-- DDL

-- DROP VIEW LIST

DROP VIEW IF EXISTS Country\_V;

DROP VIEW IF EXISTS Product\_V;

-- DROP TABLE LIST

DROP TABLE IF EXISTS Invoice\_Line\_T;

DROP TABLE IF EXISTS Product\_T;

DROP TABLE IF EXISTS Invoice\_T;

DROP TABLE IF EXISTS Customer\_T;

DROP TABLE IF EXISTS City\_T;

DROP TABLE IF EXISTS Country\_T;

/\* When I changed the order in the drop table list, it caused some error messages below

ERROR: cannot drop table invoice\_t because other objects depend on it

DETAIL: constraint fk1\_invoice\_line on table invoice\_line\_t depends on table invoice\_t

HINT: Use DROP ... CASCADE to drop the dependent objects too.

\*\*\*\*\*\*\*\*\*\* Error \*\*\*\*\*\*\*\*\*\*

ERROR: cannot drop table invoice\_t because other objects depend on it

SQL state: 2BP01

Detail: constraint fk1\_invoice\_line on table invoice\_line\_t depends on table invoice\_t

Hint: Use DROP ... CASCADE to drop the dependent objects too. \*/

-- country table

CREATE TABLE Country\_T (

Country\_code CHAR( 3 ),

Country\_name VARCHAR( 30 ) NOT NULL,

Country\_Population INTEGER,

CONSTRAINT PK\_Country\_code PRIMARY KEY( Country\_code )

);

-- city table

CREATE TABLE CITY\_T (

City\_ID INTEGER,

City\_Name VARCHAR( 30 ),

Country\_Code NCHAR( 3 ),

City\_Population INTEGER,

CONSTRAINT PK\_City PRIMARY KEY( City\_ID ),

CONSTRAINT FK\_City FOREIGN KEY( Country\_code ) REFERENCES COUNTRY\_T( Country\_code )

);

CREATE TABLE Customer\_T (

Cust\_Id CHAR( 4 ),

Cust\_Fname VARCHAR( 30 ) NULL,

Cust\_Lname VARCHAR( 30 ) NOT NULL,

Cust\_Phone VARCHAR( 15 ) NOT NULL,

Cust\_Address VARCHAR( 20 ) NOT NULL,

Cust\_City VARCHAR( 15 ) NOT NULL,

Cust\_Prov CHAR( 2 ) NULL,

Cust\_PostCode CHAR( 6 ) NOT NULL,

Cust\_Balance DECIMAL( 9,2 ),

Cust\_Country CHAR( 3 ),

CONSTRAINT PK\_Customer PRIMARY KEY( Cust\_Id ),

CONSTRAINT FK\_Customoer\_T FOREIGN KEY( Cust\_Country ) REFERENCES Country\_T( Country\_Code ) -- new one

);

CREATE TABLE Invoice\_T (

Invoice\_Number CHAR( 6 ),

Cust\_Id CHAR( 4 ) NOT NULL,

Invoice\_Date DATE,

CONSTRAINT PK\_Invoice PRIMARY KEY( Invoice\_Number ),

CONSTRAINT FK\_Cust\_ID FOREIGN KEY( Cust\_Id ) REFERENCES Customer\_T( Cust\_ID )

);

CREATE TABLE Product\_T (

Prod\_Code CHAR( 5 ),

Prod\_Description VARCHAR( 60 ) NOT NULL,

Prod\_Indate DATE NOT NULL,

Prod\_QOH INTEGER NOT NULL,

Prod\_Min INTEGER,

Prod\_Price DECIMAL( 5,2 ) NOT NULL,

Prod\_Discount INTEGER,

Prod\_CountryOrigin CHAR( 3 ),

CONSTRAINT PK\_Product PRIMARY KEY( Prod\_Code ),

CONSTRAINT FK\_Product\_T FOREIGN KEY(Prod\_CountryOrigin) REFERENCES Country\_T( Country\_Code )

);

