DATABASE – SECD2523

SECTION: 06

LAB 2

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DFo_6_4_1_Project

Part 1: Running a script to populate the tables

1.

```sql
CREATE TABLE inventory_list (
    id      VARCHAR2(11) NOT NULL,
    cost    NUMBER(7,2) NOT NULL,
    units   NUMBER(4) NOT NULL,
    CONSTRAINT inventory_list_pk PRIMARY KEY ( id )
);
```

TABLE created.

```sql
CREATE TABLE items (
    itm_number      VARCHAR2(10) NOT NULL,
    name            VARCHAR2(20) NOT NULL,
    description     VARCHAR2(50) NOT NULL,
    category        VARCHAR2(25) NOT NULL,
    color           VARCHAR2(15),
    "Size"          CHAR(1),
    ilt_id          VARCHAR2(11) NOT NULL,
    CONSTRAINT item_pk PRIMARY KEY ( itm_number )
);
```

TABLE created.

```sql
CREATE TABLE price_history (
    start_date   DATE NOT NULL,
    start_time   DATE NOT NULL,
    price        NUMBER(7,2) NOT NULL,
    end_date     DATE,
    end_time     DATE,
    itm_number   VARCHAR2(10) NOT NULL,
    CONSTRAINT price_history_pk PRIMARY KEY ( itm_number, start_date, start_time ),
    CONSTRAINT price_history_items_fk FOREIGN KEY ( itm_number ) REFERENCES items ( itm_number )
);
```

TABLE created.

```sql
CREATE TABLE sales_representatives (
    id                  VARCHAR2(4) NOT NULL,
    email               VARCHAR2(50) NOT NULL,
    first_name          VARCHAR2(20) NOT NULL,
    last_name           VARCHAR2(30) NOT NULL,
    phone_number        VARCHAR2(11) NOT NULL,
    commission_rate     NUMBER(2) NOT NULL,
    supervisor_id       VARCHAR2(4) NOT NULL,
    CONSTRAINT sales_representative_pk PRIMARY KEY ( id ),
    CONSTRAINT sre_email_uk UNIQUE (email)
);
```

TABLE created.

```sql
CREATE TABLE sales_rep_addresses (
    id               VARCHAR2(4) NOT NULL,
    address_line_1   VARCHAR2(30) NOT NULL,
    address_line_2   VARCHAR2(30),
    city             VARCHAR2(15) NOT NULL,
    zip_code         VARCHAR2(7) NOT NULL,
    CONSTRAINT sales_rep_address_pk PRIMARY KEY ( id )
);
```

TABLE created.

```sql
CREATE TABLE teams (
    id                  VARCHAR2(4) NOT NULL,
    name                VARCHAR2(20) NOT NULL,
    number_of_players   NUMBER(2) NOT NULL,
    discount            NUMBER(2),
    CONSTRAINT team_pk PRIMARY KEY ( id )
);
```

