The Art Gallery Sales Tracking System

A system for 100 artists, 1000 pieces, 5000 customers per year Phase 2

Gabelli School of Business

Fordham University

ATOM

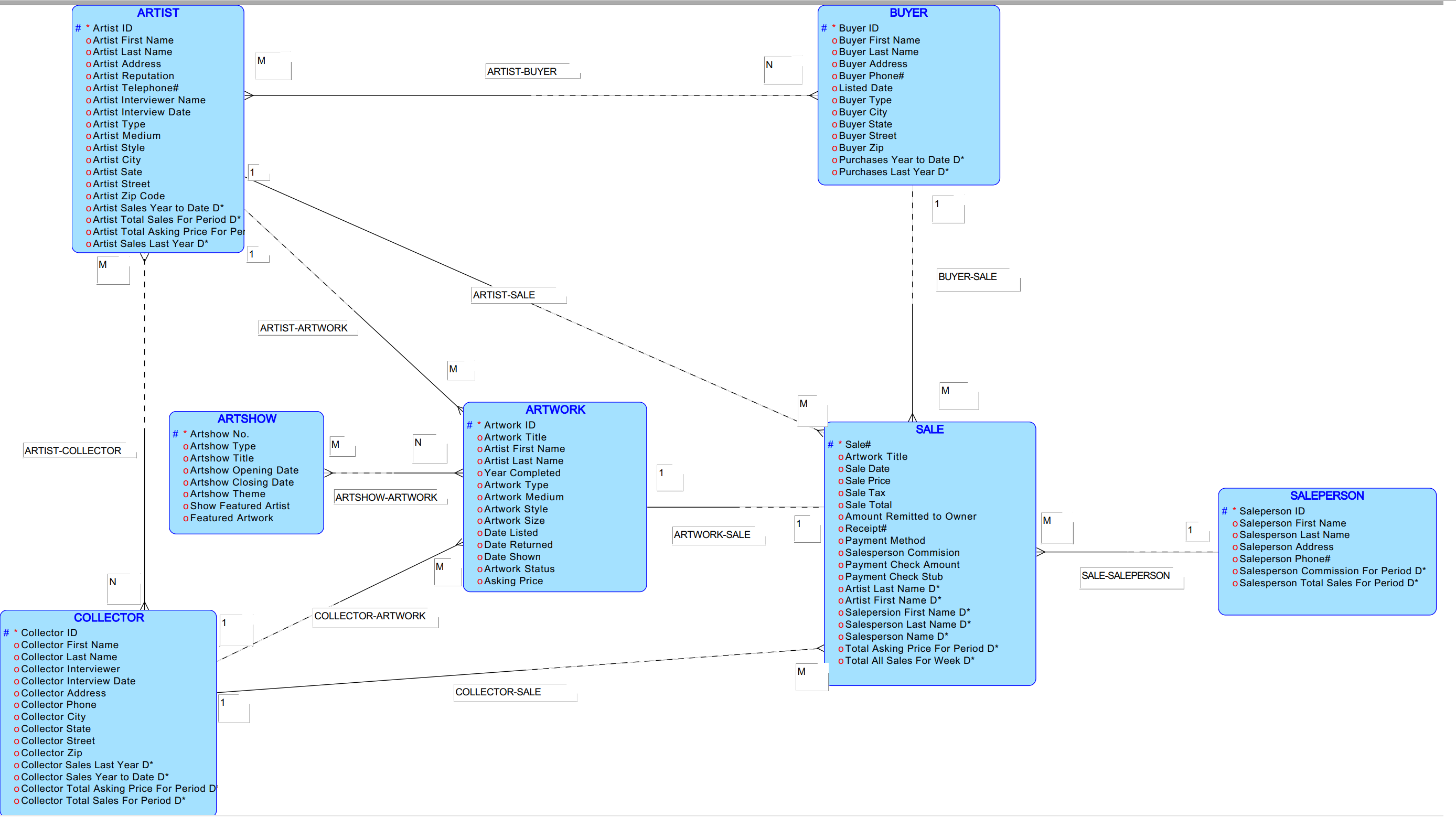
Yifan Ren

Xin Sui

Jian Shen

Chang Liu

**Entity Relationship Diagram for The Art Gallery Sales Tracking System**

****

**Data Dictionary for Entity Relationship Model**

|  |  |  |  |
| --- | --- | --- | --- |
| Entity Name | Attribute | Unique Identifier | DataType |
| ARTSHOW | Artshow No. | √ | NUMERIC |
| Artshow Type |  | CHAR |
| Artshow Title |  | CHAR |
| Artshow Opening Date |  | Date |
| Artshow Closing Date |  | Date |
| Artshow Theme |  | CHAR |
| Show Featured Artist |  | CHAR |
| Featured Artwork |  | CHAR |
| ARTIST | Artist ID | √ | NUMERIC |
| Artist Last Name |  | CHAR |
| Artist First Name |  | CHAR |
| Artist Address |  | CHAR |
| Artist Reputation |  | CHAR |
| Artist Telephone# |  | Integer |
| Artist Interviewer Name |  | CHAR |
| Artist Interview Date |  | Date |
| ArtistType |  | CHAR |
| ArtistMedium |  | CHAR |
| ArtistStyle |  | CHAR |
| Artist Zip Code |  | Integer |
| Artist City |  | CHAR |
| Artist State |  | CHAR |
| Artist Street |  | CHAR |
| Artist Sales Year to Date D\* |  | NUMERIC |
| Artist Total Sales For Period D\* |  | NUMERIC |
| Artist Total Asking Price For Period D\* |  | NUMERIC |
| Artist Sales Last Year D\* |  | NUMERIC |
| ARTWORK | Artwork ID | √ | CHAR |
| Artwork Title |  | CHAR |
| Artist First Name |  | CHAR |
| Artist Last Name |  | Integer |
| Year Completed |  | CHAR |
| Artwork Type |  | CHAR |
| Artwork Style |  | CHAR |
| Artwork Size |  | Date |
| Date Listed |  | Date |
| Date Returned |  | Date |
| Date Shown |  | CHAR |
| Artwork Status |  | NUMERIC |
| Asking Price |  | NUMERIC |

**Data Dictionary for Entity Relationship Model**

|  |  |  |  |
| --- | --- | --- | --- |
| Entity Name | Attribute | Unique Identifier | DataType |
| COLLECTOR | Collector ID | √ | NUMERIC |
| Collector First Name |  | CHAR |
| Collector Last Name |  | CHAR |
| Collector Interviewer |  | CHAR |
| Collector Interview Date |  | Date |
| Collector Address |  | CHAR |
| Collector City |  | CHAR |
| Collector State |  | CHAR |
| Collector Street |  | CHAR |
| Collector Zip |  | Integer |
| Collector Phone |  | Integer |
| Collector Sales Last Year D\* |  | NUMERIC |
| Collector Sales Year to Date D\* |  | NUMERIC |
| Collector Total Sales For Period D\* |  | NUMERIC |
| Collector Total Asking Price For Period D\* |  | NUMERIC |
| SALE | Sale# | √ | NUMERIC |
| Artwork Title |  | CHAR |
| Sale Date |  | Date |
| Sale Price |  | NUMERIC |
| Sale Tax |  | NUMERIC |
| Sale Total |  | NUMERIC |
| Amount Remitted to Owner |  | NUMERIC |
| Receipt# |  | NUMERIC |
| Payment Method |  | CHAR |
| Salesperson Commission |  | NUMERIC |
| Payment Check Amount |  | NUMERIC |
| Payment Check Stub |  | NUMERIC |
| Artist Last Name D\* |  | CHAR |
| Artist First Name D\* |  | CHAR |
| Salesperson First Name D\* |  | CHAR |
| Salesperson Last Name D\* |  | CHAR |
| Salesperson Name |  | CHAR |
| Total Asking Price For Period D\* |  | NUMERIC |
| Total All Sales For Week D\* |  | NUMERIC |
| SALEPERSON | Saleperson ID | √ | NUMERIC |
| Saleperson First Name |  | CHAR |
| Saleperson Last Name |  | CHAR |
| Saleperson Address |  | CHAR |
| Saleperson Phone# |  | Integer |
| Salesperson Commission For Period D\* |  | NUMERIC |
| Salesperson Total Sales For Period D\* |  | NUMERIC |

