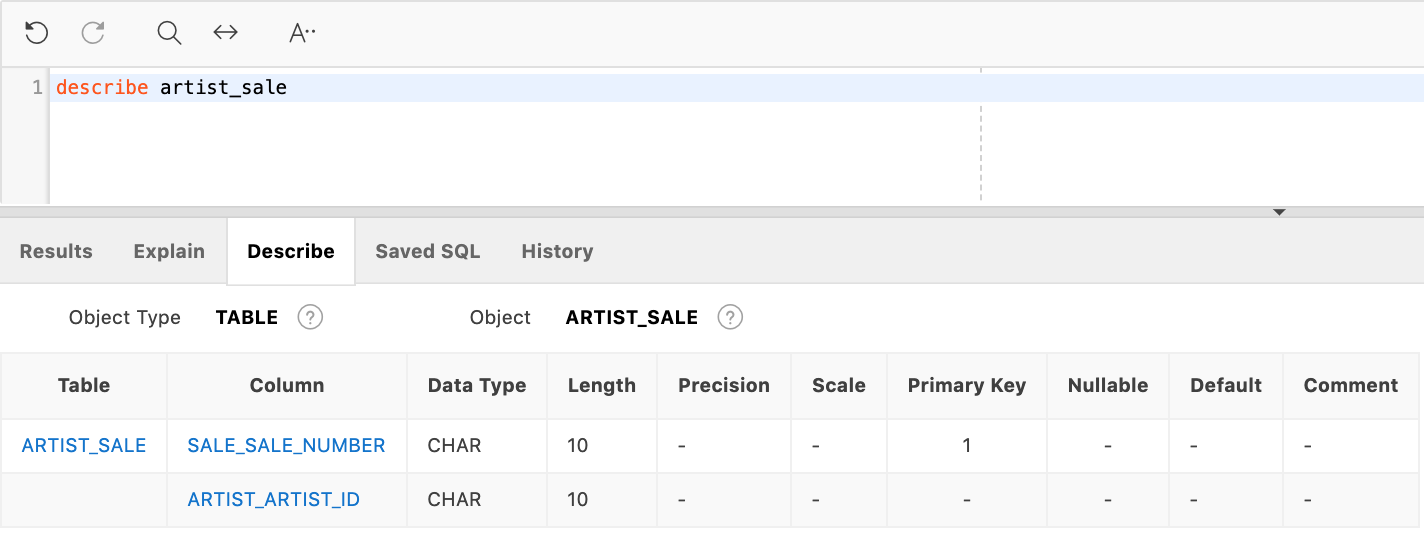


Table 3. ARTIST\_SALE

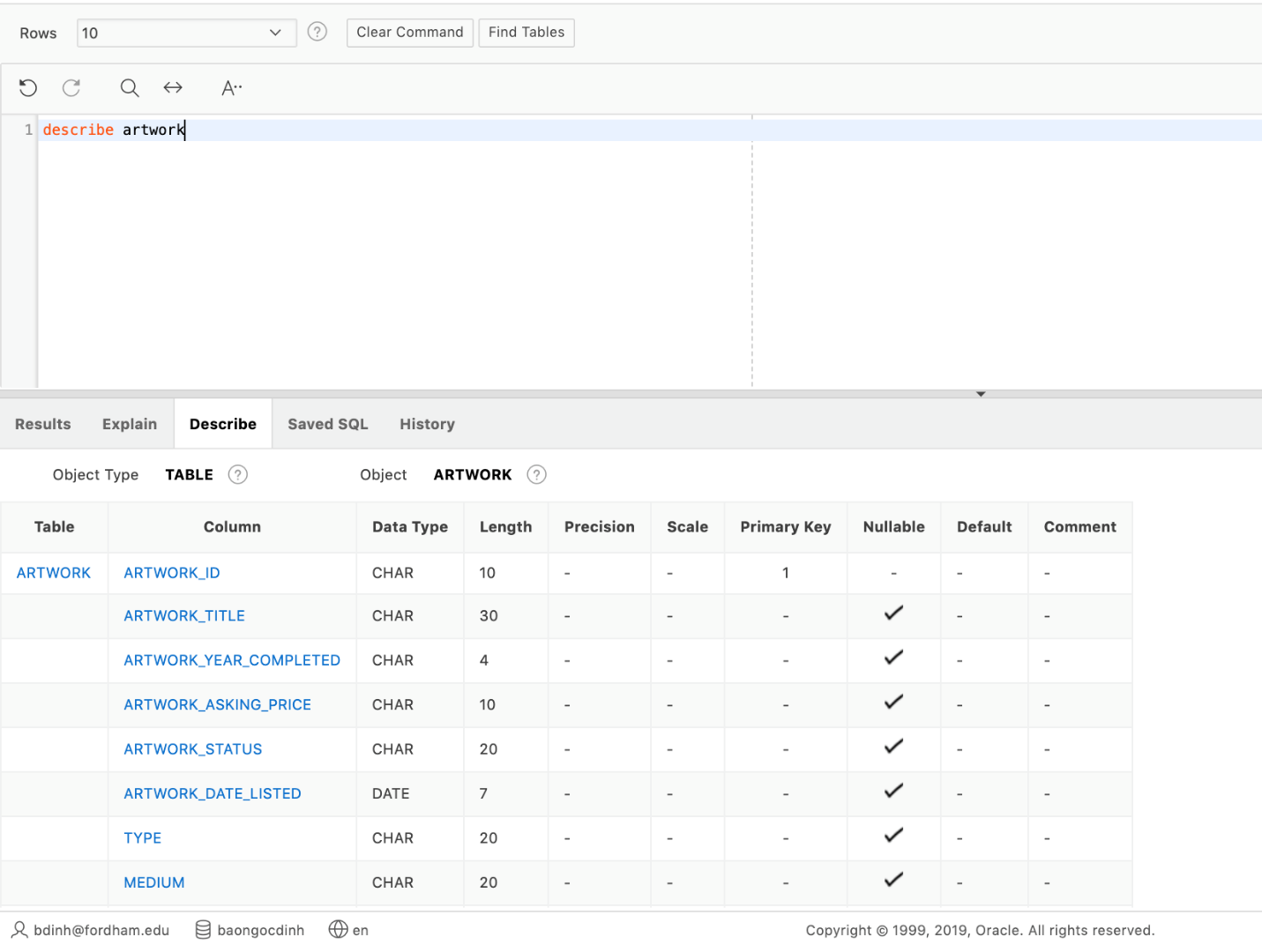


Table 4. ARTWORK

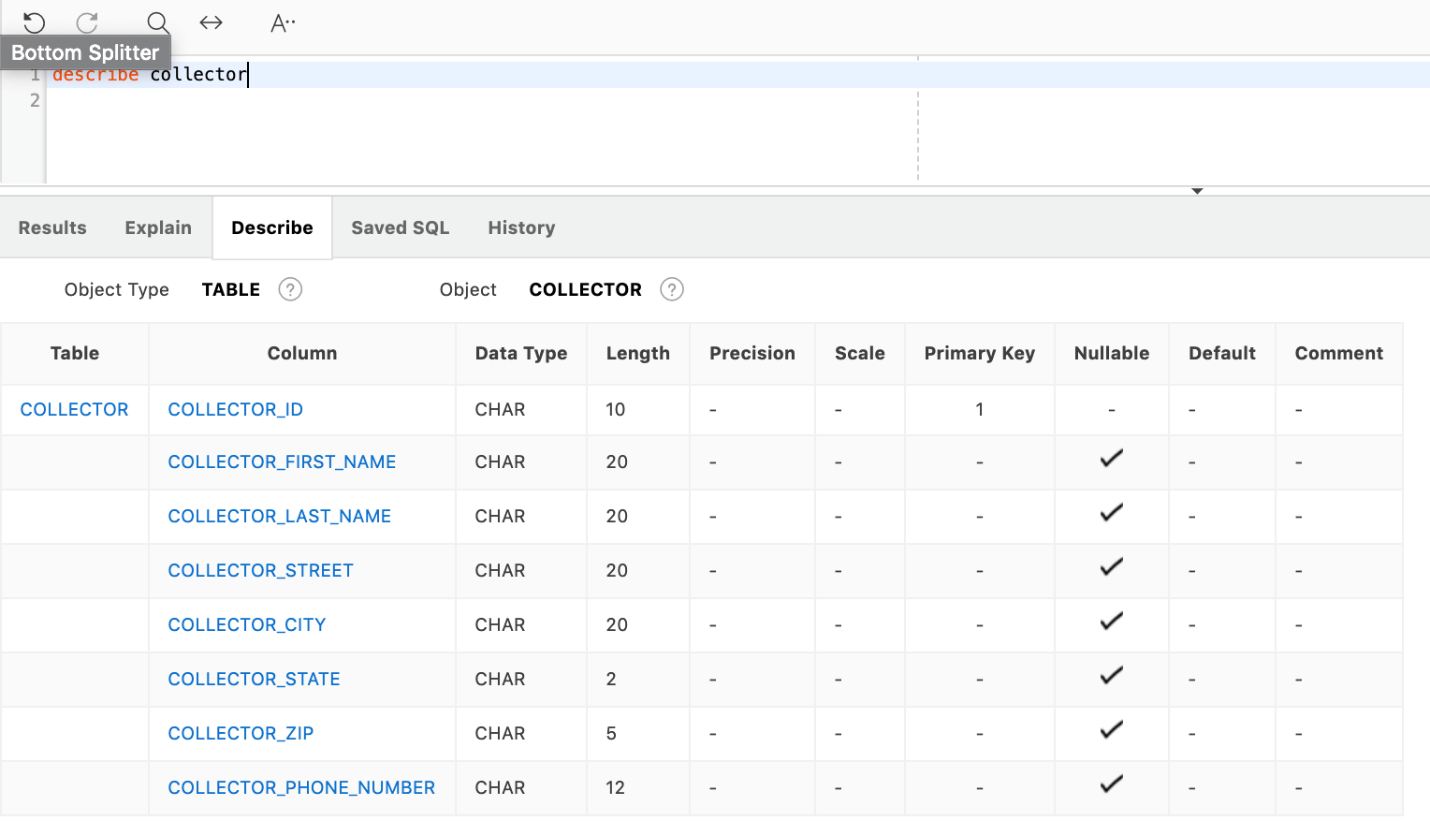


Table 5. COLLECTOR

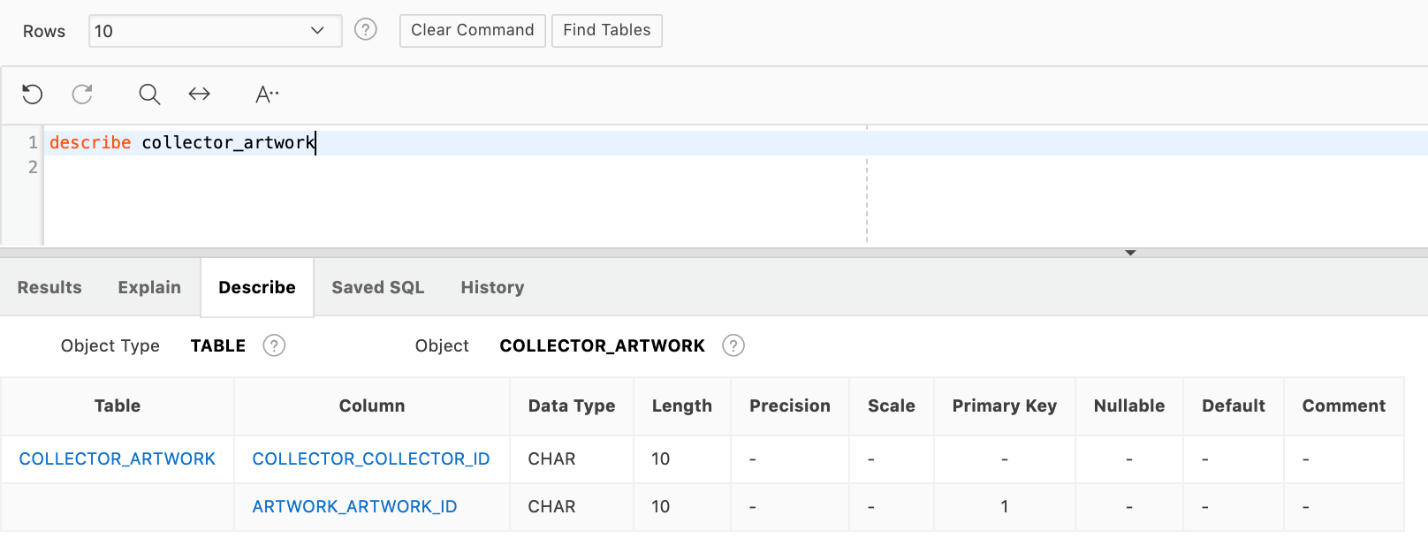


Table 6. COLLECTOR\_ARTWORK