TABLE created.

```sql
CREATE TABLE customers (
    ctr_number          VARCHAR2(6) NOT NULL,
    email               VARCHAR2(50) NOT NULL,
    first_name          VARCHAR2(20) NOT NULL,
    last_name           VARCHAR2(30) NOT NULL,
    phone_number        VARCHAR2(11) NOT NULL,
    current_balance     NUMBER(6,2) NOT NULL,
    sre_id              VARCHAR2(4),
    tem_id              VARCHAR2(4),
    loyalty_card_number VARCHAR2(6),
    CONSTRAINT customer_pk PRIMARY KEY ( ctr_number ),
    CONSTRAINT ctr_email_uk UNIQUE (email),
    CONSTRAINT ctr_lcn_uk UNIQUE (loyalty_card_number)
);
```
TABLE created.

```sql
CREATE TABLE customers_addresses (
    id             VARCHAR2(8) NOT NULL,
    address_line_1 VARCHAR2(30) NOT NULL,
    address_line_2 VARCHAR2(30),
    city           VARCHAR2(15) NOT NULL,
    zip_code       VARCHAR2(7) NOT NULL,
    ctr_number     VARCHAR2(6) NOT NULL,
    CONSTRAINT customer_address_pk PRIMARY KEY ( id )
);
```
TABLE created.

```sql
CREATE TABLE orders (
    id              VARCHAR2(9) NOT NULL,
    odr_date        DATE NOT NULL,
    odr_time        DATE NOT NULL,
    number_of_units NUMBER(2) NOT NULL,
    ctr_number      VARCHAR2(6) NOT NULL,
    CONSTRAINT orders_pk PRIMARY KEY ( id )
);
```
TABLE created.

```sql
CREATE TABLE ordered_items (
    quantity_ordered NUMBER(3) NOT NULL,
    quantity_shipped NUMBER(3) NOT NULL,
    itm_number       VARCHAR2(10) NOT NULL,
    odr_id           VARCHAR2(9) NOT NULL,
    CONSTRAINT ordered_item_pk PRIMARY KEY ( itm_number,odr_id )
);
```
TABLE created.

```sql
ALTER TABLE customers_addresses ADD CONSTRAINT customer_address_customer_fk FOREIGN KEY ( ctr_number )
    REFERENCES customers ( ctr_number );
```
TABLE altered.

```sql
ALTER TABLE customers ADD CONSTRAINT customer_sales_rep_fk FOREIGN KEY ( sre_id )
    REFERENCES sales_representatives ( id );
```
TABLE altered.

```sql
ALTER TABLE customers ADD CONSTRAINT customer_team_fk FOREIGN KEY ( tem_id )
    REFERENCES teams ( id );
```
TABLE altered.

```sql
ALTER TABLE items ADD CONSTRAINT item_inventory_list_fk FOREIGN KEY ( ilt_id )
    REFERENCES inventory_list ( id );
```
TABLE altered.

```sql
ALTER TABLE orders ADD CONSTRAINT order_customer_fk FOREIGN KEY ( ctr_number )
    REFERENCES customers ( ctr_number );
```
TABLE altered.

```sql
ALTER TABLE ordered_items ADD CONSTRAINT ordered_item_item_fk FOREIGN KEY ( itm_number )
    REFERENCES items ( itm_number );
```
TABLE altered.

```sql
ALTER TABLE ordered_items ADD CONSTRAINT ordered_item_order_fk FOREIGN KEY ( odr_id )
    REFERENCES orders ( id );
```
TABLE altered.

```sql
ALTER TABLE sales_rep_addresses ADD CONSTRAINT sales_rep_add_sales_rep_fk FOREIGN KEY ( id )
    REFERENCES sales_representatives ( id );
```
TABLE altered.

```
ALTER TABLE sales_representatives ADD CONSTRAINT sales_rep_sales_rep_fk FOREIGN KEY ( supervisor_id ) REFERENCES sales_representatives ( id );
```
TABLE altered.

```
CREATE OR REPLACE TRIGGER fkntm_orders BEFORE
    UPDATE OF ctr_number ON orders
BEGIN
    raise_application_error(
        -20225,
        'Non Transferable FK constraint  on table orders is violated'
    );
END;
/
```
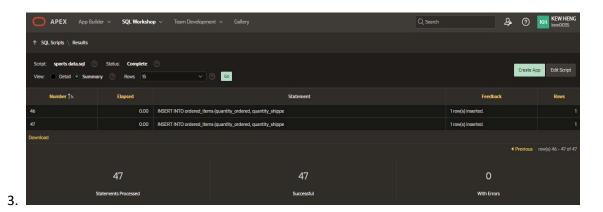TRIGGER created.

2.

Yes, it matched.

3.

4.

No error was found.