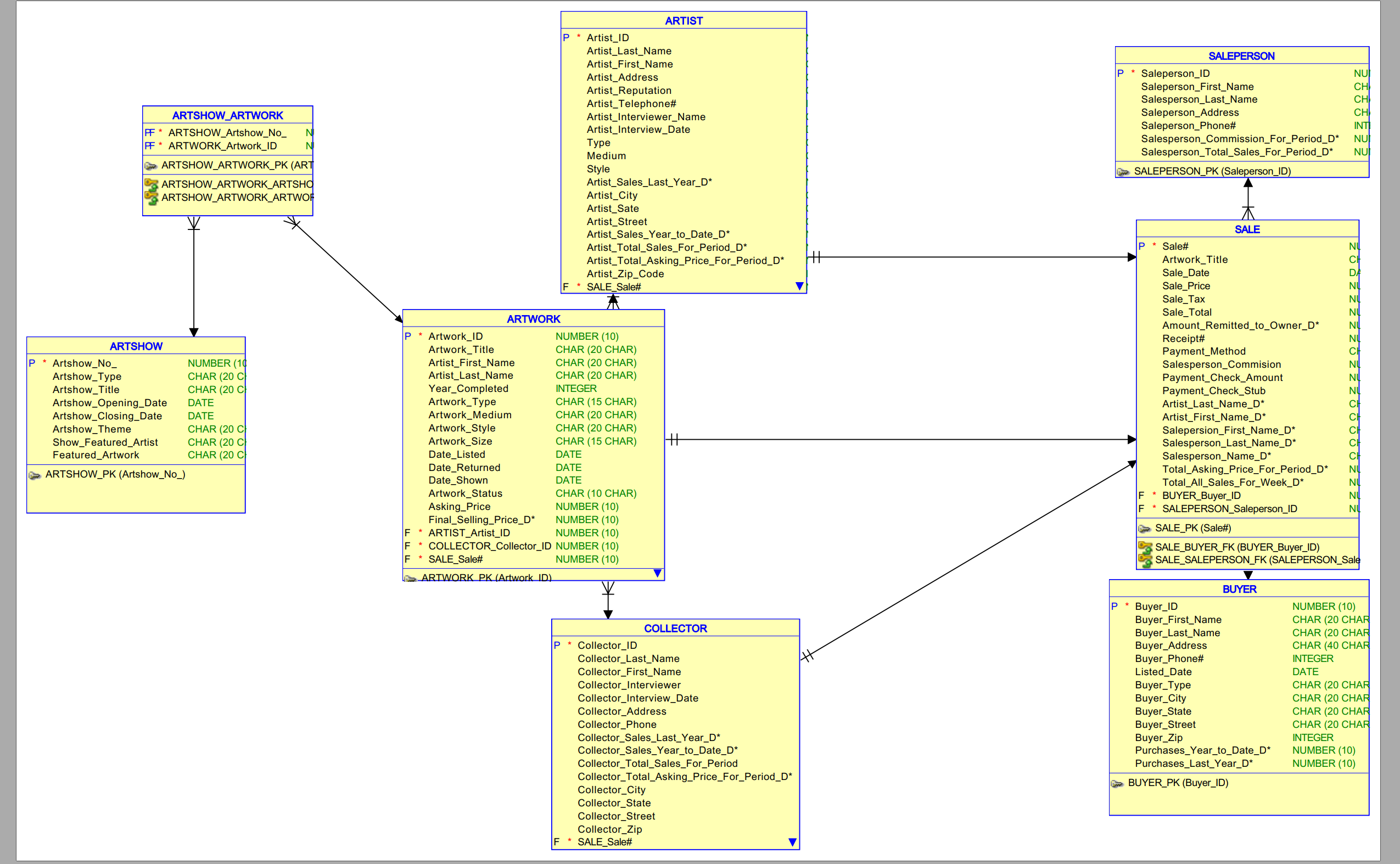
**Data Dictionary for Entity Relationship Model**

|  |  |  |  |
| --- | --- | --- | --- |
| Entity Name | Attribute | Unique Identifier | DataType |
| BUYER | Buyer ID | √ | NUMERIC |
| Buyer First Name |  | CHAR |
| Buyer Address |  | CHAR |
| Buyer City |  | CHAR |
| Buyer Sate |  | CHAR |
| Buyer Street |  | CHAR |
| Buyer Last Name |  | CHAR |
| Buyer Phone# |  | Integer |
| Buyer Zip |  | Integer |
| Buyer Type |  | CHAR |
| Purchases Last Year D\* |  | NUMERIC |
| Purchases Year to Date D\* |  | NUMERIC |

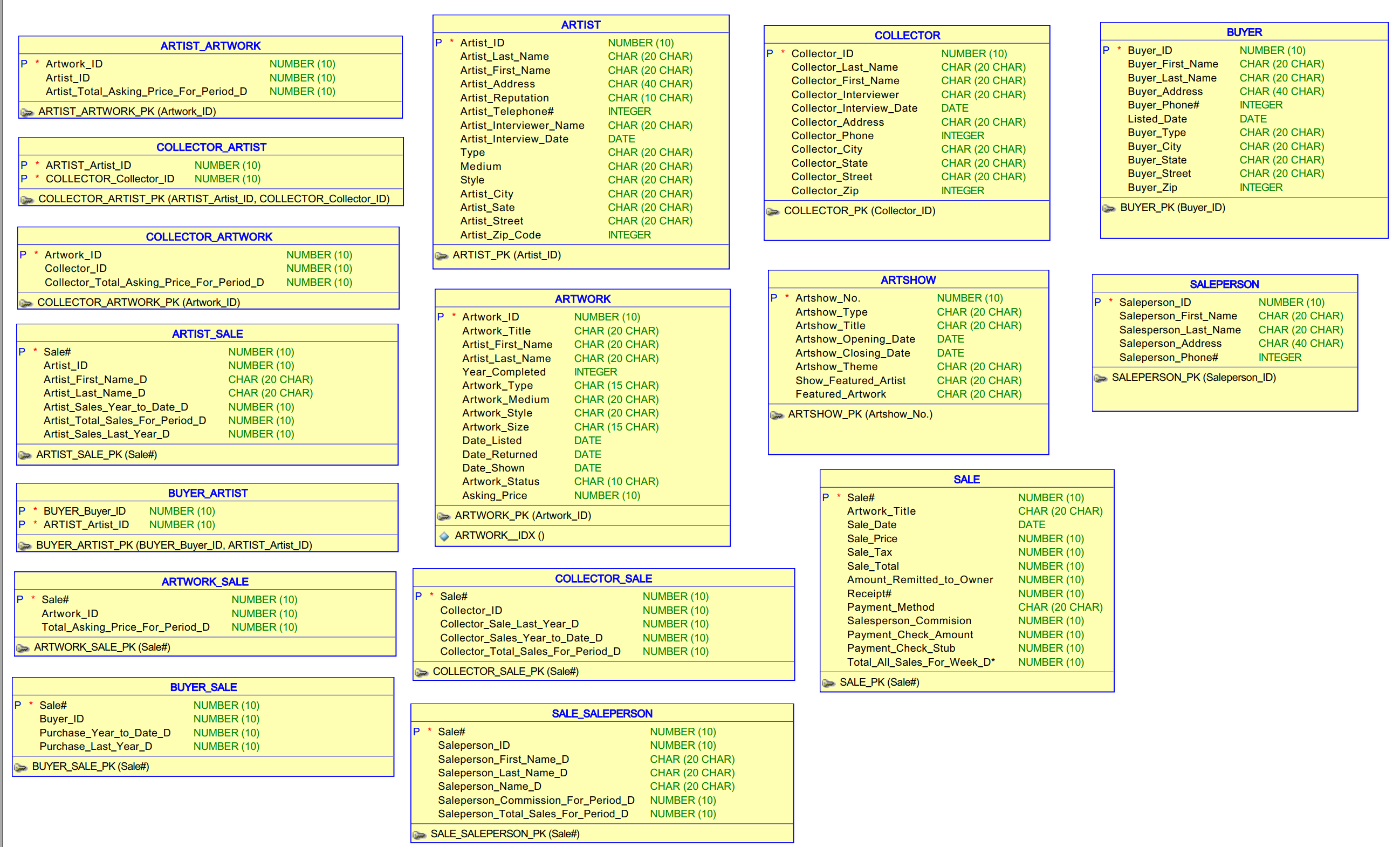
**List of assumptions for Entity Relationship Model**

* Artist Sales Year to Date D\*, Artist Total Sales For Period D\*, Artist Sales Last Year D\* are the descriptive attributes between ARTIST and SALE.
* Artist Total Asking Price For Period D\*\*, is the descriptive attribute between ARTIST and ARTWORK.
* Collector Sales Last Year D\*, Collector Sales Year to Date D\*, Collector Total Sales For Period D\*, are the descriptive attributes between COLLECTOR and SALE.
* Collector Total Asking Price For Period D\*\*, is the descriptive attribute between COLLECTOR and ARTWORK.
* Artist Last Name D\*, Artist First Name D\*, are the descriptive attributes between SALE and ARTIST.
* Total Asking Price For Period D\*, is the descriptive attribute between SALE and ARTWORK.
* Salesperson First Name D\*, Salesperson Last Name D\*, Total All Sales For Week D\* are the descriptive attributes between SALE and SALEPERSON.
* Salesperson Commission For Period D\*, Salesperson Total Sales For Period D\* are the descriptive attributes between SALEPERSON and SALE.
* Purchases Last Year D\*, Purchases Year to Date D\* are the descriptive attributes between BUYER and SALE.