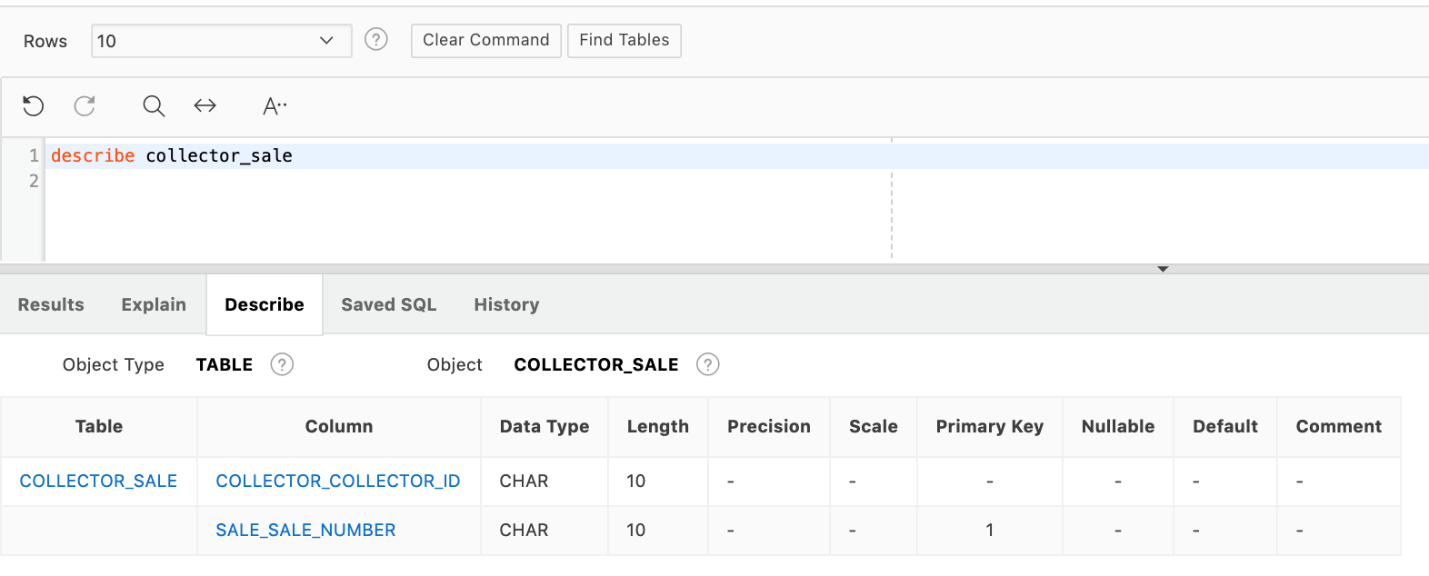


Table 7. COLLECTOR\_SALE

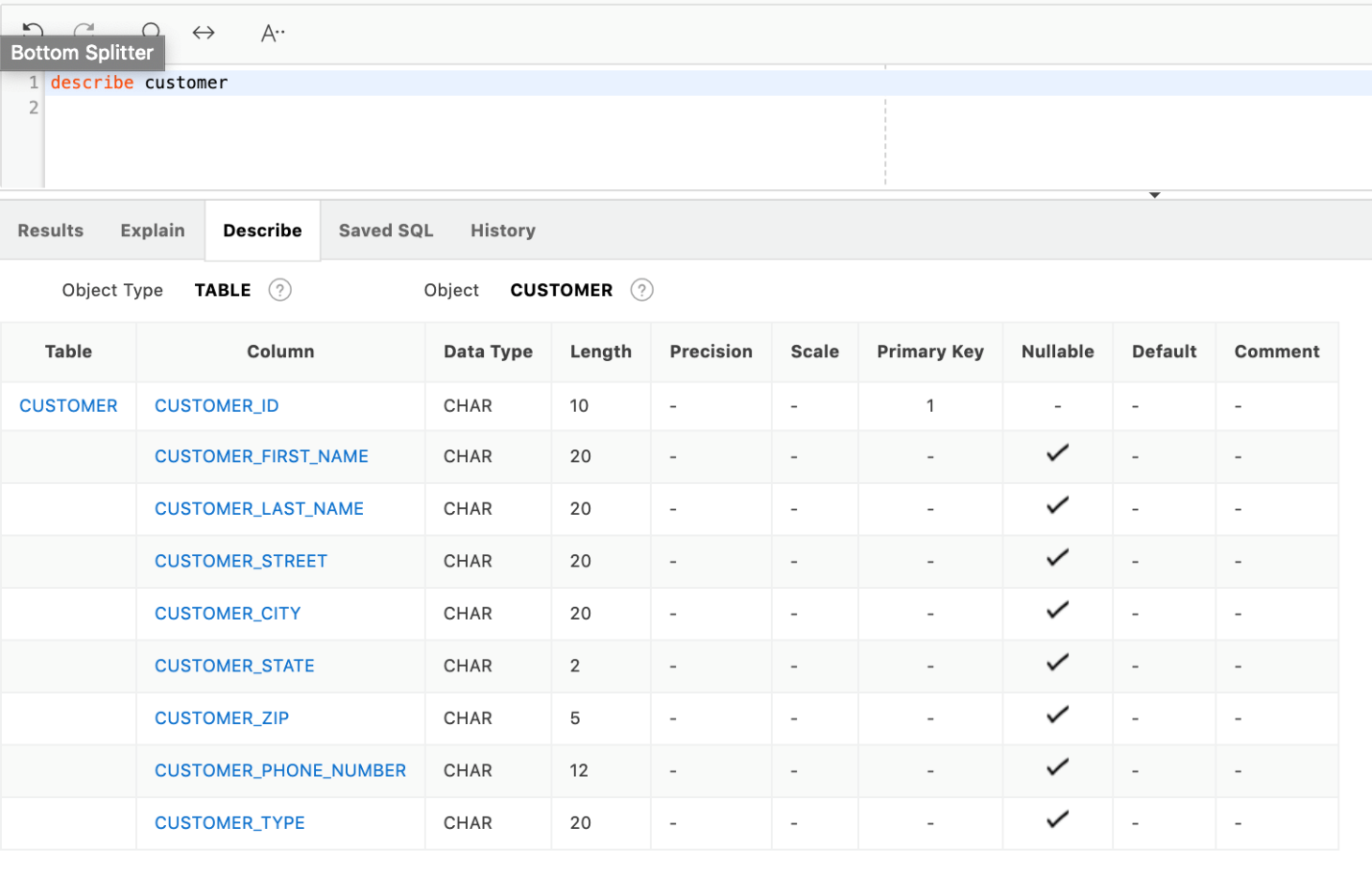


Table 8. CUSTOMER

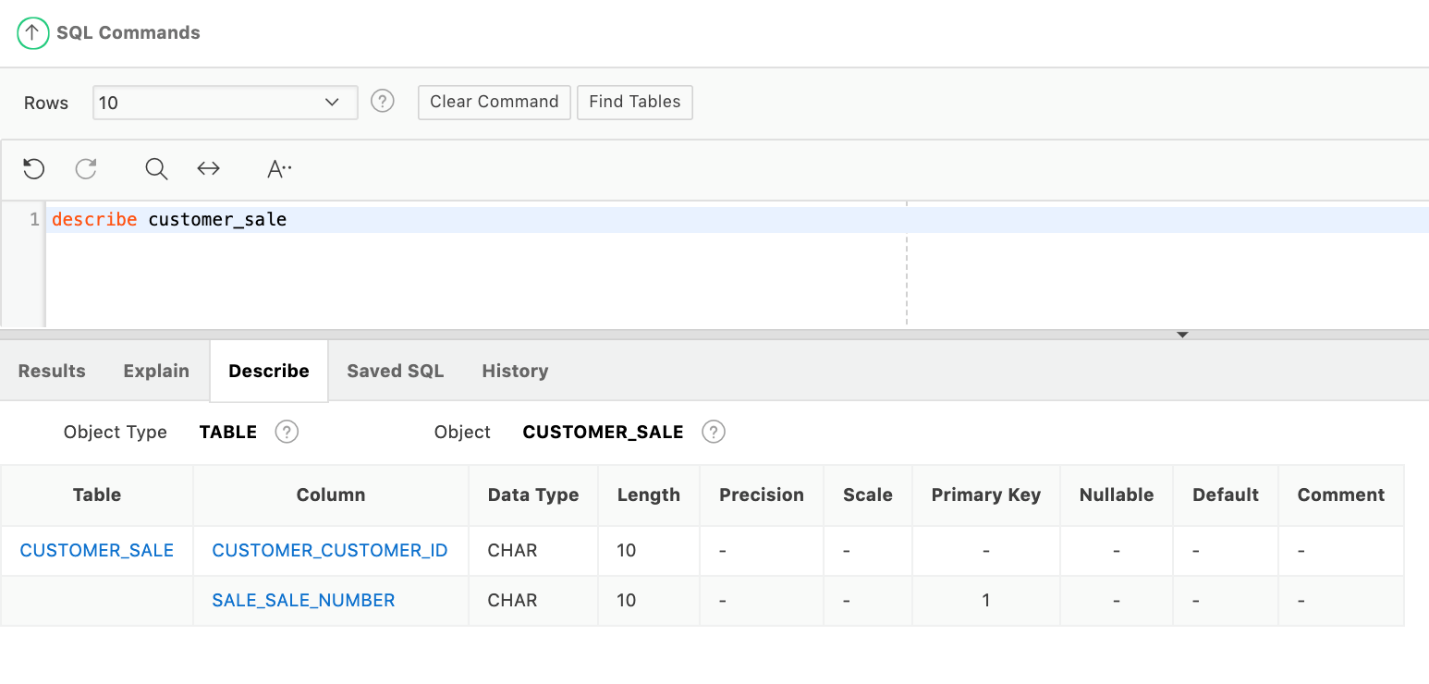


Table 9. CUSTOMER\_SALE

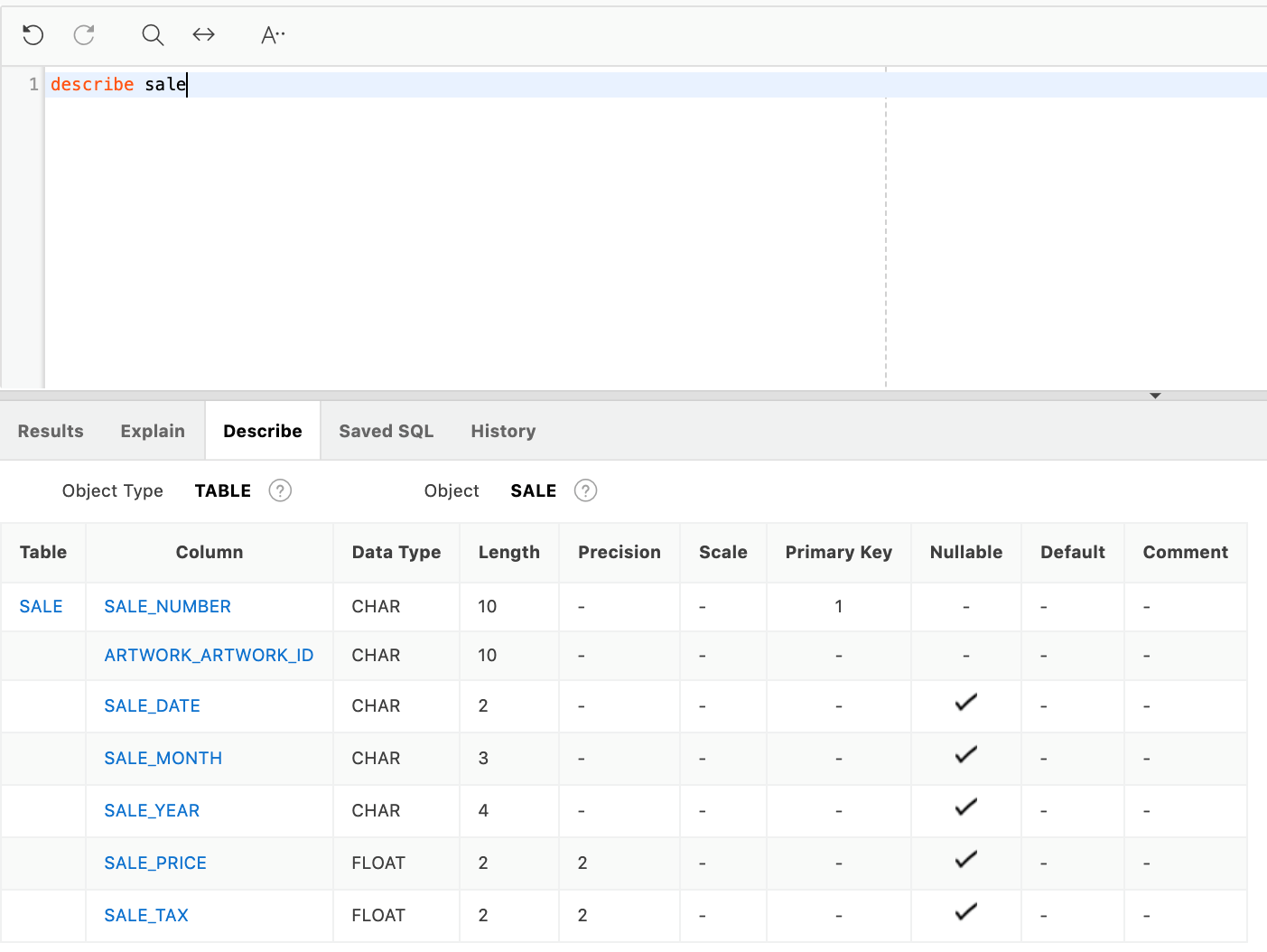


Table 10. SALE

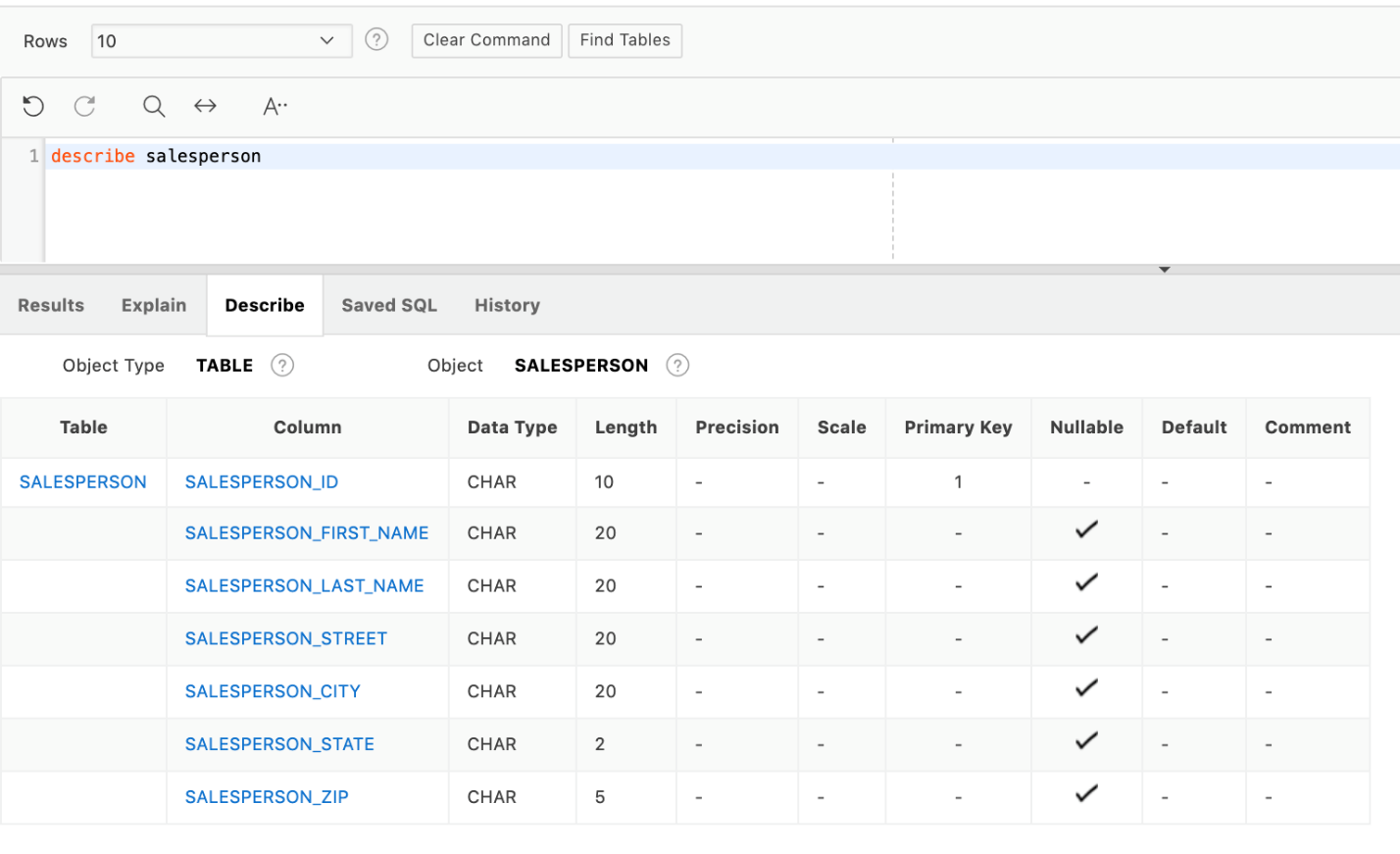


