**ASSIGNMENT DBS 301 - Assignment 3 – Section D, WINTER 2018**

**Prof. Nebojsa Conkic DONE BY:**

GROUP No. 11

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| --- | --- | --- |
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1. TIC

ORDERS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column name** | OrderId | OrderDate | OrderTotal | CustomerId |
| **PK/FK** | PK |  |  | FK |
| **NN/UK** |  | NN |  | NN |
| **FK table** |  |  |  | Customers |
| **FK column** |  |  |  | CustomerId |
| **Datatype** | NUMBER | DATE | NUMBER | NUMBER |
| **Max length** | 8 |  | (6,2) | 6 |
| **Validate** |  |  |  |  |
| **Sample Data 1** | 11223344 | 2018-04-20 | 100.00 | 654321 |
| **Sample Data 2** | 11223355 | 2017-08-22 | 114.41 | 654322 |
| **Sample Data 3** | 11223366 | 2016-04-18 | 420.20 | 654323 |

PAYMENT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column name** | OrderId | CardNum | CardHolder | ExpDate | CardType |
| **Key type** | PK,FK | PK |  |  |  |
| **NN/UK** |  |  | NN | NN | NN |
| **FK table** | Orders |  |  |  |  |
| **FK column** | OrderId |  |  |  |  |
| **Datatype** | NUMBER | NUMBER | VARCHAR2 | DATE | VARCHAR2 |
| **Max length** | 8 | 16 | 25 |  | 15 |
| **Validate** |  |  |  |  | IN (‘A’, ‘D’, ‘M’,’V’) |
| **Sample Data 1** | 12345678 | 4500000011223344 | Michael Jackson | 2022-05 | V |
| **Sample Data 2** | 12345679 | 3700122031004545 | Lebron James | 2019-06 | A |
| **Sample Data 3** | 12345680 | 5191123443001718 | Nickel Pommer | 2020-08 | M |

RECORDING

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Column name** | RecordingId | Title | Artist | SellPrice | QtyInStock | CategoryId | LabelId |
| **Key type** | PK |  |  |  |  | FK1 | FK2 |
| **NN/UK** |  | NN | NN | NN |  | NN | NN |
| **FK table** |  |  |  |  |  | Category | Label |
| **FK column** |  |  |  |  |  | CategoryId | LabelId |
| **Datatype** | NUMBER | VARCHAR2 | VARCHAR2 | NUMBER | NUMBER | NUMBER | NUMBER |
| **Max length** | 5 | 25 | 25 | (4,2) | 3 | 3 | 3 |
| **Validate** |  |  |  | >0 | >= 0 |  |  |
| **Sample Data 1** | 10005 | Baby | Justin Bieber | 8.50 | 9 | 121 | 621 |
| **Sample Data 2** | 10006 | Marvins Room | Drake | 9.50 | 5 | 122 | 321 |
| **Sample Data 3** | 10007 | Gods Plan | Drake | 9.50 |  | 123 | 421 |

ORDER\_LINE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column name** | OrderId | Line# | Qty | ActPrice | RecordingID |
| **Key type** | PK,FK1 | PK |  |  | FK2 |
| **NN/UK** |  |  |  | NN | NN |
| **FK table** | Orders |  |  |  | Recording |
| **FK column** | OrderId |  |  |  | RecordingId |
| **Datatype** | NUMBER | NUMBER | NUMBER | NUMBER | NUMBER |
| **Max length** | 8 | 2 | 3 | (4,2) | 5 |
| **Validate** |  |  | >= 0 | >0 |  |
| **Sample Data 1** | 12345678 | 2 | 5 | 9.99 | 10005 |
| **Sample Data 2** | 12345679 | 6 | 4 | 8.99 | 10006 |
| **Sample Data 3** | 12345680 | 1 | 2 | 12.99 | 10007 |

RECORD\_HIST

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column name** | RecordingId | Price# | Price | StartDate |
| **Key type** | PK,FK | PK |  |  |
| **NN/UK** |  |  | NN | NN |
| **FK table** | Recording |  |  |  |
| **FK column** | RecordingId |  |  |  |
| **Datatype** | NUMBER | NUMBER | NUMBER | DATE |
| **Max length** | 5 | 2 | (4,2) |  |
| **Validate** |  |  | >0 |  |
| **Sample Data 1** | 10005 | 1 | 9.99 | 2017-12-20 |
| **Sample Data 2** | 10005 | 2 | 12.99 | 2018-01-01 |
| **Sample Data 3** | 10006 | 2 | 10.99 | 2018-04-08 |