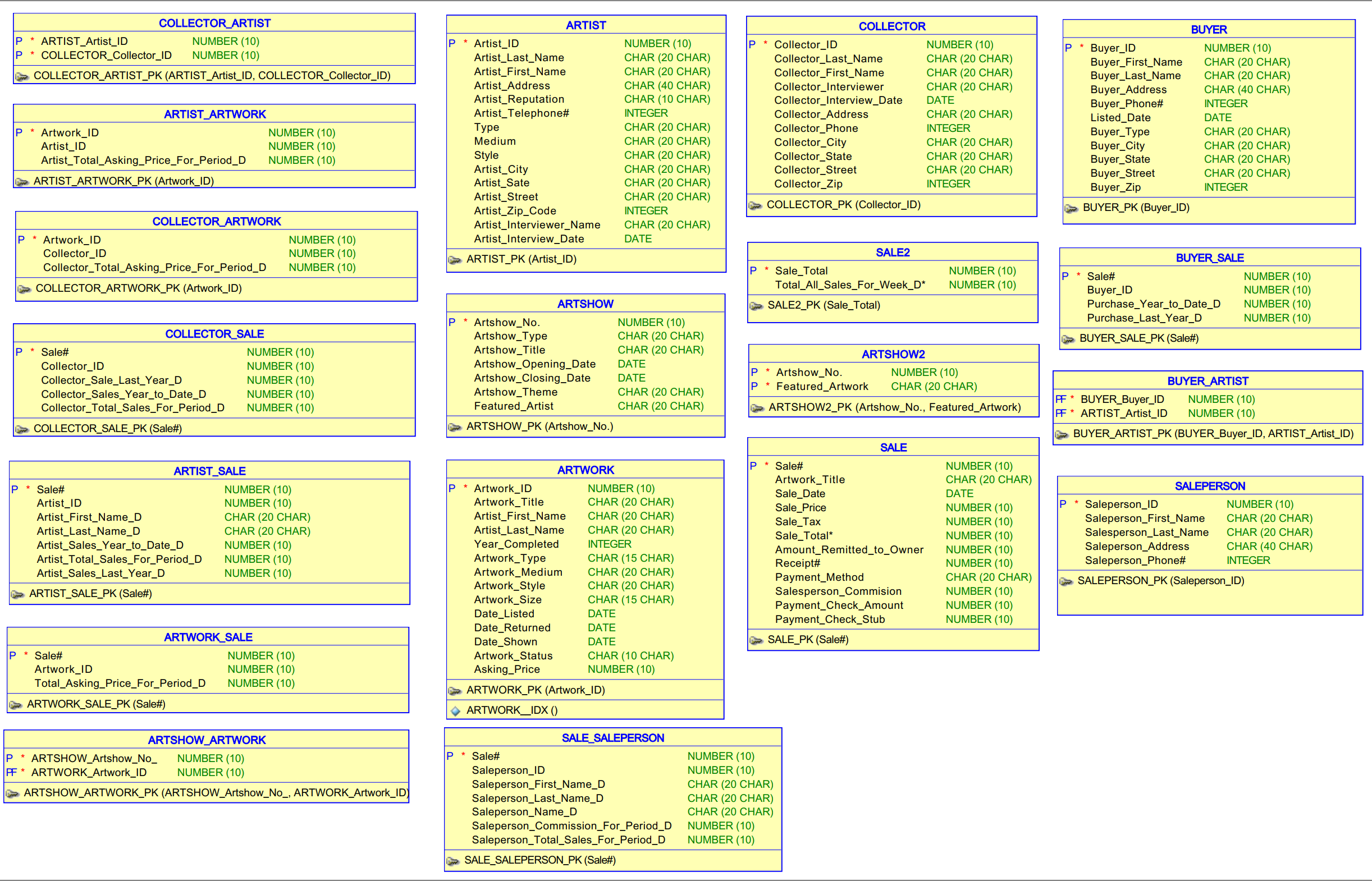
**Default Relational Model for The Art Gallery Sales Tracking System**



**Revised Relational Model for The Art Gallery Sales Tracking System**

****

**Normalized Relational Model for The Art Gallery Sales Tracking System**

****

**Data Dictionary for Normalized Relational Model**

|  |  |  |  |
| --- | --- | --- | --- |
| Entity Name | Attribute | Primary & Foreign Keys | DataType |
| COLLECTOR\_ARTIST | ARTIST\_Artist\_ID | Primary Key | NUMERIC |
| COLLECTOR\_Collector\_ID | Primary Key | NUMERIC |
| ARTIST\_ARTWORK | Artwork\_ID | Primary Key | NUMERIC |
| Artist\_ID |  | NUMERIC |
| Artist\_Total\_Asking\_Price\_For\_Period\_D\* |  | NUMERIC |
| COLLECTOR\_ARTWORK | Artwork\_ID | Primary Key | NUMERIC |
| Collector\_ID |  | NUMERIC |
| Collector\_Total\_Asking\_Price\_For\_Period\_D\* |  | NUMERIC |
| COLLECTOR\_SALE | Sale# | Primary Key | NUMERIC |
| Collector\_ID |  | NUMERIC |
| Collector\_Sale\_Last\_Year\_D\* |  | NUMERIC |
| Collector\_Sales\_Year\_to\_Date\_D\* |  | NUMERIC |
| Collector\_Total\_Sales\_For\_Period\_D\* |  | NUMERIC |
| ARTIST\_SALE | Sale# | Primary Key | NUMERIC |
| Artist\_ID |  | NUMERIC |
| Artist\_First\_Name\_D\* |  | CHAR |
| Artist\_Last\_Name\_D\* |  | CHAR |
| Artist\_Sales\_Year\_to\_Date\_D\* |  | NUMERIC |
| Artist\_Total\_Sales\_For\_Period\_D\* |  | NUMERIC |
| Artist\_Sales\_Last\_Year\_D\* |  | NUMERIC |
| ARTWORK\_SALE | Sale# | Primary Key | NUMERIC |
| Artwork\_ID |  | NUMERIC |
| Total\_Asking\_Price\_For\_Period\_D\* |  | NUMERIC |
| ARTSHOW\_ARTWORK | ARTSHOW\_Artshow\_No | Primary Key | NUMERIC |
| ARTWORK\_Artwork\_ID | Primary Key | NUMERIC |
| SALE\_SALEPERSON | Sale# | Primary Key | NUMERIC |
| Saleperson\_ID |  | NUMERIC |
| Saleperson\_First\_Name\_D\* |  | CHAR |
| Saleperson\_Last\_Name\_D\* |  | CHAR |
| Saleperson\_Name\_D\* |  | CHAR |
| Saleperson\_Commission\_For\_Period\_D\* |  | NUMERIC |
| Saleperson\_Total\_Sales\_For\_Period\_D\* |  | NUMERIC |
| BUYER\_ARTIST | BUYER\_Buyer\_ID | Primary Key | NUMERIC |
| ARTIST\_Artist\_ID | Primary Key | NUMERIC |

**Data Dictionary for Normalized Relational Model**

|  |  |  |  |
| --- | --- | --- | --- |
| Entity Name | Attribute | Primary & Foreign Keys | DataType |
| BUYER\_SALE | Sale# | Primary Key | NUMERIC |
| Buyer\_ID |  | NUMERIC |
| Purchase\_Year\_to\_Date\_D\* |  | NUMERIC |
| Purchase\_Last\_Year\_D\* |  | NUMERIC |
| ARTIST | Artist\_ID | Primary Key | NUMERIC |
| Artist\_Last\_Name |  | CHAR |
| Artist\_First\_Name |  | CHAR |
| Artist\_Address |  | CHAR |
| Artist\_Reputation |  | CHAR |
| Artist\_Telephone# |  | Integer |
| Type |  | CHAR |
| Medium |  | CHAR |
| Style |  | CHAR |
| Artist\_City |  | CHAR |
| Artist\_Sate |  | CHAR |
| Artist\_Street |  | CHAR |
| Artist\_Zip\_Code |  | Integer |
| Artist\_Interviewer\_Name |  | CHAR |
| Artist\_Interview\_Date |  | Date |
| ARTSHOW | Artshow\_No. | Primary Key | NUMERIC |
| Artshow\_Type |  | CHAR |
| Artshow\_Title |  | CHAR |
| Artshow\_Opening\_Date |  | Date |
| Artshow\_Closing\_Date |  | Date |
| Artshow\_Theme |  | CHAR |
| Featured\_Artist |  | CHAR |
| ARTSHOW2 | Artshow\_No. | Primary Key | NUMERIC |
| Featured\_Artwork |  | CHAR |
| ARTWORK | Artwork\_ID | Primary Key | NUMERIC |
| Artwork\_Title |  | CHAR |
| Artist\_First\_Name |  | CHAR |
| Artist\_Last\_Name |  | CHAR |
| Year\_Completed |  | Integer |
| Artwork\_Type |  | CHAR |
| Artwork\_Medium |  | CHAR |
| Artwork\_Style |  | CHAR |
| Artwork\_Size |  | CHAR |
| Date\_Listed |  | Date |
| Date\_Returned |  | Date |
| Date\_Shown |  | Date |
| Artwork\_Status |  | CHAR |
| Asking\_Price |  | NUMERIC |