Table 11. SALESPERSON

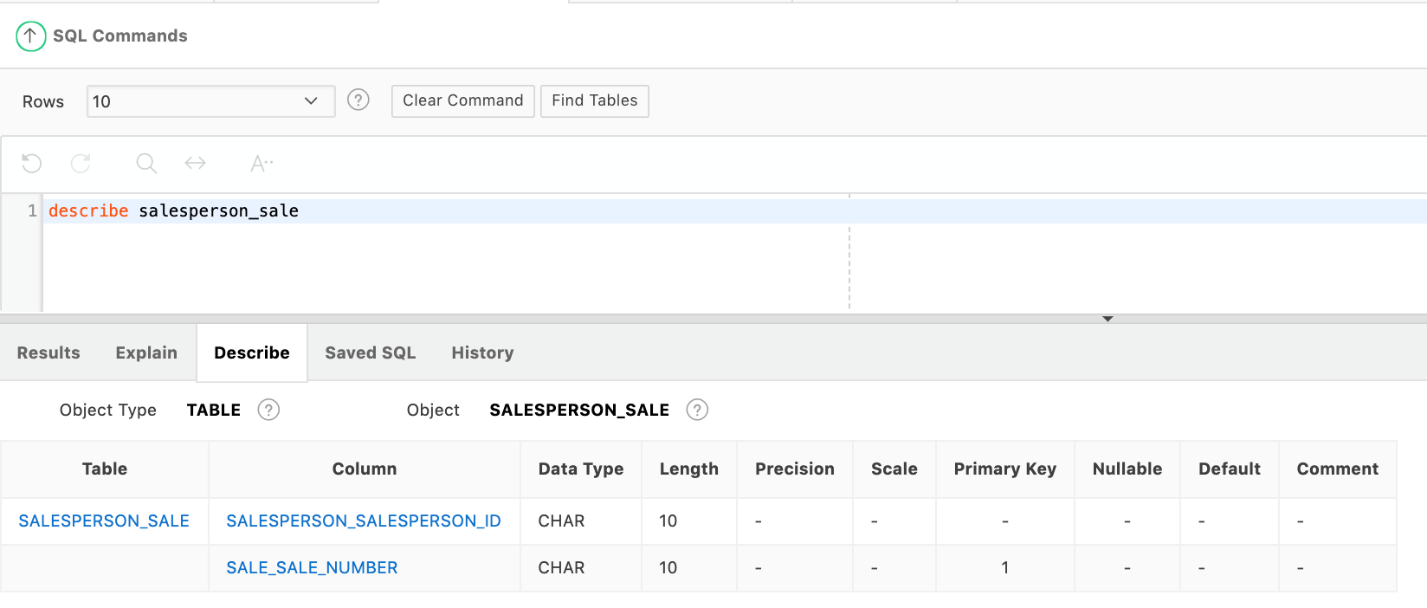


Table 12. SALEPERSON\_SALE

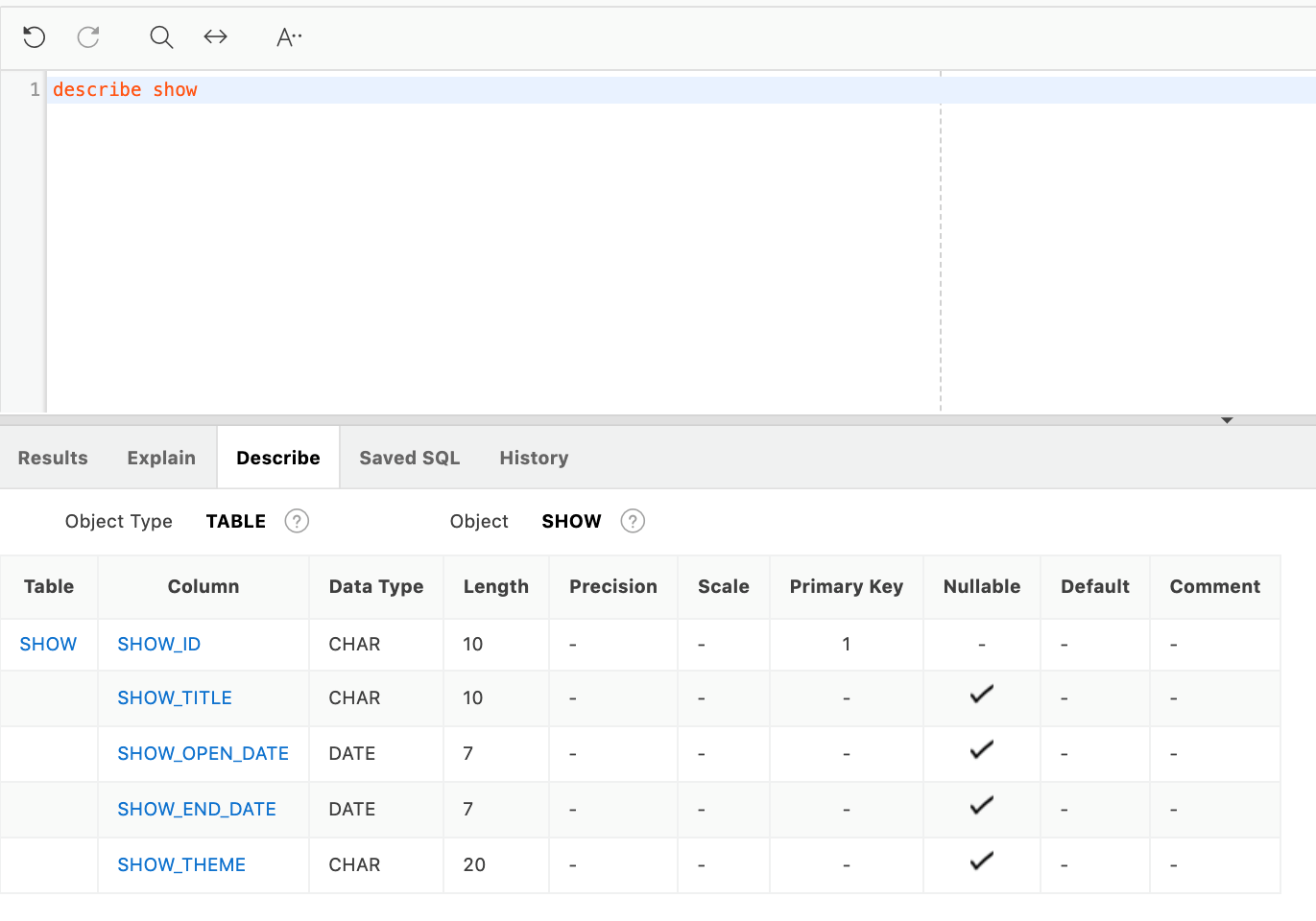


Table 13. SHOW

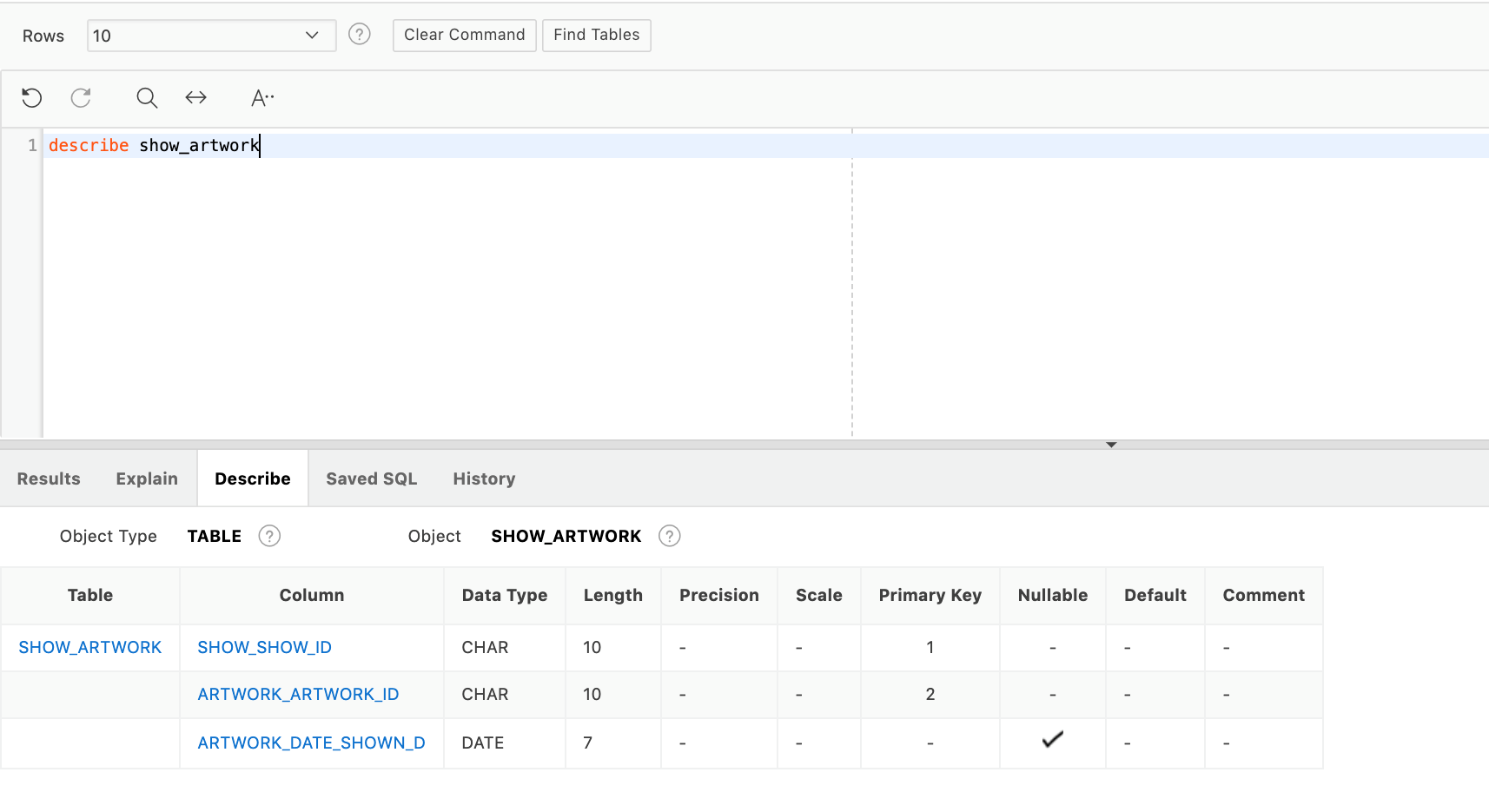


Table 14. SHOW\_ARTWORK

**List of Tables**

|  |  |
| --- | --- |
|  | Name of Tables |
| 1 | ARTIST |
| 2 | ARTIST\_ARTWORK |
| 3 | ARTIST\_SALE |
| 4 | ARTWORK |
| 5 | COLLECTOR |
| 6 | COLLECTOR\_ARTWORK |
| 7 | COLLECTOR\_SALE |
| 8 | CUSTOMER |
| 9 | CUSTOMER\_SALE |
| 10 | SALE |
| 11 | SALESPERSON |
| 12 | SALESPERSON\_SALE |
| 13 | SHOW |
| 14 | SHOW\_ARTWORK |

