--DROPPING ALL TABLES IF NECESSARY

DROP TABLE AIRPLANE;

DROP TABLE AIRPLANE\_TYPE;

--commiting

commit;

--------------------------------------------------------------------------------

--1. Create the AIRPLANE\_TYPE relation

CREATE TABLE AIRPLANE\_TYPE(

Type\_Name VARCHAR2(30) PRIMARY KEY,

Company VARCHAR2(30) NOT NULL,

Max\_Seats INT NOT NULL,

CONSTRAINT CHECK\_\_MAX\_SEATS\_\_AT CHECK (Max\_Seats > 0 AND Max\_Seats < 854),

CONSTRAINT CHECK\_\_Type\_Name\_\_AT CHECK (Type\_Name like 'Boeing 737'

OR Type\_Name like 'Boeing 747'

OR Type\_Name like 'Boeing 777'

OR Type\_Name like 'Boeing 787 Dreamliner'

OR Type\_Name like 'Airbus A320'

OR Type\_Name like 'Airbus A380'

OR Type\_Name like 'Embraer E175'

OR Type\_Name like 'Embraer E190'

OR Type\_Name like 'Bombardier CRJ900'

OR Type\_Name like 'Cessna 172'

OR Type\_Name like 'Gulfstream G650'

OR Type\_Name like 'Bombardier CRJ700'

OR Type\_Name like 'McDonnell Douglas MD-80'

OR Type\_Name like 'Beechcraft King Air'

OR Type\_Name like 'Lockheed C-130 Hercules')

);

--2. Create the AIRPLANE relation

CREATE TABLE AIRPLANE(

Airplane\_ID VARCHAR2(7) NOT NULL,

Total\_Number\_of\_Seats NUMBER(3) NOT NULL,

Type\_Name VARCHAR2(23) NOT NULL,

CONSTRAINT PK\_\_AIRPLANE\_\_A PRIMARY KEY (Airplane\_ID),

CONSTRAINT FK\_\_Type\_Name\_\_A FOREIGN KEY (Type\_Name) REFERENCES

AIRPLANE\_TYPE(Type\_Name),

CONSTRAINT CHK\_\_TOTAL\_NO\_OF\_SEATS\_\_A CHECK (Total\_Number\_of\_SEATS > 0 AND

Total\_Number\_of\_SEATS < 854)

);

--------------------------------------------------------------------------------

--3. Populating the AIRPLANE\_TYPE relation

INSERT INTO AIRPLANE\_TYPE(Type\_Name, Company, Max\_Seats)

VALUES ('Boeing 737', 'Boeing', 215);

INSERT INTO AIRPLANE\_TYPE(Type\_Name, Company, Max\_Seats)

VALUES ('Airbus A320', 'Airbus', 220);

INSERT INTO AIRPLANE\_TYPE(Type\_Name, Company, Max\_Seats)

VALUES ('Embraer E175', 'Embraer', 88);

INSERT INTO AIRPLANE\_TYPE(Type\_Name, Company, Max\_Seats)

VALUES ('Bombardier CRJ900', 'Bombardier', 76);

INSERT INTO AIRPLANE\_TYPE(Type\_Name, Company, Max\_Seats)

VALUES ('Bombardier CRJ700', 'Boeing', 550);

--4. Populating the AIRPLANE relation

INSERT INTO AIRPLANE(Airplane\_ID, Total\_Number\_of\_Seats, Type\_Name)

VALUES ('JFK-101', 215, 'Boeing 737');

INSERT INTO AIRPLANE(Airplane\_ID, Total\_Number\_of\_Seats, Type\_Name)

VALUES ('JFK-102', 215, 'Boeing 737');

INSERT INTO AIRPLANE(Airplane\_ID, Total\_Number\_of\_Seats, Type\_Name)

VALUES ('LAX-101', 220, 'Airbus A320');

INSERT INTO AIRPLANE(Airplane\_ID, Total\_Number\_of\_Seats, Type\_Name)

VALUES ('ORD-101', 88, 'Embraer E175');