**Data Dictionary for Normalized Relational Model**

|  |  |  |  |
| --- | --- | --- | --- |
| Entity Name | Attribute | Primary & Foreign Keys | DataType |
| COLLECTOR | Collector\_ID | Primary Key | NUMERIC |
| Collector\_Last\_Name |  | CHAR |
| Collector\_First\_Name |  | CHAR |
| Collector\_Interviewer |  | CHAR |
| Collector\_Interview\_Date |  | Date |
| Collector\_Address |  | CHAR |
| Collector\_Phone |  | Integer |
| Collector\_City |  | CHAR |
| Collector\_State |  | CHAR |
| Collector\_Street |  | CHAR |
| Collector\_Zip |  | Integer |
| SALE | Sale# | Primary Key | NUMERIC |
| Artwork\_Title |  | CHAR |
| Sale\_Date |  | Date |
| Sale\_Price |  | NUMERIC |
| Sale\_Tax |  | NUMERIC |
| Sale\_Total\* |  | NUMERIC |
| Amount\_Remitted\_to\_Owner |  | NUMERIC |
| Receipt# |  | NUMERIC |
| Payment\_Method |  | CHAR |
| Salesperson\_Commision |  | NUMERIC |
| Payment\_Check\_Amount |  | NUMERIC |
| Payment\_Check\_Stub |  | NUMERIC |
| SALE2 | Sale\_Total | Primary Key | NUMERIC |
| Total\_All\_Sales\_For\_Week\_D\* |  | NUMERIC |
| BUYER | Buyer\_ID | Primary Key | NUMERIC |
| Buyer\_First\_Name |  | CHAR |
| Buyer\_Last\_Name |  | CHAR |
| Buyer\_Address |  | CHAR |
| Buyer\_Phone# |  | Integer |
| Listed\_Date |  | Date |
| Buyer\_Type |  | CHAR |
| Buyer\_City |  | CHAR |
| Buyer\_State |  | CHAR |
| Buyer\_Street |  | CHAR |
| Buyer\_Zip |  | Integer |
| SALEPERSON | Saleperson\_ID | Primary Key | NUMERIC |
| Saleperson\_First\_Name |  | CHAR |
| Salesperson\_Last\_Name |  | CHAR |
| Saleperson\_Address |  | CHAR |
| Saleperson\_Phone# |  | Integer |

**List of assumptions for Normalized Relational Model**

* Artist\_Telephone#, Artist\_Zip\_Code, Style could have multiple values (repeating group) for a ARTIST
* Artist\_Address, Artist\_City, Artist\_Sate, Artist\_Street depend on Artist\_Zip\_Code
* An ARTIST could have have several Artist\_Interviewer\_Name, Artist\_Interview\_Date
* Collector\_Telephone#, Collector\_Zip\_Code could have multiple values (repeating group) for a COLLECTOR
* Collector\_Address, Collector\_City, Collector\_Sate, Collector\_Street depend on Collector\_Zip\_Code
* An COLLECTOR could have have several Collector\_Interviewer\_Name, Collector\_Interview\_Date
* Buyer\_Phone #, Buyer\_Zip, could have multiple values (repeating group) for a BUYER
* Buyer\_Address, Buyer\_City, Buyer\_Sate, Buyer\_Street depend on Buyer\_Zip
* Saleperson\_Phone#, Saleperson\_Address, could have multiple values (repeating group) for a SALEPERSON
* Featured\_Artist could have multiple values (repeating group) for a ARTSHOW.
* Featured\_Artwork depends on Artshow\_No.
* Collector\_Telephone#, Collector\_Zip\_Code, Style could have multiple values (repeating group) for an ARTWORK
* An ARTWORK could have have several Asking\_Price
* Date\_Shown, Date\_Listed, Date\_Returned depends on Artwork\_Medium
* Sale\_Total = Sale\_Price + Sale\_Tax
* Amount\_Remitted\_to\_Owner = Sale\_Total - Salesperson\_Commision
* Total\_All\_Sales\_For\_Week\_D\* depend on Sale\_Total
* Payment\_Check\_Stub, Payment\_Check\_Amount, Receipt# depend on Payment\_Method
* Total\_All\_Sales\_For\_Week\_D depend on Sale\_Total
* Artist\_Total\_Asking\_Price\_For\_Period\_D\* = Adding up the individual Asking\_Price of Artist within Period
* Collector\_Total\_Asking\_Price\_For\_Period\_D\* = Adding up the individual Asking\_Price of Collector within Period
* Total\_Asking\_Price\_For\_Period\_D\* = Adding up the individual Asking\_Price within Period
* Collector\_Sale\_Last\_Year\_D\* = Adding up the Sale\_Total\* of Collector last year
* Collector\_Total\_Sales\_For\_Period\_D\* = Adding up the Sale\_Total\* of Collector in Period
* *Collector\_Sales\_Year\_to\_Date\_D\* = Adding up all the* Sale\_Total\* of Collector
* Artist\_Total\_Sales\_For\_Period\_D\* = Adding up the Sale\_Total\* of Artist in Period
* Artist\_Sales\_Last\_Year\_D\* = Adding up the Sale\_Total\* of Artist last year
* Artist\_Sales\_Year\_to\_Date\_D\* = Adding up all the Sale\_Total\* of Artist
* Saleperson\_Commission\_For\_Period\_D\* = Adding up the Salesperson’s Salesperson\_Commission in Period
* Saleperson\_Total\_Sales\_For\_Period\_D\* = Adding up the Salesperson’s Sale\_Total\* in Period
* Purchase\_Last\_Year\_D\* = Adding up the Sale\_Total\* last year
* Purchase\_Year\_to\_Date\_D\* = Adding up all the Sale\_Total\*

**Generate the DDL for The Art Gallery Sales Tracking System**

CREATE TABLE artist (

artist\_id NUMBER(10) NOT NULL,

artist\_last\_name CHAR(20 CHAR),

artist\_first\_name CHAR(20 CHAR),

artist\_address CHAR(40 CHAR),

artist\_reputation CHAR(10 CHAR),

artist\_telephone# INTEGER,

type CHAR(20 CHAR),

medium CHAR(20 CHAR),

style CHAR(20 CHAR),

artist\_city CHAR(20 CHAR),

artist\_sate CHAR(20 CHAR),

artist\_street CHAR(20 CHAR),

artist\_zip\_code INTEGER,

artist\_interviewer\_name CHAR(20 CHAR),

artist\_interview\_date DATE

);

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

CREATE TABLE artist\_artwork (

artwork\_id NUMBER(10) NOT NULL,

artist\_id NUMBER(10) NOT NULL,

artist\_total\_asking\_price\_for\_period\_d NUMBER(10)

);

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

CREATE TABLE artist\_sale (

sale# NUMBER(10) NOT NULL,

artist\_id NUMBER(10) NOT NULL,

artist\_first\_name\_d CHAR(20 CHAR),

artist\_last\_name\_d CHAR(20 CHAR),

artist\_sales\_year\_to\_date\_d NUMBER(10),

artist\_total\_sales\_for\_period\_d NUMBER(10),

artist\_sales\_last\_year\_d NUMBER(10)

);

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

CREATE TABLE artshow (

"Artshow\_No." NUMBER(10) NOT NULL,

artshow\_type CHAR(20 CHAR),

artshow\_title CHAR(20 CHAR),

artshow\_opening\_date DATE,

artshow\_closing\_date DATE,

artshow\_theme CHAR(20 CHAR),

featured\_artist CHAR(20 CHAR)

);

ALTER TABLE artshow ADD CONSTRAINT artshow\_pk PRIMARY KEY ( "Artshow\_No." );

CREATE TABLE artshow\_artwork (

artshow\_artshow\_no\_ NUMBER(10) NOT NULL,

artwork\_artwork\_id NUMBER(10) NOT NULL

);

ALTER TABLE artshow\_artwork ADD CONSTRAINT artshow\_artwork\_pk PRIMARY KEY ( artshow\_artshow\_no\_,

artwork\_artwork\_id );

CREATE TABLE artshow2 (

"Artshow\_No." NUMBER(10) NOT NULL,

featured\_artwork CHAR(20 CHAR) NOT NULL

);

ALTER TABLE artshow2 ADD CONSTRAINT artshow2\_pk PRIMARY KEY ( "Artshow\_No.",

featured\_artwork );

CREATE TABLE artwork (

artwork\_id NUMBER(10) NOT NULL,

artwork\_title CHAR(20 CHAR),

artist\_first\_name CHAR(20 CHAR),

artist\_last\_name CHAR(20 CHAR),

year\_completed INTEGER,

artwork\_type CHAR(15 CHAR),

artwork\_medium CHAR(20 CHAR),

artwork\_style CHAR(20 CHAR),

artwork\_size CHAR(15 CHAR),

date\_listed DATE,

date\_returned DATE,

date\_shown DATE,

artwork\_status CHAR(10 CHAR),

asking\_price NUMBER(10),

collector\_id NUMBER(10) NOT NULL

);