SALES\_REP

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Column name** | LabelId | Rep# | LastName | FirstName | Phone# | Email | RegionId |
| **Key type** | PK,FK1 | PK |  |  |  |  | FK2 |
| **NN/UK** |  |  | NN | NN | NN,UK | UK | NN |
| **FK table** | Label |  |  |  |  |  | Region |
| **FK column** | LabelId |  |  |  |  |  | RegionId |
| **Datatype** | NUMBER | NUMBER | VARCHAR2 | VARCHAR2 | NUMBER | VARCHAR2 | VARCHAR2 |
| **Max length** | 3 | 5 | 25 | 25 | 12 | 25 | 3 |
| **Validate** |  |  |  |  |  |  |  |
| **Sample Data 1** | 621 | 90013 | Oma | Ali | 4169990299 | [Ali.oma@yahoo.com](mailto:Ali.oma@yahoo.com) | CAN |
| **Sample Data 2** | 321 | 90014 | Lee | Bruce | 6132888108 | [Bruce.lee@gmail.com](mailto:Bruce.lee@gmail.com) | CAN |
| **Sample Data 3** | 421 | 90012 | Lee | Brandon | 5141234566 | [Lee.V@hotmail.com](mailto:Lee.V@hotmail.com) | CAN |

1. DDL

CREATE TABLE CUSTOMER(

CustomerId NUMBER(6),

LastName VARCHAR2(25) NOT NULL,

FirstName VARCHAR2(25) NOT NULL,

DOB DATE,

Address VARCHAR2(35),

City VARCHAR2(20),

Province VARCHAR2(20),

PostCode VARCHAR2(6) NOT NULL,

Email VARCHAR2(25) ,

CONSTRAINT customer\_email\_uk UNIQUE (Email)

);

CREATE TABLE ORDERS(

OrderId NUMBER(8),

OrderDate DATE NOT NULL,

OrderTotal NUMBER(6,2),

CustomerId NUMBER(6) NOT NULL

);

CREATE TABLE PAYMENT(

OrderId NUMBER(8),

CardNum NUMBER(16),

CardHolder VARCHAR2(25) NOT NULL,

ExpDate DATE NOT NULL,

CardType VARCHAR2(15) NOT NULL,

CONSTRAINT payment\_cardType\_ck CHECK (CardType IN (‘A’, ‘D’, ‘M’, ‘V’))

);

CREATE TABLE RECORDING(

RecordingId NUMBER(5),

Title VARCHAR2(25) NOT NULL,

Artist VARCHAR2(25) NOT NULL,

SellPrice NUMBER(3,2) NOT NULL,

QtyInStock NUMBER(3),

CategoryId NUMBER(3) NOT NULL,

LabelId NUMBER(3) NOT NULL,

CONSTRAINT recording\_sellprice\_ck CHECK (SellPrice > 0),

CONSTRAINT recording\_qtyInStock\_ck CHECK (QtyInStock >= 0)

);

CREATE TABLE ORDER\_LINE(

OrderId NUMBER(8),

Line# NUMBER(2),

Qty NUMBER(3),

ActPrice NUMBER(3,2) NOT NULL,

RecordingId NUMBER(5) NOT NULL,

CONSTRAINT orderline\_qty\_ck CHECK (Qty >= 0),

CONSTRAINT orderline\_actPrice CHECK (ActPrice > 0)

);

CREATE TABLE RECORD\_HIST(

RecordingId NUMBER(5),

Price# NUMBER(2),

Price NUMBER(3,2) NOT NULL,

StartDate DATE NOT NULL,

CONSTRAINT recordHist\_price\_ck CHECK (Price >0)

);

CREATE TABLE CATEGORY(

CategoryId NUMBER(3),

CategoryDesc VARCHAR2(25) NOT NULL,

CONSTRAINT category\_categoryDesc\_uk UNIQUE (CategoryDesc)

);

CREATE TABLE LABEL (

LabelId NUMBER(3),

LabelName VARCHAR2(25) NOT NULL,

URL VARCHAR2(35) NOT NULL,

CONSTRAINT label\_labelName\_uk UNIQUE (LabelName),

CONSTRAINT label\_url\_uk UNIQUE (URL)

);