CREATE TABLE Invoice\_Line\_T (

Invoice\_Number CHAR( 6 ),

Invoice\_Line INTEGER,

Prod\_Code CHAR( 5 ) NOT NULL,

Line\_units INTEGER NOT NULL,

Line\_Price DECIMAL( 5,2 ) NOT NULL,

CONSTRAINT PK\_Invoice\_Line PRIMARY KEY( Invoice\_Number, Invoice\_Line ),

CONSTRAINT FK1\_Invoice\_Line FOREIGN KEY( Invoice\_Number ) REFERENCES Invoice\_T( Invoice\_Number ),

CONSTRAINT FK2\_Invoice\_Line FOREIGN KEY( Prod\_Code ) REFERENCES Product\_T( Prod\_Code )

);

-- Creating first View 'Country\_V'

CREATE VIEW Country\_V AS

SELECT Country\_code, Country\_Population

FROM Country\_T

WHERE Country\_Population > (SELECT AVG(Country\_Population) FROM Country\_T);

-- Creating second view 'Product\_V'

CREATE VIEW Product\_V AS

SELECT Prod\_code, Prod\_Description, Prod\_Price

FROM Product\_T

WHERE Prod\_price < (SELECT AVG(Prod\_price) FROM Product\_T);

-- DML

-- populate city and country table - COUNTRY\_T

INSERT INTO Country\_T VALUES ('RUS','Russian Federation', 144192450);

INSERT INTO Country\_T VALUES ('MEX','Mexico', 119530753);

INSERT INTO Country\_T VALUES ('DZA','Algeria', 40400000);

INSERT INTO Country\_T VALUES ('CHN','China', 1376049000);

INSERT INTO Country\_T VALUES ('CHL','Chile', 18006407);

INSERT INTO Country\_T VALUES ('CAN','Canada', 36155487);

INSERT INTO Country\_T VALUES ('BEL','Belgium', 10239000);

INSERT INTO Country\_T VALUES ('BRA','Brazil', 170115000);

INSERT INTO Country\_T VALUES ('GBR','United Kingdom',59623400);

INSERT INTO Country\_T VALUES ('KOR','South Korea',46844000);

-- populate city and country table - CITY\_T

INSERT INTO City\_T VALUES (3580,'Moscow','RUS',8389200);

INSERT INTO City\_T VALUES (3581,'St Petersburg','RUS',4694000);

INSERT INTO City\_T VALUES (2597,'Soledad de Graciano Sánchez','MEX',179956);

INSERT INTO City\_T VALUES (2598,'San Juan del Río','MEX',179300);

INSERT INTO City\_T VALUES (35,'Alger','DZA',2168000);

INSERT INTO City\_T VALUES (36,'Oran','DZA',609823);

INSERT INTO City\_T VALUES (1890,'Shanghai','CHN',9696300);

INSERT INTO City\_T VALUES (1891,'Peking','CHN',7472000);

INSERT INTO City\_T VALUES (554,'Santiago de Chile','CHL',4703954);

INSERT INTO City\_T VALUES (555,'Puente Alto','CHL',386236);

INSERT INTO City\_T VALUES (1810,'Montréal','CAN',1016376);

INSERT INTO City\_T VALUES (1812,'Toronto','CAN',688275);

INSERT INTO City\_T VALUES (175,'Antwerpen','BEL',446525);

INSERT INTO City\_T VALUES (176,'Gent','BEL',224180);

INSERT INTO City\_T VALUES (206,'São Paulo','BRA',9968485);

INSERT INTO City\_T VALUES (207,'Rio de Janeiro','BRA',5598953);

INSERT INTO City\_T VALUES (456,'London','GBR',7285000);

INSERT INTO City\_T VALUES (457,'Birmingham','GBR',1013000);

INSERT INTO City\_T VALUES (2331,'Seoul','KOR',9981619);

INSERT INTO City\_T VALUES (2332,'Pusan','KOR',3804522);

-- populate customer and product tables----------

-- CUSTOMER\_T

INSERT INTO Customer\_T VALUES ('C001', 'Seongyeop', 'Jeong', '343-988-8771', '1385 Woodroffe Ave', 'Ottawa' ,'ON','K2G1V8', 1, 'CAN');

INSERT INTO Customer\_T VALUES ('C002', 'Harah', 'Verma', '613-883-5008', '1385 Woodroffe Ave', 'Ottawa' ,'ON','K2G1V8', 2, 'RUS');