**Tables with Data for Art Gallery Tracking System**

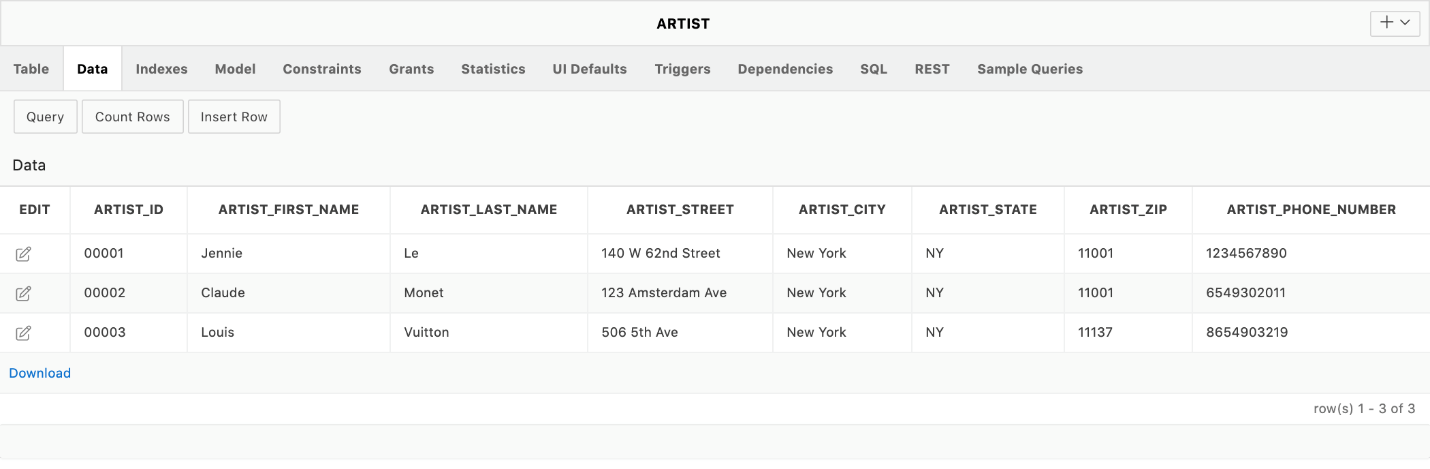
****

Table 1. ARTIST

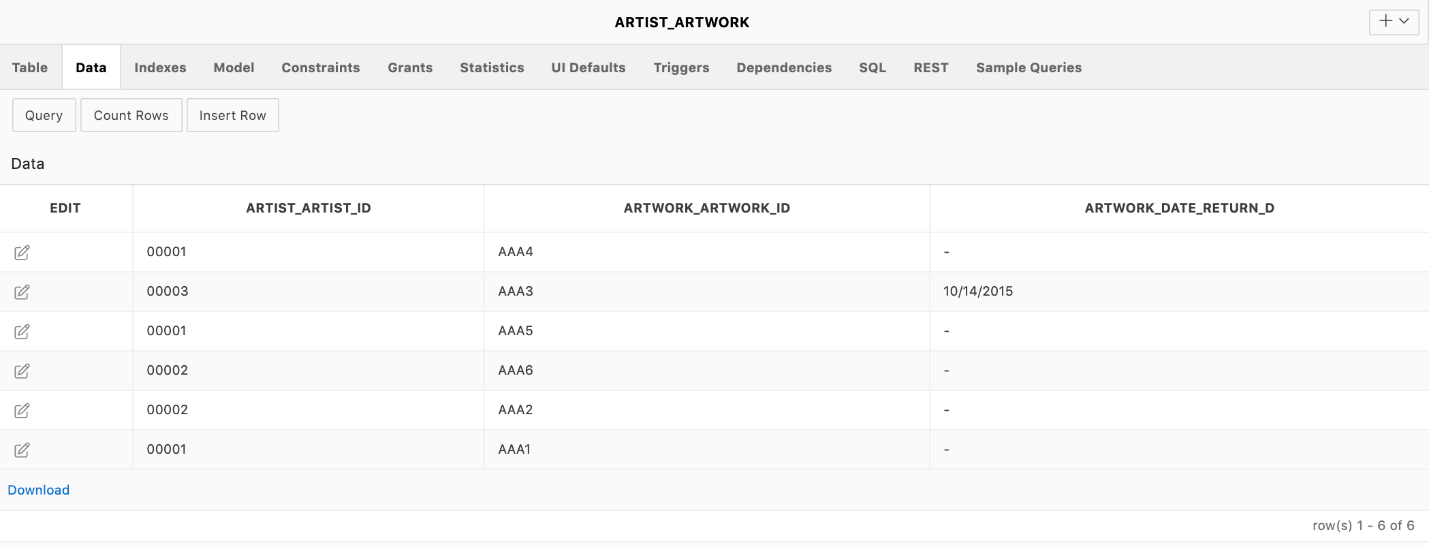


Table 2. ARTIST\_ARTWORK

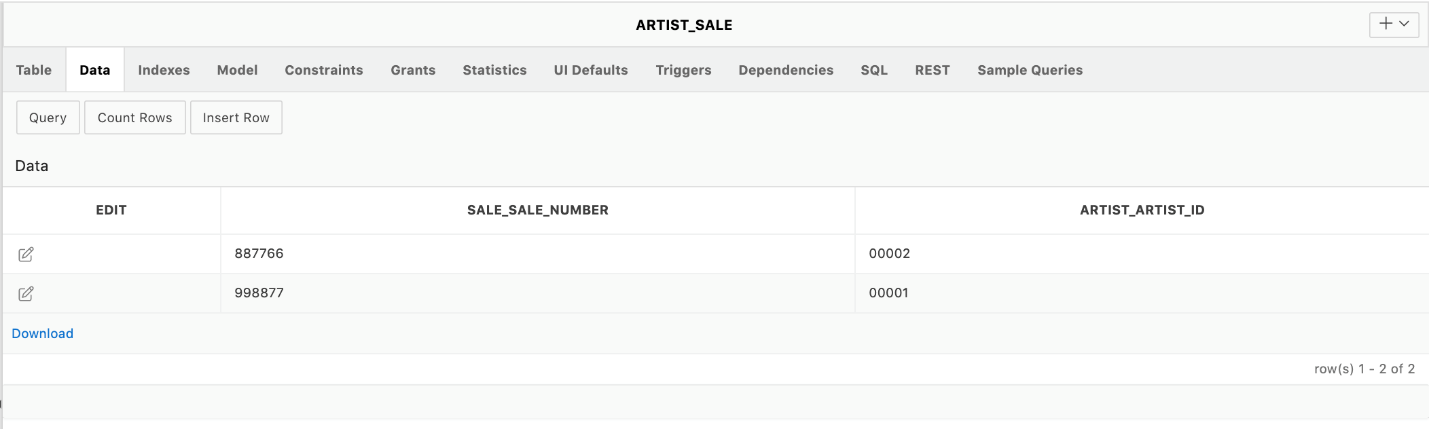


Table 3. ARTIST\_SALE

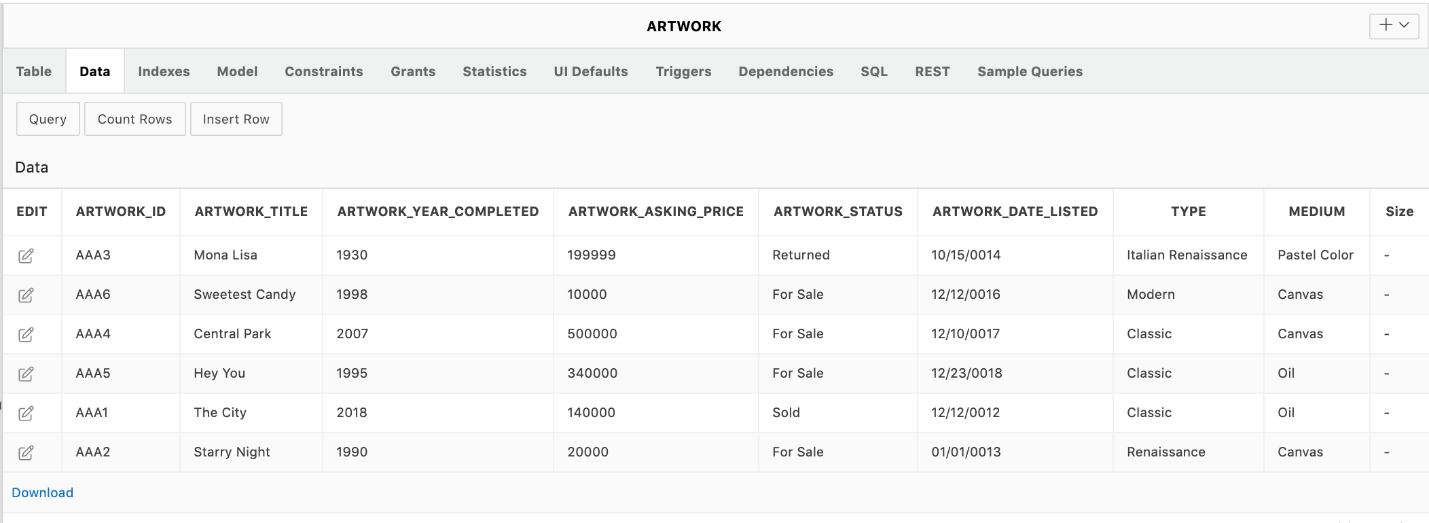


Table 4. ARTWORK

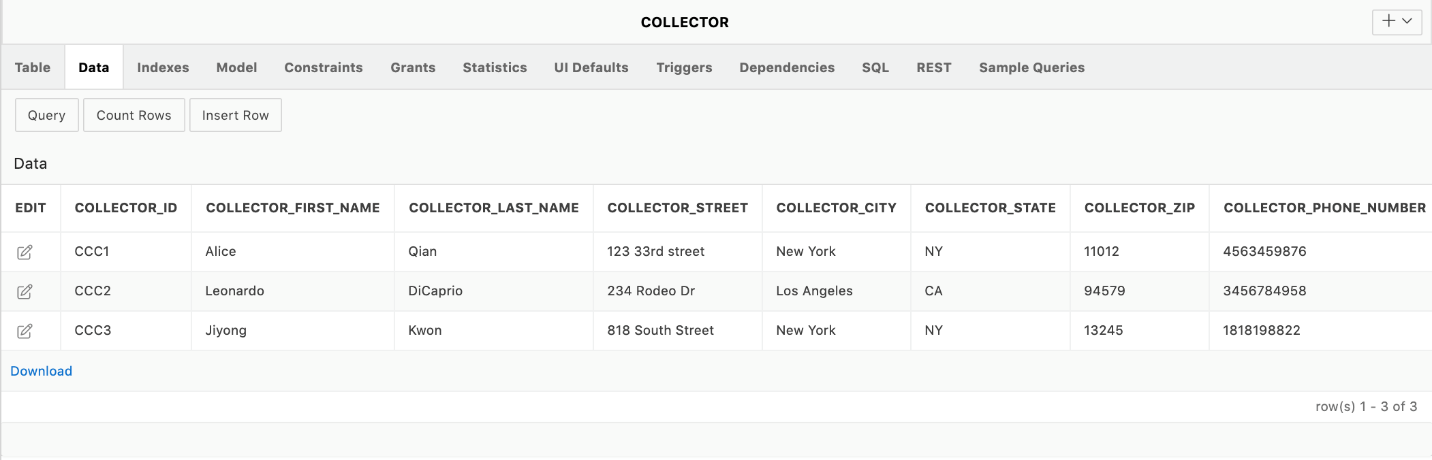


Table 5. COLLECTOR

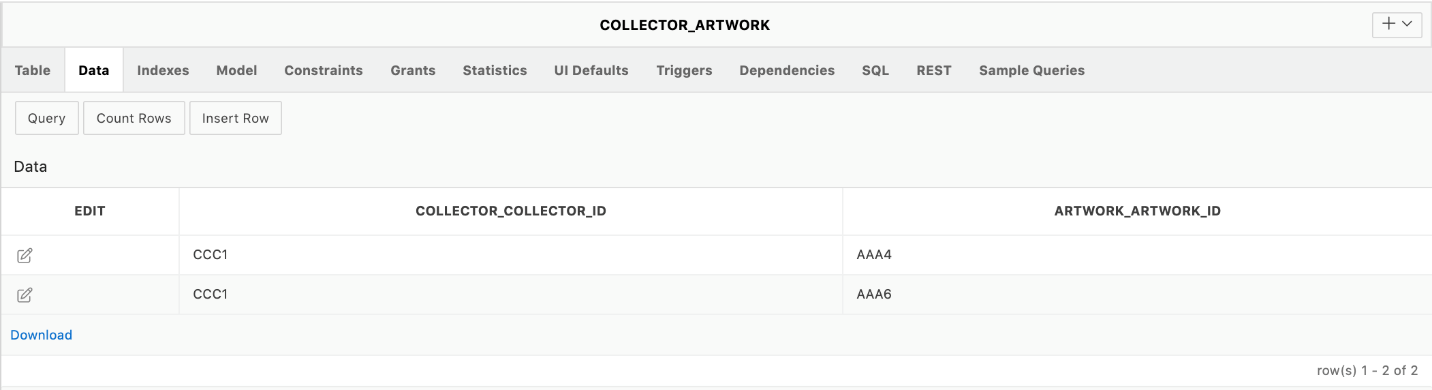


Table 6. COLLECTOR\_ARTWORK

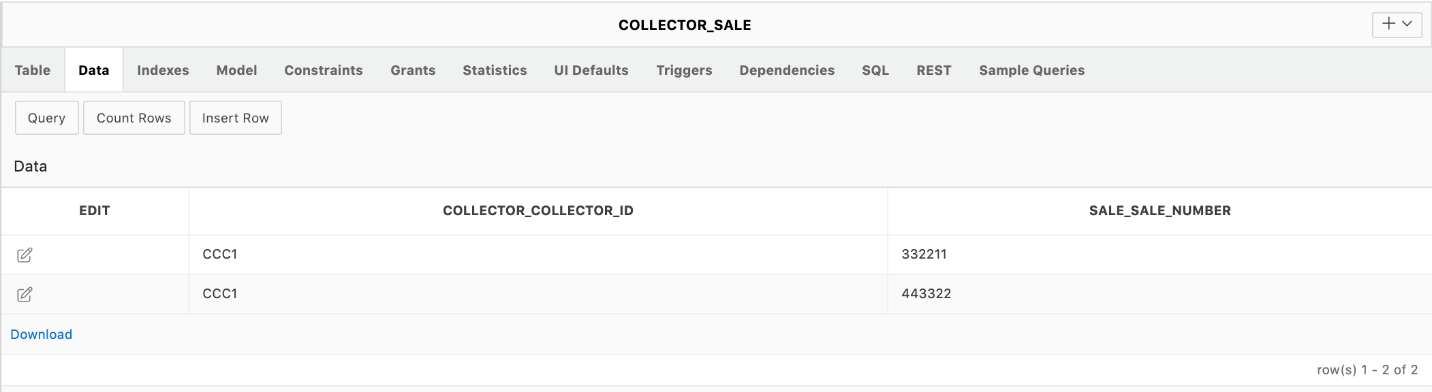


Table 7. COLLECTOR\_SALE

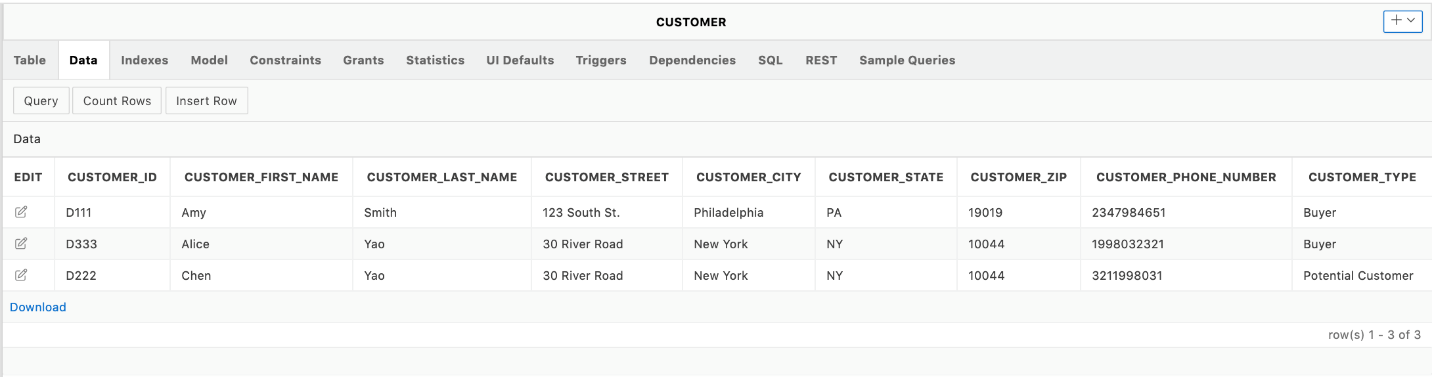


Table 8. CUSTOMER

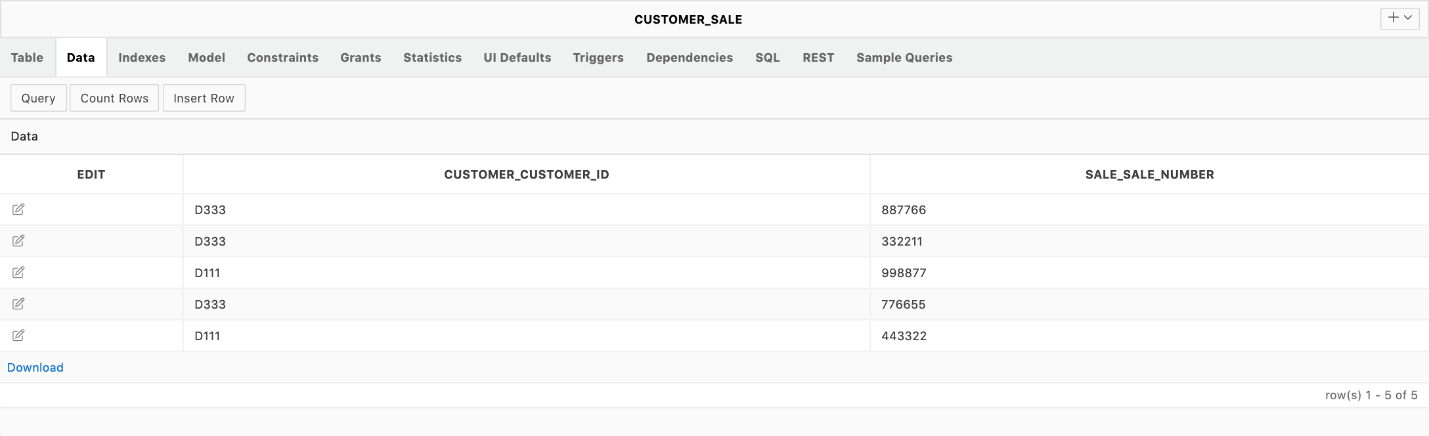


Table 9. CUSTOMER\_SALE

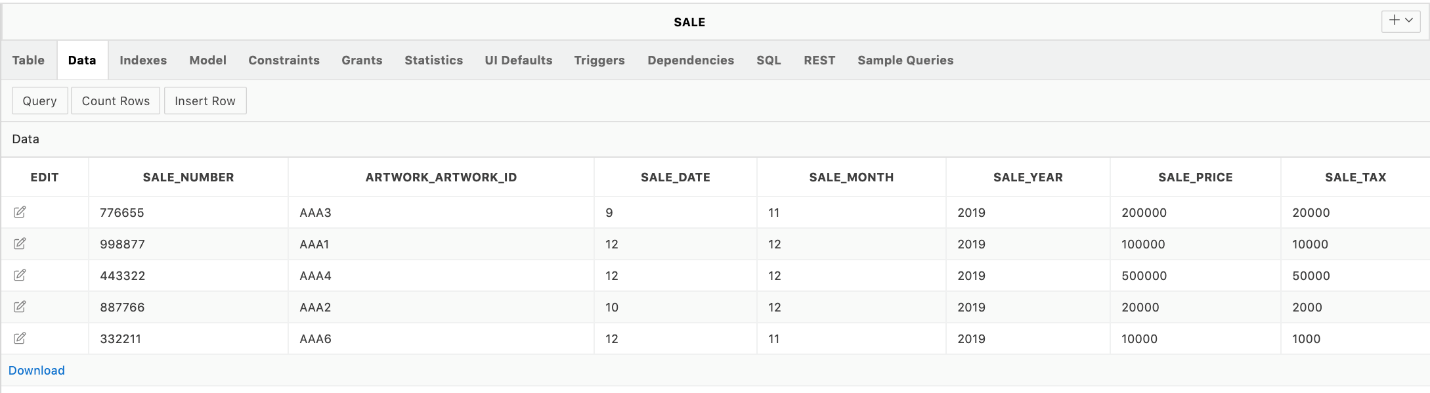


Table 10. SALE

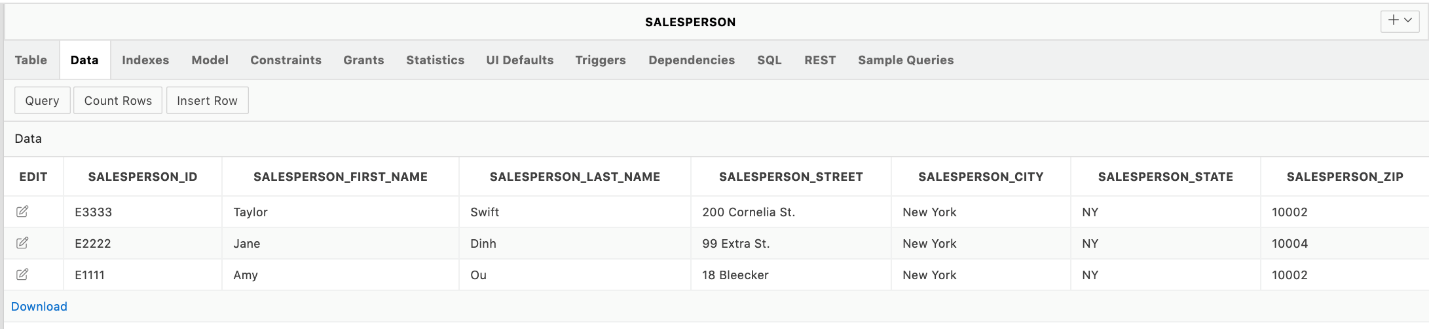


Table 11. SALESPERSON

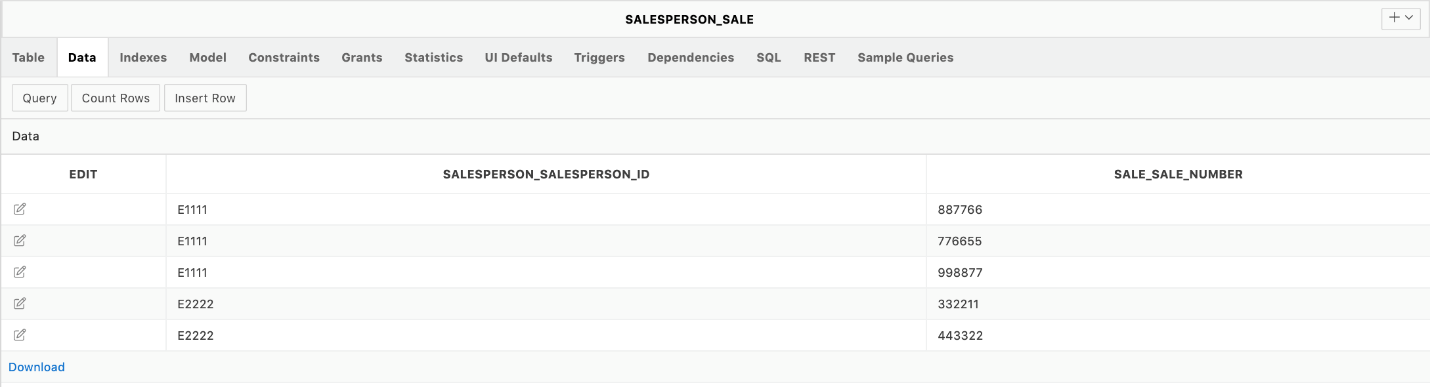


Table 12. SALEPERSON\_SALE

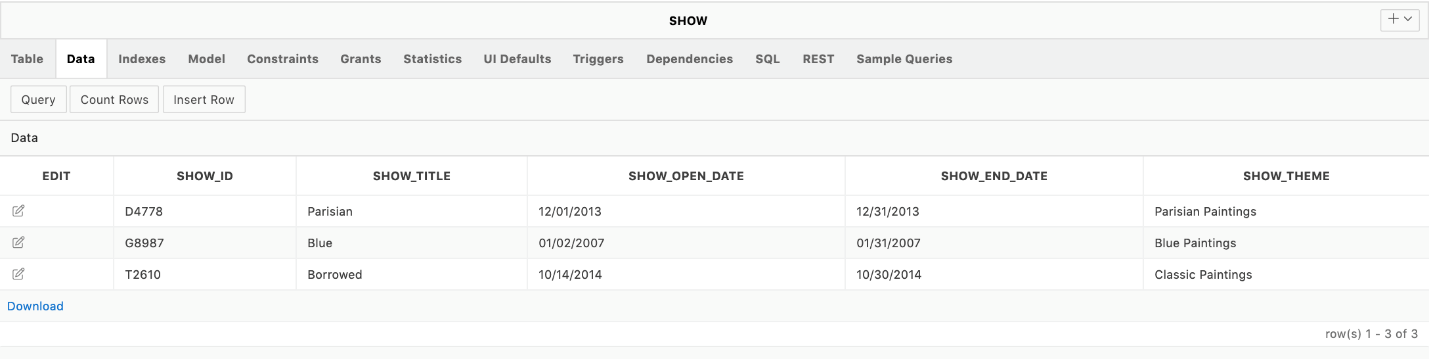


Table 13. SHOW

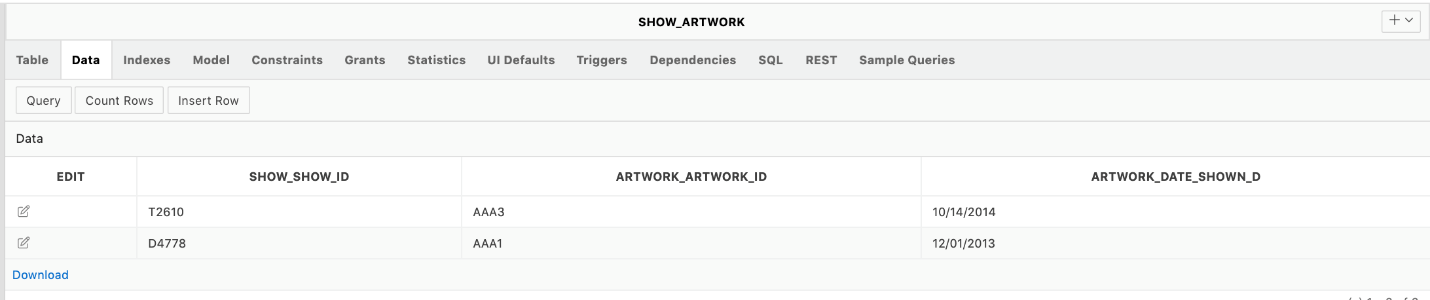


Table 14. SHOW\_ARTWORK

**Art Gallery Tracking System Database SQL Command**

1. List the artwork that is created by an artist and currently owned by one of the collectors.