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

CREATE TABLE artwork\_sale (

sale# NUMBER(10) NOT NULL,

artwork\_id NUMBER(10) NOT NULL,

total\_asking\_price\_for\_period\_d NUMBER(10)

);

ALTER TABLE artwork\_sale ADD CONSTRAINT artwork\_sale\_pk PRIMARY KEY ( sale# );

CREATE TABLE buyer (

buyer\_id NUMBER(10) NOT NULL,

buyer\_first\_name CHAR(20 CHAR),

buyer\_last\_name CHAR(20 CHAR),

buyer\_address CHAR(40 CHAR),

buyer\_phone# INTEGER,

listed\_date DATE,

buyer\_type CHAR(20 CHAR),

buyer\_city CHAR(20 CHAR),

buyer\_state CHAR(20 CHAR),

buyer\_street CHAR(20 CHAR),

buyer\_zip INTEGER

);

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

CREATE TABLE buyer\_artist (

buyer\_buyer\_id NUMBER(10) NOT NULL,

artist\_artist\_id NUMBER(10) NOT NULL

);

ALTER TABLE buyer\_artist ADD CONSTRAINT buyer\_artist\_pk PRIMARY KEY ( buyer\_buyer\_id,

artist\_artist\_id );

CREATE TABLE buyer\_sale (

sale# NUMBER(10) NOT NULL,

buyer\_id NUMBER(10) NOT NULL,

purchase\_year\_to\_date\_d NUMBER(10),

purchase\_last\_year\_d NUMBER(10)

);

ALTER TABLE buyer\_sale ADD CONSTRAINT buyer\_sale\_pk PRIMARY KEY ( sale# );

CREATE TABLE collector (

collector\_id NUMBER(10) NOT NULL,

collector\_last\_name CHAR(20 CHAR),

collector\_first\_name CHAR(20 CHAR),

collector\_interviewer CHAR(20 CHAR),

collector\_interview\_date DATE,

collector\_address CHAR(20 CHAR),

collector\_phone INTEGER,

collector\_city CHAR(20 CHAR),

collector\_state CHAR(20 CHAR),

collector\_street CHAR(20 CHAR),

collector\_zip INTEGER

);

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

CREATE TABLE collector\_artist (

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

collector\_collector\_id NUMBER(10) NOT NULL

);

ALTER TABLE collector\_artist ADD CONSTRAINT collector\_artist\_pk PRIMARY KEY ( artist\_artist\_id,

collector\_collector\_id );

CREATE TABLE collector\_artwork (

artwork\_id NUMBER(10) NOT NULL,

collector\_id NUMBER(10),

collector\_total\_asking\_price\_for\_period\_d NUMBER(10)

);

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

CREATE TABLE collector\_sale (

sale# NUMBER(10) NOT NULL,

collector\_id NUMBER(10) NOT NULL,

collector\_sale\_last\_year\_d NUMBER(10),

collector\_sales\_year\_to\_date\_d NUMBER(10),

collector\_total\_sales\_for\_period\_d NUMBER(10)

);

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

CREATE TABLE sale (

sale# NUMBER(10) NOT NULL,

artwork\_title CHAR(20 CHAR),

sale\_date DATE,

sale\_price NUMBER(10),

sale\_tax NUMBER(10),

"Sale\_Total\*" NUMBER(10),

amount\_remitted\_to\_owner NUMBER(10),

receipt# NUMBER(10),

payment\_method CHAR(20 CHAR),

salesperson\_commision NUMBER(10),

payment\_check\_amount NUMBER(10),

payment\_check\_stub NUMBER(10)

);

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

CREATE TABLE sale\_saleperson (

sale# NUMBER(10) NOT NULL,

saleperson\_id NUMBER(10) NOT NULL,

saleperson\_first\_name\_d CHAR(20 CHAR),

saleperson\_last\_name\_d CHAR(20 CHAR),

saleperson\_name\_d CHAR(20 CHAR),

saleperson\_commission\_for\_period\_d NUMBER(10),

saleperson\_total\_sales\_for\_period\_d NUMBER(10)

);

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

CREATE TABLE sale2 (

sale\_total NUMBER(10) NOT NULL,

"Total\_All\_Sales\_For\_Week\_D\*" NUMBER(10)

);

ALTER TABLE sale2 ADD CONSTRAINT sale2\_pk PRIMARY KEY ( sale\_total );

CREATE TABLE saleperson (

saleperson\_id NUMBER(10) NOT NULL,

saleperson\_first\_name CHAR(20 CHAR),

salesperson\_last\_name CHAR(20 CHAR),

saleperson\_address CHAR(40 CHAR),

saleperson\_phone# INTEGER

);

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

ALTER TABLE artist\_artwork

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

REFERENCES artist ( artist\_id );

ALTER TABLE artist\_artwork

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

REFERENCES artwork ( artwork\_id );

ALTER TABLE artist\_sale

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

REFERENCES artist ( artist\_id );

ALTER TABLE artist\_sale

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

REFERENCES sale ( sale# );

ALTER TABLE artshow\_artwork

ADD CONSTRAINT artshow\_artwork\_artshow\_fk FOREIGN KEY ( artshow\_artshow\_no\_ )

REFERENCES artshow ( "Artshow\_No." );

ALTER TABLE artshow\_artwork

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

REFERENCES artwork ( artwork\_id );

ALTER TABLE artshow2

ADD CONSTRAINT artshow2\_artshow\_fk FOREIGN KEY ( "Artshow\_No." )

REFERENCES artshow ( "Artshow\_No." );

ALTER TABLE artwork

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

REFERENCES collector ( collector\_id );

ALTER TABLE artwork\_sale

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

REFERENCES artwork ( artwork\_id );

ALTER TABLE artwork\_sale

ADD CONSTRAINT artwork\_sale\_sale\_fk FOREIGN KEY ( sale# )

REFERENCES sale ( sale# );

ALTER TABLE buyer\_artist

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

REFERENCES artist ( artist\_id );

ALTER TABLE buyer\_artist

ADD CONSTRAINT buyer\_artist\_buyer\_fk FOREIGN KEY ( buyer\_buyer\_id )

REFERENCES buyer ( buyer\_id );

ALTER TABLE buyer\_sale

ADD CONSTRAINT buyer\_sale\_buyer\_fk FOREIGN KEY ( buyer\_id )

REFERENCES buyer ( buyer\_id );

ALTER TABLE buyer\_sale

ADD CONSTRAINT buyer\_sale\_sale\_fk FOREIGN KEY ( sale# )

REFERENCES sale ( sale# );

ALTER TABLE collector\_artist

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

REFERENCES artist ( artist\_id );

ALTER TABLE collector\_artist

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

REFERENCES collector ( collector\_id );

ALTER TABLE collector\_sale

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

REFERENCES collector ( collector\_id );

ALTER TABLE collector\_sale

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

REFERENCES sale ( sale# );

ALTER TABLE sale\_saleperson

ADD CONSTRAINT sale\_saleperson\_sale\_fk FOREIGN KEY ( sale# )

REFERENCES sale ( sale# );

ALTER TABLE sale\_saleperson

ADD CONSTRAINT sale\_saleperson\_saleperson\_fk FOREIGN KEY ( saleperson\_id )

REFERENCES saleperson ( saleperson\_id );

-- Oracle SQL Developer Data Modeler Summary Report:

--

-- CREATE TABLE 19

-- CREATE INDEX 0

-- ALTER TABLE 39

-- 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 0

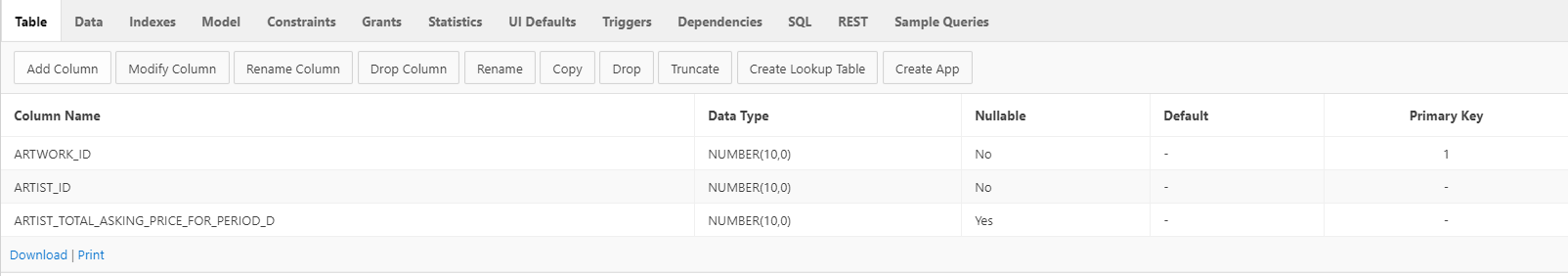
-- WARNINGS 0

**Table *structures* for all tables arranged properly**

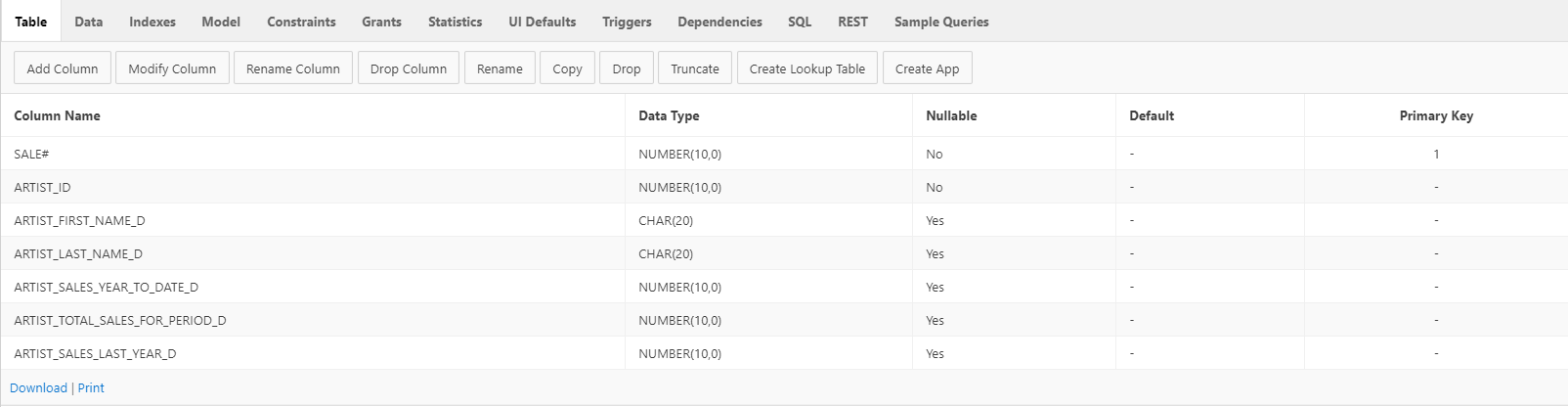
ARTIST



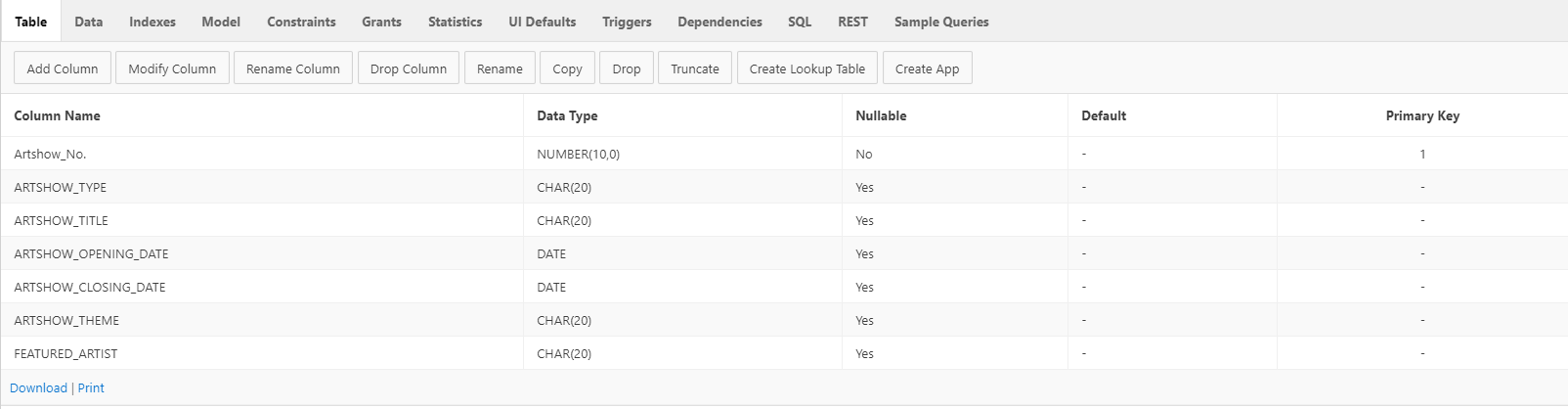
ARTIST\_ARTWORK



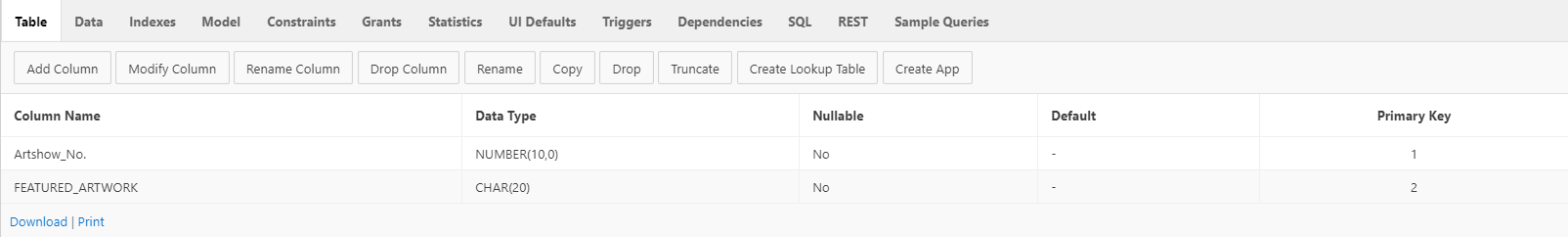
ARTIST\_SALE