CREATE TABLE REGION (

RegionId VARCHAR2(3),

RegionName VARCHAR2(25) NOT NULL,

CONSTRAINT region\_regionName\_uk UNIQUE (RegionName)

);

CREATE TABLE SALES\_REP (

LabelId NUMBER(3),

Rep# NUMBER(5),

LastName VARCHAR2(25) NOT NULL,

FirstName VARCHAR2(25) NOT NULL,

Phone# NUMBER(12) NOT NULL,

Email VARCHAR2(25),

RegionId VARCHAR2(3) NOT NULL,

CONSTRAINT salesrep\_phone\_uk UNIQUE (Phone#),

CONSTRAINT salesrep\_email\_uk UNIQUE (Email)

);

1. PK, FK using alter

* CUSTOMER

ALTER TABLE CUSTOMER

ADD CONSTRAINT customer\_customerId\_pk PRIMARY KEY (CustomerId);

* ORDERS

ALTER TABLE ORDERS

ADD CONSTRAINT orders\_orderId\_pk PRIMARY KEY (OrderId);

ALTER TABLE ORDERS

ADD CONSTRAINT orders\_customerId\_fk FOREIGN KEY (CustomerId)

REFERENCES customer (CustomerId);

* PAYMENT

ALTER TABLE PAYMENT

ADD CONSTRAINT payment\_orderId\_cardNum\_pk PRIMARY KEY (OrderId, CardNum);

ALTER TABLE PAYMENT

ADD CONSTRAINT payment\_orderId\_fk FOREIGN KEY (OrderId)

REFERENCES orders (OrderId);

* CATEGORY

ALTER TABLE CATEGORY

ADD CONSTRAINT category\_categoryId\_pk PRIMARY KEY (CategoryId);

* LABEL

ALTER TABLE LABEL

ADD CONSTRAINT label\_labelId\_pk PRIMARY KEY (LabelId);

* RECORDING

ALTER TABLE RECORDING

ADD CONSTRAINT recording\_recordingId\_pk PRIMARY KEY (RecordingId);

ALTER TABLE RECORDING

ADD CONSTRAINT recording\_categoryId\_fk FOREIGN KEY (CategoryId)

REFERENCES category (CategoryId);

ALTER TABLE RECORDING

ADD CONSTRAINT recording\_labelId\_fk FOREIGN KEY (LabelId)

REFERENCES label (LabelId);

* ORDER\_LINE

ALTER TABLE ORDER\_LINE

ADD CONSTRAINT orderline\_orderId\_line\_pk PRIMARY KEY (OrderId, Line#);

ALTER TABLE ORDER\_LINE

ADD CONSTRAINT orderline\_orderId\_fk FOREIGN KEY (OrderId)

REFERENCES orders (OrderId);

ALTER TABLE ORDER\_LINE

ADD CONSTRAINT orderline\_recordingId\_fk FOREIGN KEY (RecordingId)

REFERENCES recording (RecordingId);

* RECORD\_HIST

ALTER TABLE RECORD\_HIST

ADD CONSTRAINT recrdHist\_recrdIdprice\_pk PRIMARY KEY (RecordingId, Price#);

ALTER TABLE RECORD\_HIST

ADD CONSTRAINT recordHist\_recordingId\_fk FOREIGN KEY (RecordingId)

REFERENCES recording (RecordingId);

* REGION

ALTER TABLE REGION

ADD CONSTRAINT region\_regionId\_pk PRIMARY KEY (RegionId);

* SALES\_REP

ALTER TABLE SALES\_REP

ADD CONSTRAINT salesrep\_labelId\_rep\_pk PRIMARY KEY (LabelId, Rep#);

ALTER TABLE SALES\_REP

ADD CONSTRAINT salesrep\_labelId\_fk FOREIGN KEY (LabelId)

REFERENCES label (LabelId);

ALTER TABLE SALES\_REP

ADD CONSTRAINT salesrep\_regionId\_fk FOREIGN KEY (RegionId)

REFERENCES region (RegionId);

1. DML

INSERT INTO CUSTOMER values (100100, 'Jackson', 'Michael', TO\_DATE('1981-05-12', 'YYYY-MM-DD'), '12 Riverdale', 'Toronto', 'Ontario', '111222', 'michaeljackson@yahoo.com' );

INSERT INTO CUSTOMER values (100101, 'James', 'Lebron', TO\_DATE('1994-02-14', 'YYYY-MM-DD'), '112 Empire', 'Toronto', 'Ontario', '234123', 'lebrondajames@gmail.com' );