select ARTIST\_FIRST\_NAME, ARTIST\_LAST\_NAME, ARTWORK\_TITLE, COLLECTOR\_FIRST\_NAME, COLLECTOR\_LAST\_NAME

from COLLECTOR, COLLECTOR\_ARTWORK, ARTWORK, ARTIST\_ARTWORK, ARTIST

where ARTIST.ARTIST\_ID = ARTIST\_ARTWORK.ARTIST\_ARTIST\_ID

and ARTIST\_ARTWORK.ARTWORK\_ARTWORK\_ID = ARTWORK.ARTWORK\_ID

and COLLECTOR\_ARTWORK.ARTWORK\_ARTWORK\_ID = ARTWORK.ARTWORK\_ID

and COLLECTOR\_ARTWORK.COLLECTOR\_COLLECTOR\_ID = COLLECTOR.COLLECTOR\_ID;



1. Present the sale records along with the artwork sold, salesperson in charge, buyer name and the sale price and tax. Ordered by sales price for your reference of business decision making.

select SALESPERSON\_FIRST\_NAME, SALE\_PRICE, SALE\_TAX, ARTWORK\_TITLE,

CUSTOMER\_FIRST\_NAME, CUSTOMER\_LAST\_NAME

from ARTWORK, CUSTOMER\_SALE, CUSTOMER, SALESPERSON, SALESPERSON\_SALE, SALE

where SALE.SALE\_NUMBER = SALESPERSON\_SALE.SALE\_SALE\_NUMBER

and CUSTOMER\_SALE.CUSTOMER\_CUSTOMER\_ID = CUSTOMER.CUSTOMER\_ID

and CUSTOMER\_SALE.SALE\_SALE\_NUMBER = SALE.SALE\_NUMBER

and SALESPERSON\_SALE.SALESPERSON\_SALESPERSON\_ID = SALESPERSON.SALESPERSON\_ID