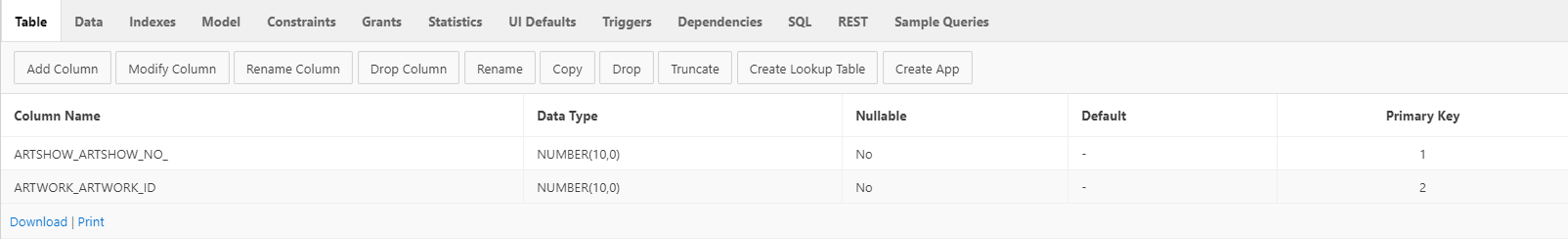
ARTSHOW



ARTSHOW2



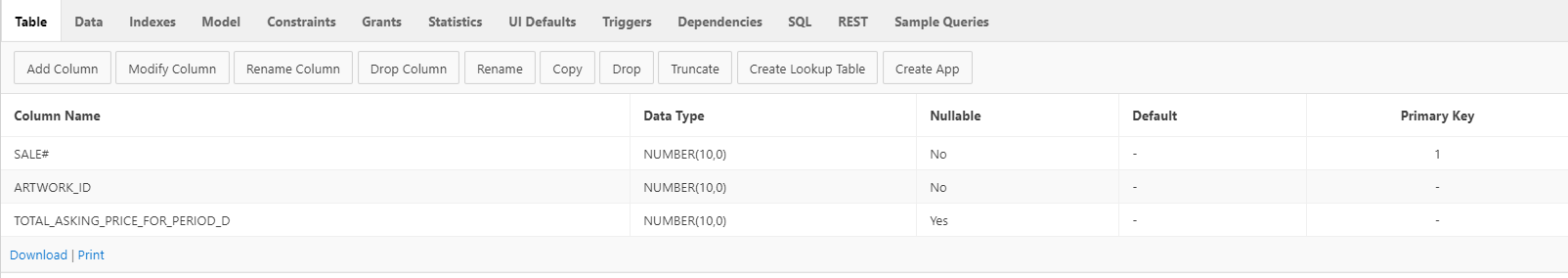
ARTSHOW\_ARTWORK



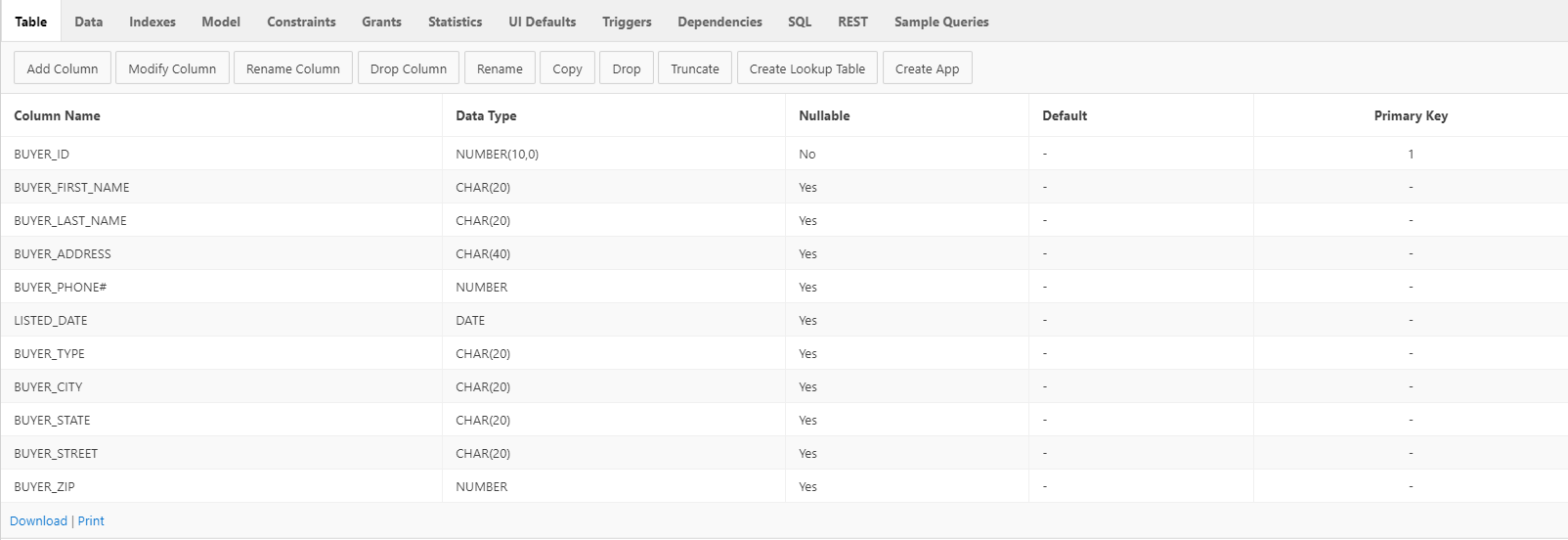
ARTWORK



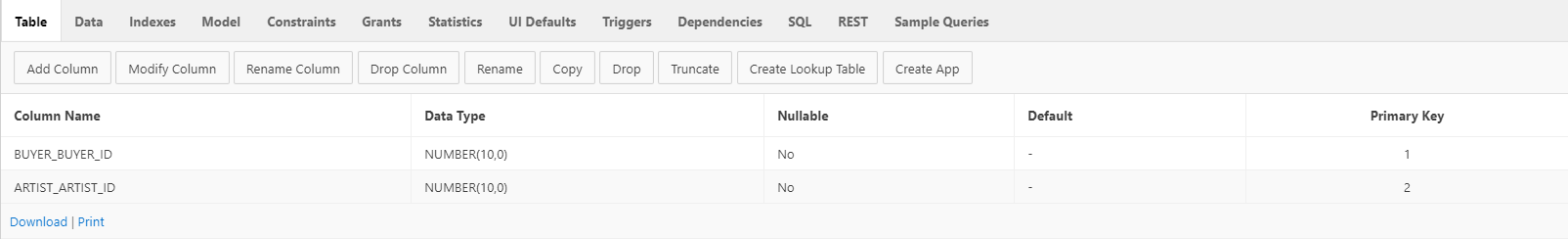
ARTWORK\_SALE



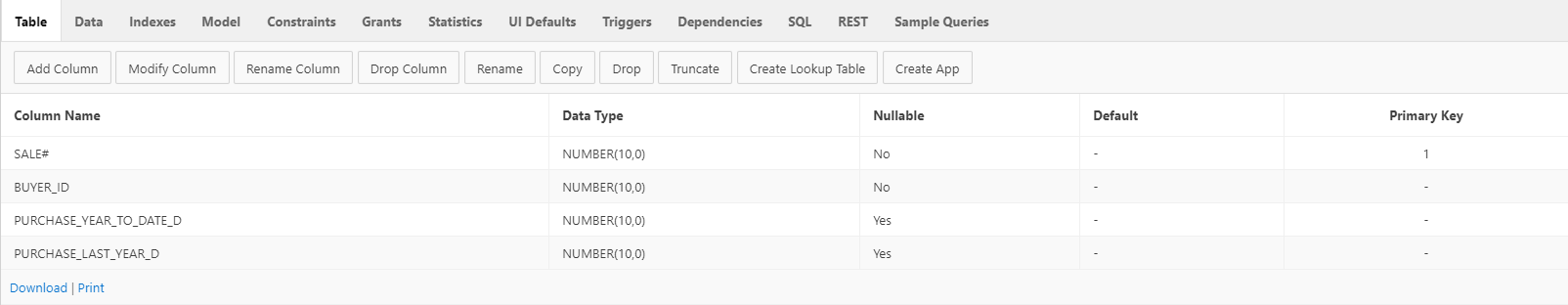
BUYER



BUYER\_ARTIST



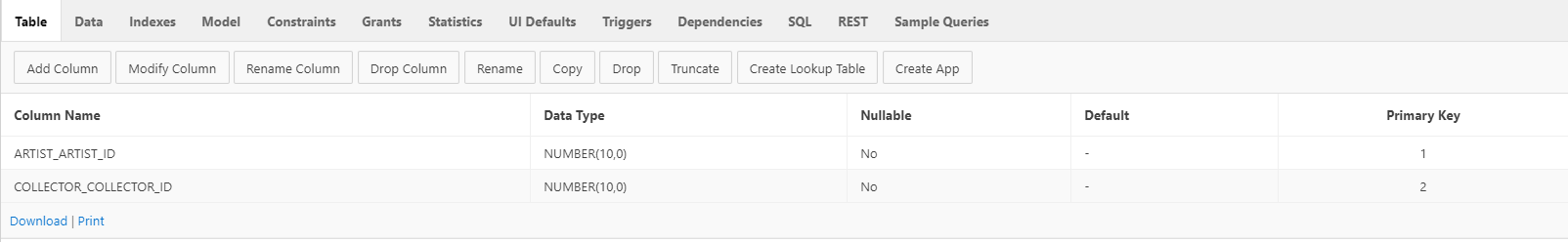
BUYER\_SALE



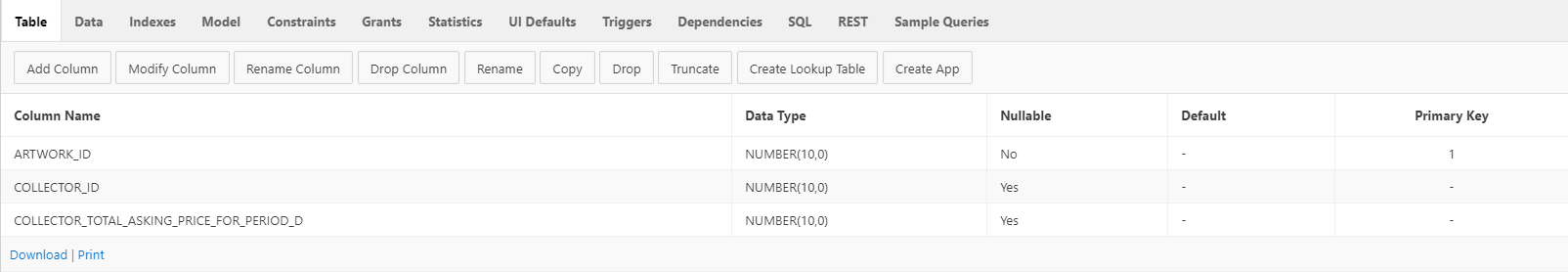