INSERT INTO AIRPLANE(Airplane\_ID, Total\_Number\_of\_Seats, Type\_Name)

VALUES ('DFW-101', 76, 'Bombardier CRJ900');

INSERT INTO AIRPLANE(Airplane\_ID, Total\_Number\_of\_Seats, Type\_Name)

VALUES ('ATL-101', 550, 'Bombardier CRJ700');

--------------------------------------------------------------------------------

--ADD THE COMMENT BELLOW WHEN COMMAND IS 100% WORKING

--CREATE VIEW AIRPLANE\_TABLE\_METADATA AS

SELECT

index\_info.table\_name,

index\_info.index\_name,

table\_rows.num\_rows,

block\_info.blocks,

(SELECT MIN(Total\_Number\_of\_Seats) FROM AIRPLANE) AS min\_column\_value,

(SELECT MAX(Total\_Number\_of\_Seats) FROM AIRPLANE) AS max\_column\_value

FROM user\_indexes index\_info

JOIN user\_tables table\_rows ON index\_info.table\_name = table\_rows.table\_name

JOIN user\_segments block\_info ON index\_info.table\_name = block\_info.segment\_name

WHERE index\_info.table\_name = 'AIRPLANE';

--ADD THE COMMENT BELLOW WHEN COMMAND IS 100% WORKING

--CREATE VIEW AIRPLANE\_TYPE\_TABLE\_METADATA AS

SELECT

index\_info.table\_name,

index\_info.index\_name,

table\_rows.num\_rows,

block\_info.blocks,

(SELECT MIN(Max\_Seats) FROM AIRPLANE\_TYPE) AS min\_column\_value,

(SELECT MAX(Max\_Seats) FROM AIRPLANE\_TYPE) AS max\_column\_value

FROM user\_indexes index\_info

JOIN user\_tables table\_rows ON index\_info.table\_name = table\_rows.table\_name

JOIN user\_segments block\_info ON index\_info.table\_name = block\_info.segment\_name

WHERE index\_info.table\_name = 'AIRPLANE\_TYPE';

--ADD THE COMMENT BELLOW WHEN COMMAND IS 100% WORKING

--CREATE VIEW AIRPLANE\_COLUMN\_METADATA AS SELECT

cols.table\_name,

cols.column\_name,

MAX(

CASE

WHEN cons.constraint\_type = 'P' THEN 'Primary Key'

WHEN cons.constraint\_type = 'R' THEN 'Foreign Key'

ELSE 'Non-unique'

END

) AS constraint\_type,

COUNT(DISTINCT cols.column\_name) / COUNT(\*) AS selectivity

FROM user\_tab\_cols cols

LEFT JOIN user\_cons\_columns ucc ON cols.table\_name = ucc.table\_name AND cols.column\_name = ucc.column\_name

LEFT JOIN user\_constraints cons ON ucc.constraint\_name = cons.constraint\_name

WHERE cols.table\_name = 'AIRPLANE'

GROUP BY cols.table\_name, cols.column\_name;

--ADD THE COMMENT BELLOW WHEN COMMAND IS 100% WORKING

--CREATE VIEW AIRPLANE\_TYPE\_COLUMN\_METADATA AS

SELECT

cols.table\_name,

cols.column\_name,

MAX(

CASE

WHEN cons.constraint\_type = 'P' THEN 'Primary Key'

WHEN cons.constraint\_type = 'U' THEN 'Unique Key'

WHEN cons.constraint\_type = 'R' THEN 'Foreign Key'

ELSE 'Non-unique'

END

) AS constraint\_type,

COUNT(DISTINCT cols.column\_name) / COUNT(\*) AS selectivity

FROM user\_tab\_cols cols

LEFT JOIN user\_cons\_columns ucc ON cols.table\_name = ucc.table\_name AND cols.column\_name = ucc.column\_name

LEFT JOIN user\_constraints cons ON ucc.constraint\_name = cons.constraint\_name

WHERE cols.table\_name = 'AIRPLANE\_TYPE'

GROUP BY cols.table\_name, cols.column\_name;