and SALE.ARTWORK\_ARTWORK\_ID = ARTWORK.ARTWORK\_ID

order by SALE.SALE\_PRICE DESC;

1. List all information about the titles, salesperson name, sale price and collector name of all artworks provided by a collector.

select ARTWORK\_TITLE, SALESPERSON\_FIRST\_NAME, SALESPERSON\_LAST\_NAME, SALE\_PRICE, COLLECTOR\_FIRST\_NAME, COLLECTOR\_LAST\_NAME

from ARTWORK, SALESPERSON, COLLECTOR, SALE, COLLECTOR\_SALE, SALESPERSON\_SALE, COLLECTOR\_ARTWORK

where SALESPERSON.SALESPERSON\_ID = SALESPERSON\_SALE.SALESPERSON\_SALESPERSON\_ID

and SALE.SALE\_NUMBER = SALESPERSON\_SALE.SALE\_SALE\_NUMBER

and COLLECTOR.COLLECTOR\_ID = COLLECTOR\_SALE.COLLECTOR\_COLLECTOR\_ID

and SALE.SALE\_NUMBER = COLLECTOR\_SALE.SALE\_SALE\_NUMBER

and COLLECTOR.COLLECTOR\_ID = COLLECTOR\_ARTWORK.COLLECTOR\_COLLECTOR\_ID

and ARTWORK.ARTWORK\_ID = COLLECTOR\_ARTWORK.ARTWORK\_ARTWORK\_ID

and SALE.ARTWORK\_ARTWORK\_ID = ARTWORK.ARTWORK\_ID;



1. List artworks that are presented in the show and actually sold and display the artist name, artwork title, show title and customer name for the artworks.