COLLECTOR



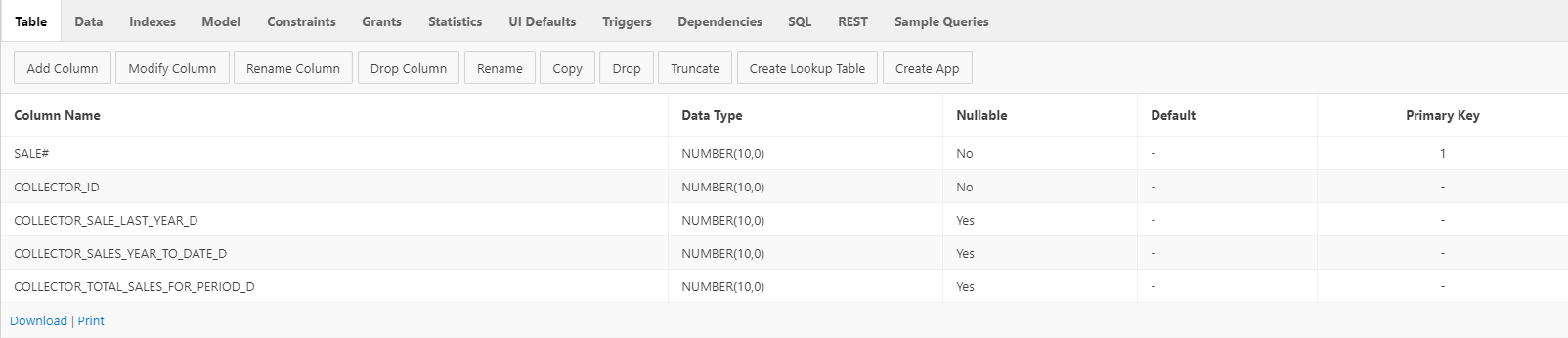
COLLECTOR\_ARTIST



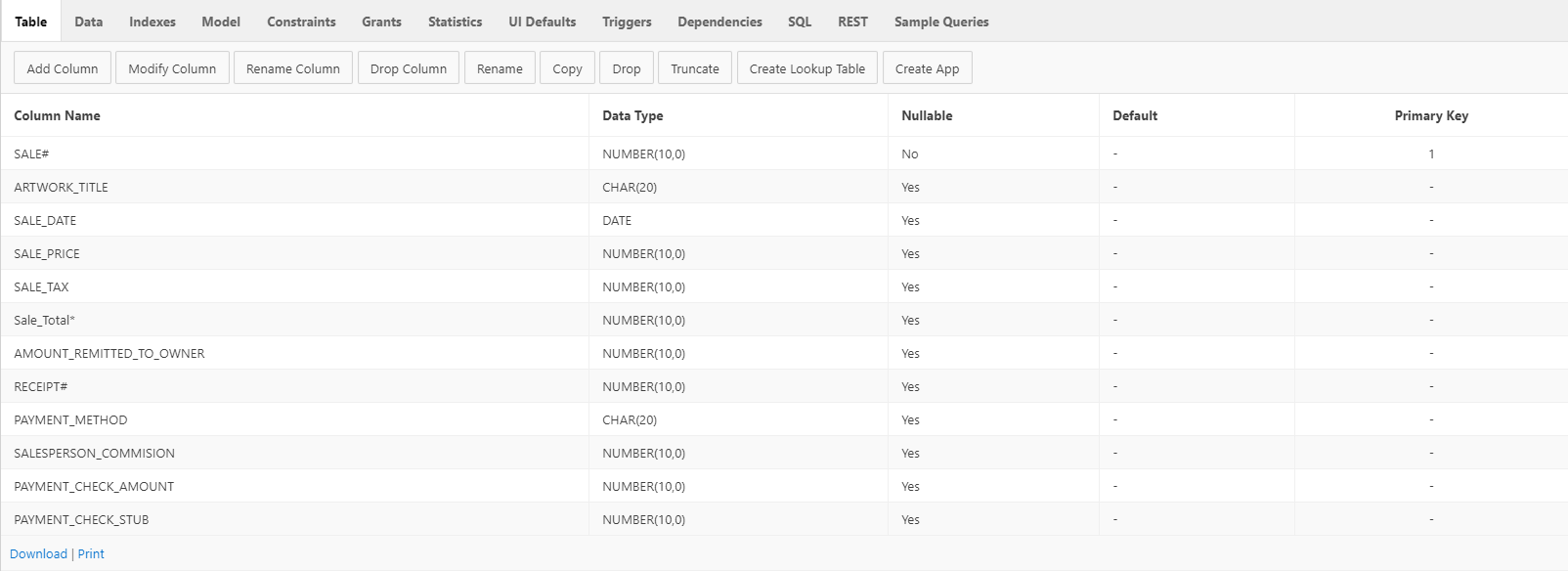
COLLECTOR\_ARTWORK



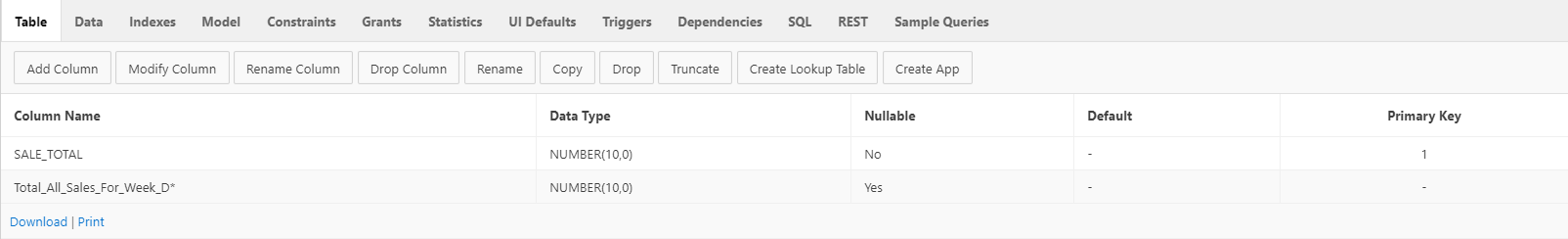
COLLECTOR\_SALE



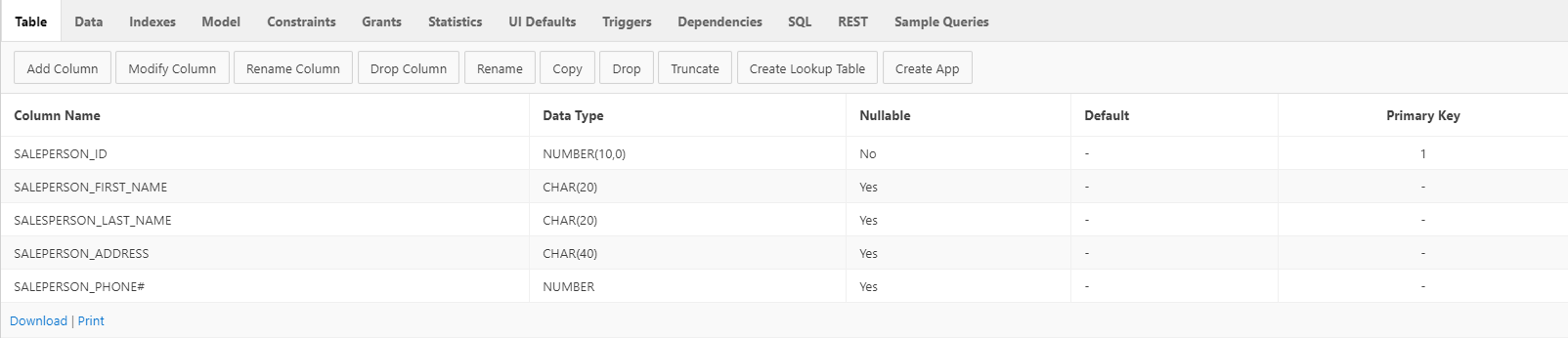
SALE



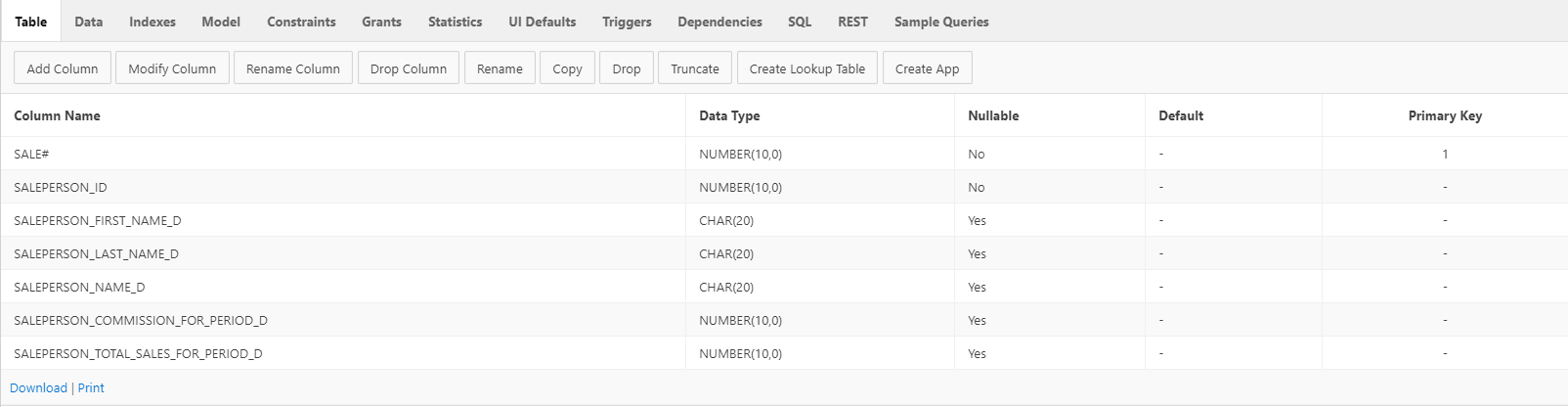
SALE2



SALEPERSON



SALE\_SALEPERSON



**Screenshot of database in APEX (successfully generated)**