INSERT INTO CUSTOMER values (100102, 'Pommer', 'Nickel', TO\_DATE('1986-12-20', 'YYYY-MM-DD'), '10th Street', 'Montreal', 'Quebec', '874278', 'nickel.pommer@hotmail.com' );

INSERT INTO ORDERS values (12345678, TO\_DATE('2018-04-16', 'YYYY-MM-DD'), 292.80, 100100);

INSERT INTO ORDERS values (12345679, TO\_DATE('2018-04-17', 'YYYY-MM-DD'), 365.00, 100101);

INSERT INTO ORDERS values (12345680, TO\_DATE('2018-04-18', 'YYYY-MM-DD'), 420.10, 100102);

INSERT INTO PAYMENT values (12345678, 4724007011023390, 'Michael Jackson', TO\_DATE('2022-05', 'YYYY-MM'), 'V');

INSERT INTO PAYMENT values (12345679, 3790122031004545, 'Lebron James', TO\_DATE('2019-06', 'YYYY-MM'), 'A');

INSERT INTO PAYMENT values (12345680, 5191123443001718, 'Nickel Pommer', TO\_DATE('2020-08', 'YYYY-MM'), 'M');

INSERT INTO CATEGORY values (121, 'Pop');

INSERT INTO CATEGORY values (123, 'Alt Rock');

INSERT INTO CATEGORY values (122, 'Hip Hop');

INSERT INTO LABEL values (321, 'Microsoft', 'microsoft.com');

INSERT INTO LABEL values (621, 'Google', 'google.ca');

INSERT INTO LABEL values (421, 'Youtube', 'youtube.com');

INSERT INTO RECORDING values (10005, ‘Whatever It Takes’, ‘Imagine Dragons’, 12.99, 30, 123, 621);

INSERT INTO RECORDING values (10006, ‘Thought Contagion’, ‘Muse’, 8.99, 5, 123, 321);

INSERT INTO RECORDING values (10007, ‘Last resort’, ‘Limp Bizkit’, 10.99, null , 122, 321);

INSERT INTO RECORDING values (10034, 'Baby', 'Justin Bieber', 8.50, 9, 121, 621);

INSERT INTO RECORDING values (10035, 'Marvins Room', 'Drake', 9.50, 5, 122, 321);

INSERT INTO RECORDING values (10036, 'Gods Plan', 'Drake', 9.50, null, 123, 421);

INSERT INTO ORDER\_LINE values (12345678, 2, 5, 9.50, 10034);

INSERT INTO ORDER\_LINE values (12345679, 6, 4, 5.50, 10035);

INSERT INTO ORDER\_LINE values (12345680, 1, 2, 6.50, 10036);

INSERT INTO RECORD\_HIST values (10034, 1, 9.50, TO\_DATE('2017-01-10', 'YYYY-MM-DD'));

INSERT INTO RECORD\_HIST values (10035, 2, 8.50, TO\_DATE('2018-01-01', 'YYYY-MM-DD'));

INSERT INTO RECORD\_HIST values (10036, 2, 8.50, TO\_DATE('2018-04-08', 'YYYY-MM-DD'));

INSERT INTO REGION values ('CAN', 'Canada');

INSERT INTO REGION values ('USN', 'US-North');

INSERT INTO REGION values ('EU', 'Europe');

INSERT INTO SALES\_REP values (621, 54321, 'Carl', 'Parkinson', 4165483241, 'ParkinDisease@yahoo.com', 'CAN');

INSERT INTO SALES\_REP values (321, 54322, 'Jackson', 'Jack', 6476349752, 'Jackson@gmail.com', 'CAN');

INSERT INTO SALES\_REP values (421, 54323, 'Hospital', 'Australia', 6478208921, 'Aussie@hotmail.com', 'CAN');

CREATE VIEW cust\_cat\_ar as

SELECT c.LastName, c.city, c.DOB, r.artist, r.title

FROM customer c JOIN orders o

ON (o.CustomerId = c.CustomerId)

JOIN order\_line ol

ON (ol.OrderId = o.OrderId)

JOIN recording r

ON (ol.RecordingId = r.RecordingId)

JOIN category ca

ON (r.CategoryId = ca.CategoryId)

WHERE lower(ca.CategoryDesc) = ‘alt rock’;

A screenshot of a social media post

Description generated with very high confidence