select ARTIST\_FIRST\_NAME, ARTIST\_LAST\_NAME, ARTWORK\_TITLE, SHOW\_TITLE, CUSTOMER\_FIRST\_NAME, CUSTOMER\_LAST\_NAME

from CUSTOMER\_SALE, SALE, SHOW\_ARTWORK, ARTIST\_ARTWORK, CUSTOMER, SHOW, ARTWORK, ARTIST

where ARTIST\_ARTWORK.ARTWORK\_ARTWORK\_ID=ARTWORK.ARTWORK\_ID

and ARTIST.ARTIST\_ID=ARTIST\_ARTWORK.ARTIST\_ARTIST\_ID

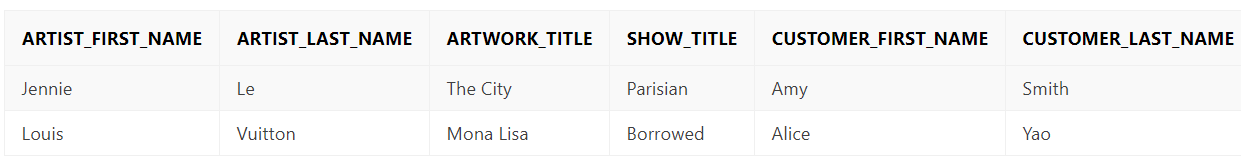
and SHOW.SHOW\_ID=SHOW\_ARTWORK.SHOW\_SHOW\_ID

and SHOW\_ARTWORK.ARTWORK\_ARTWORK\_ID=ARTWORK.ARTWORK\_ID

and CUSTOMER\_SALE.CUSTOMER\_CUSTOMER\_ID=CUSTOMER.CUSTOMER\_ID

and CUSTOMER\_SALE.SALE\_SALE\_NUMBER=SALE.SALE\_NUMBER

and SALE.ARTWORK\_ARTWORK\_ID=ARTWORK.ARTWORK\_ID;

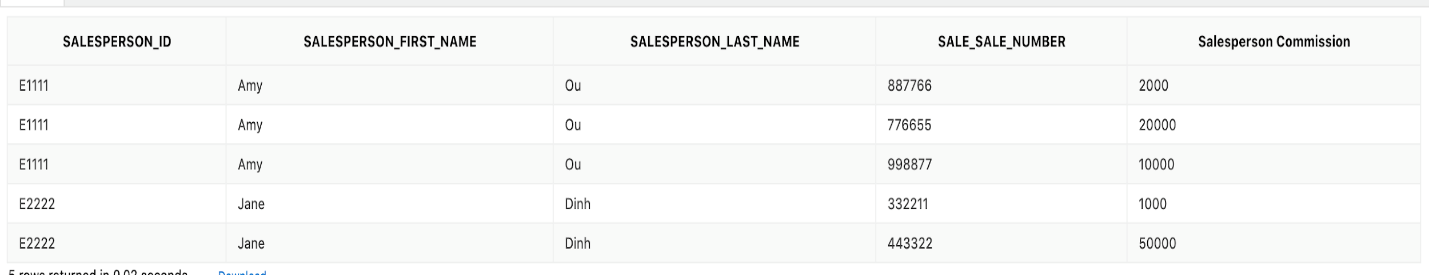


1. Find all the salesperson and their commission from each sale? (Sales Commission is 10% of Sales price)

select SALESPERSON\_ID, SALESPERSON\_FIRST\_NAME, SALESPERSON\_LAST\_NAME, SALE\_SALE\_NUMBER,(SALE\_PRICE\*.1) as "Salesperson Commission"

from salesperson, sale, salesperson\_sale

where salesperson\_sale.SALESPERSON\_SALESPERSON\_ID=salesperson.SALESPERSON\_ID and salesperson\_sale.SALE\_SALE\_NUMBER=sale.sale\_number;



1. Find all information on the shows the museum has run, their open and end date, theme, artworks that were showcased and their type, medium and size:

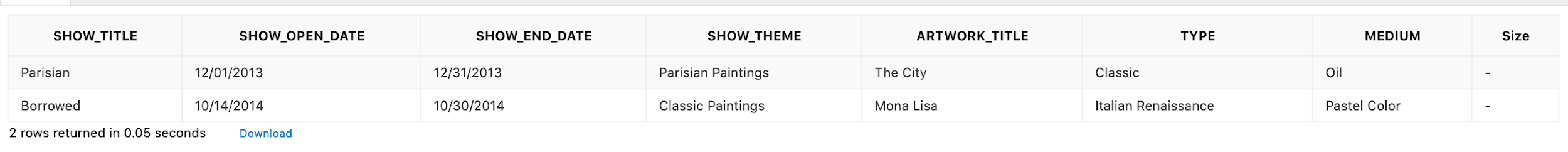
select show\_title, show\_open\_date, show\_end\_date, show\_theme, artwork\_title, "TYPE", medium, "Size"

from artwork, show\_artwork, show

where SHOW\_ID=SHOW\_SHOW\_ID

AND ARTWORK\_ARTWORK\_ID=ARTWORK\_ID

order by show\_open\_date;



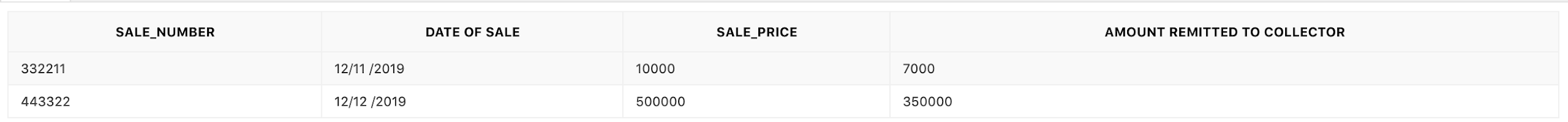
1. Find all the sales that came from collector, the date of sale, sale price and the amount the gallery remitted to the collector:

select sale\_number, sale\_date||'/'||sale\_month||'/'||sale\_year as "DATE OF SALE", sale\_price, (sale\_price\*.7) as "AMOUNT REMITTED TO COLLECTOR"

from sale, collector\_sale, collector

where COLLECTOR\_COLLECTOR\_ID=collector.collector\_id

and SALE\_SALE\_NUMBER=sale.sale\_number;



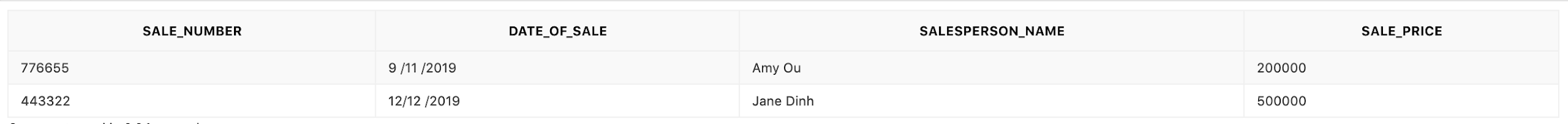
1. Find all the sales, date of sale, the salesperson in charge of the sales, sales price where the amount of the sale is bigger than $150,000:

select sale\_number, sale\_date||'/'||sale\_month||'/'||sale\_year AS date\_of\_sale, SALESPERSON\_FIRST\_NAME||' '||SALESPERSON\_LAST\_NAME as Salesperson\_Name, sale\_price

from sale, salesperson, salesperson\_sale

where sale\_price>=150000 and SALE\_NUMBER=SALE\_SALE\_NUMBER

and SALESPERSON\_SALESPERSON\_ID=salesperson\_id;



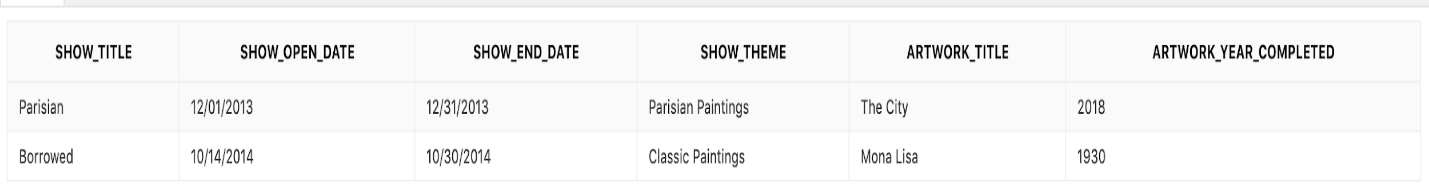
1. Find all the shows and artworks that were featured in the show where the artwork’s completion year is before 1910:

select show\_title, SHOW\_OPEN\_DATE, SHOW\_END\_DATE, SHOW\_THEME, ARTWORK\_TITLE, ARTWORK\_YEAR\_COMPLETED

from show, artwork, show\_artwork

where ARTWORK\_YEAR\_COMPLETED>1910 and show\_id=SHOW\_SHOW\_ID

and artwork\_id=ARTWORK\_ARTWORK\_ID;



1. Find all the salesperson that has made a sale, how many sales they have made. Sort by descending count of sales:

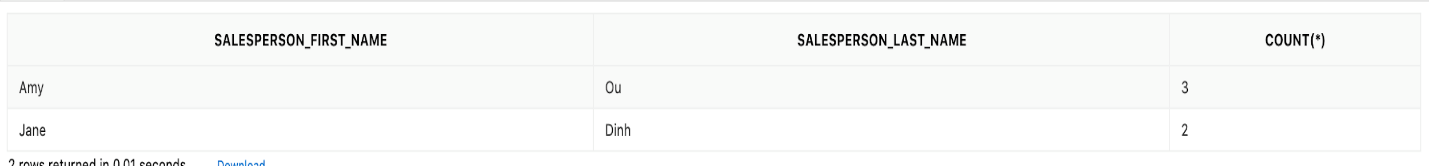
select SALESPERSON\_FIRST\_NAME, SALESPERSON\_LAST\_NAME, count(\*)

from salesperson, salesperson\_sale

where salesperson\_id=SALESPERSON\_SALESPERSON\_ID

group by SALESPERSON\_FIRST\_NAME, SALESPERSON\_LAST\_NAME

order by COUNT(\*) DESC;



1. List an art work id and the sale price each time an artist id 00002 make a sale

select ARTWORK\_ARTWORK\_ID, SALE\_PRICE

from SALE

where SALE\_NUMBER in

(select SALE\_SALE\_NUMBER from ARTIST\_SALE

where ARTIST\_ARTIST\_ID = '00002');

|  |  |
| --- | --- |
| **ARTWORK\_ARTWORK\_ID** | **SALE\_PRICE** |
| AAA2 | 20000 |

1. List the show title, show theme, show open date, and the artwork ID in the show by combining show and show\_artwork tables from left to right.

select SHOW\_TITLE, SHOW\_THEME, SHOW\_OPEN\_DATE, ARTWORK\_ARTWORK\_ID

from "SHOW" left outer join SHOW\_ARTWORK

on SHOW\_ID = SHOW\_ARTWORK.SHOW\_SHOW\_ID;

|  |  |  |  |
| --- | --- | --- | --- |
| **SHOW\_TITLE** | **SHOW\_THEME** | **SHOW\_OPEN\_DATE** | **ARTWORK\_ARTWORK\_ID** |
| Parisian | Parisian Paintings | 12/01/2013 | AAA1 |
| Blue | Blue Paintings | 01/02/2007 | - |
| Borrowed | Classic Paintings | 10/14/2014 | AAA3 |

**Art Gallery Tracking System Database in APEX**