Part 2: Inserting rows to the system

1.

```
INSERT INTO teams (id, name, number_of_players, discount)
VALUES ('t004', 'JETS', 10, 5);
```
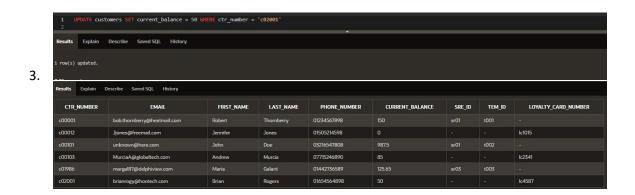
Results   Explain   Describe   Saved SQL   History

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT
t001	Rockets	25	10
t002	Celtics	42	20
t003	Rovers	8	-
t004	Jets	10	5

2.

```
INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number,
current_balance, loyalty_card_number)
VALUES ('c02001', 'brianrogy@hootech.com', 'Brian', 'Rogers', '01654564898', -5, 'lc4587');
```

Results   Explain   Describe   Saved SQL   History

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	-
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	-	-	lc1015
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	-	-	lc2341
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-
c02001	brianrogy@hootech.com	Brian	Rogers	01654564898	-5	-	-	lc4587

3.

```
1   UPDATE customers SET current_balance = 50 WHERE ctr_number = 'c02001'
2
```

Results   Explain   Describe   Saved SQL   History

1 row(s) updated.

Results   Explain   Describe   Saved SQL   History

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBER
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	t001	-
c00012	Jjones@freemail.com	Jennifer	Jones	01505214598	0	-	-	lc1015
c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	t002	-
c00103	MurciaA@globaltech.com	Andrew	Murcia	07715246890	85	-	-	lc2341
c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	t003	-
c02001	brianrogy@hootech.com	Brian	Rogers	01654564898	50	-	-	lc4587

Dfo_6_4_2_Project

Part 1- Updating rows to the system

1.

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
06/17/2017	09:00:00	4.99	-	-
11/25/2016	09:00:00	14.99	01/25/2017	17:00
01/25/2017	17:01:00	8.99	01/25/2017	19:00
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:30:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-
05/31/2017	16:35:30	149	-	-

7 rows returned in 0.01 seconds   Download

2.


```
UPDATE   price_history
SET  end_date = SYSDATE , end_time = SYSDATE
WHERE   itm_number = ' im01101048' and end_date IS NULL;
```

3.

Results   Explain   Describe   Saved SQL   History

START_DATE	TO_CHAR(START_TIME,'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME,'HH24:MI')
06/17/2017	09:00:00	4.99	-	-
11/25/2016	09:00:00	14.99	01/25/2017	17:00
01/25/2017	17:01:00	8.99	01/25/2017	19:00
01/26/2017	09:00:00	15.99	-	-
02/12/2017	12:30:00	7.99	-	-
04/25/2017	10:10:10	24.99	-	-
05/31/2017	16:35:30	149	11/09/2023	03:56

4.


```
INSERT  INTO  price_history (start_date, start_time, price, itm_number)
VALUES  (SYSDATE, SYSDATE, 99.99 , 'im01101048')
```

5.

Results   Explain   Describe   Saved SQL   History

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
06/17/2017	06/17/2016	4.99	-	-	im01101044
11/25/2016	11/25/2016	14.99	01/25/2017	01/25/2017	im01101045
01/25/2017	01/25/2017	8.99	01/25/2017	01/25/2017	im01101045
01/26/2017	01/26/2017	15.99	-	-	im01101045
02/12/2017	02/12/2017	7.99	-	-	im01101046
04/25/2017	04/25/2017	24.99	-	-	im01101047
05/31/2017	05/31/2017	149	11/09/2023	11/09/2023	im01101048
11/09/2023	11/09/2023	99.99	-	-	im01101048

Part 2: Deleting rows from the system

1.
```
DELETE    FROM   customers _ addresses
WHERE    id = 'ca0101';
```

2.

ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE	CTR_NUMBER
ca0102	17 Gartsquare Road	Starford	Liverpool	LP89JHK	c00001
ca0103	54 Ropehill Crescent	Georgetown	Star	ST45AGV	c00101
ca0104	36 Watercress Lane	-	Jump	JP23YTH	c01986
ca0105	63 Acacia Drive	Skins	Liverpool	LP83JHR	c00001

4 rows returned in 0.01 seconds   Download