INSERT INTO Customer\_T VALUES ('C003', 'Xingyi', 'Wu', '613-600-9857', '1385 Woodroffe Ave', 'Ottawa' ,'ON','K2G1V8', 3, 'CHN');

INSERT INTO Customer\_T VALUES ('C004', 'Steven', 'Mcdavid', '613-266-3090', '854 Younge Street' , 'Toronto' ,'ON','K2G1V8', 4, 'KOR');

INSERT INTO Customer\_T VALUES ('C005', 'Thuy', 'Mai', '613-914-0109', '264 Main Street' , 'Kitchener','ON','K2G1V8', 5, 'MEX');

INSERT INTO Customer\_T VALUES ('C006', 'Yoshuya', 'Shiraishi', '604-313-7547', '357 Rue Catherine' , 'Montreal' ,'ON','K2G1V8', 6, 'GBR');

INSERT INTO Product\_T VALUES ('P2011', 'Compac Presario', '2011-02-14', 20, 5, 499.99, 0, 'RUS');

INSERT INTO Product\_T VALUES ('P2012', 'HP laptop', '2010-09-25', 40, 5, 529.99, 0, 'CHL');

INSERT INTO Product\_T VALUES ('P2013', 'Samsung LCD', '2010-02-15', 22, 8, 329.99, 0, 'BRA');

INSERT INTO Product\_T VALUES ('P2014', 'Brother Network All-In-One Laser Printer', '2010-10-10', 50, 10, 159.99, 0, 'KOR');

INSERT INTO Product\_T VALUES ('P2015', 'Western Digital External Hard drive', '2010-04-08', 30, 10, 149.99, NULL, 'GBR');

INSERT INTO Product\_T VALUES ('P2016', 'Apple iPad 2 with Wi-Fi + 3G', '2011-02-23', 90, 200, 849.00, 0, 'MEX');

INSERT INTO Product\_T VALUES ('P2017', 'iPAD 2 Smart Cover', '2011-02-14', 70, 10, 45.00, 10, 'DZA');

-- Invoice\_T / Invoice\_Line\_T tables

INSERT INTO Invoice\_T VALUES ('I23001', 'C001', '2011-02-15');

INSERT INTO Invoice\_T VALUES ('I23002', 'C001', '2011-04-25');

INSERT INTO Invoice\_T VALUES ('I23003', 'C004', '2011-06-12');

INSERT INTO Invoice\_T VALUES ('I23004', 'C002', '2011-07-08');

INSERT INTO Invoice\_T VALUES ('I23005', 'C005', '2011-08-24');

INSERT INTO Invoice\_T VALUES ('I23006', 'C006', '2011-09-07');

INSERT INTO Invoice\_T VALUES ('I23007', 'C006', '2010-12-28');

INSERT INTO Invoice\_T VALUES ('I23008', 'C006', '2011-12-15');

INSERT INTO Invoice\_Line\_T VALUES ('I23001', 1, 'P2011', 1, 650.75);

INSERT INTO Invoice\_Line\_T VALUES ('I23001', 2, 'P2014', 3, 159.99);

INSERT INTO Invoice\_Line\_T VALUES ('I23002', 1, 'P2012', 1, 529.99);

INSERT INTO Invoice\_Line\_T VALUES ('I23003', 1, 'P2015', 3, 140.75);

INSERT INTO Invoice\_Line\_T VALUES ('I23004', 1, 'P2014', 1, 159.99);

INSERT INTO Invoice\_Line\_T VALUES ('I23005', 1, 'P2016', 1, 798.99);

INSERT INTO Invoice\_Line\_T VALUES ('I23006', 1, 'P2011', 1, 499.99);

INSERT INTO Invoice\_Line\_T VALUES ('I23007', 1, 'P2012', 1, 529.99);

INSERT INTO Invoice\_Line\_T VALUES ('I23008', 1, 'P2016', 3, 689.00);

INSERT INTO Invoice\_Line\_T VALUES ('I23008', 2, 'P2017', 3, 35.99);

-- Delete statement

DELETE FROM Customer\_T WHERE Cust\_Country = 'CHL';

DELETE FROM Product\_T WHERE Prod\_CountryOrigin = 'RUS';

-- the reason that there're error messages after we run the program is that each key has connected with each other by primary key and foreign key