

Database Design Project

Oracle Baseball League Store Database

Project Scenario:

You are a small consulting company specializing in database development. You have just been awarded the contract to develop a data model for a database application system for a small retail store called Oracle Baseball League (OBL).

The Oracle Baseball League store serves the entire surrounding community selling baseball kit. The OBL has two types of customer, there are individuals who purchase items like balls, cleats, gloves, shirts, screen printed t-shirts, and shorts. Additionally customers can represent a team when they purchase uniforms and equipment on behalf of the team.

Teams and individual customers are free to purchase any item from the inventory list, but teams get a discount on the list price depending on the number of players. When a customer places an order we record the order items for that order in our database.

OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

Section 6 Lesson 4 Exercise 1: Data Manipulation Language

Use DML operations to manage database tables (S6L4 Objective 2)

In this exercise you will populate and work with the data that is stored in the database system tables.

Part 1 : Running a script to populate the tables.

You have to consider the order of the tables when populating them. A table that has a foreign key field cannot be populated before the related table with the primary key.

1. Use the table mapping document and list the order that you would use to populate the tables.
2. Open the “sports data.sql” and look at the order the data is being added there, does your list match? This file can be found in the Section 6 Lesson 4 interaction (sports data.zip) and must first be extracted.

Table created.

TABLE INVENTORY_LIST

Column	Null?	Type
ID	-	VARCHAR2(20)
COST	-	NUMBER(6,0)
UNITS	-	NUMBER(4,0)

```
1 v CREATE TABLE inventory_list(  
2     id    VARCHAR2(20),  
3     cost  NUMBER(6),  
4     units NUMBER(4)  
5 );  
6  
7 DESCRIBE inventory_list;
```

Table created.

TABLE ITEMS

Column	Null?	Type
ITM_NUMBER	-	VARCHAR2(20)
NAME	-	VARCHAR2(20)
DESCRIPTION	-	VARCHAR2(30)
CATEGORY	-	VARCHAR2(20)
COLOR	-	VARCHAR2(10)
Size	-	VARCHAR2(4)
ILT_ID	-	VARCHAR2(20)

```
1 v CREATE TABLE items(  
2     itm_number  VARCHAR2(20),  
3     name        VARCHAR2(20),  
4     description  VARCHAR2(30),  
5     category    VARCHAR2(20),  
6     color       VARCHAR2(10),  
7     "Size"      VARCHAR2(4),  
8     ilt_id      VARCHAR2(20)  
9 );  
10  
11 DESCRIBE items;
```

```

1 v CREATE TABLE price_history(
2     start_date    DATE,
3     start_time    TIMESTAMP,
4     price         NUMBER(4),
5     end_date      DATE,
6     end_time      TIMESTAMP,
7     itm_number    VARCHAR2(20)
8 );
9
10 DESCRIBE price_history;

```

TABLE PRICE_HISTORY

Column	Null?	Type
START_DATE	-	DATE
START_TIME	-	TIMESTAMP(6)
PRICE	-	NUMBER(4,0)
END_DATE	-	DATE
END_TIME	-	TIMESTAMP(6)
ITM_NUMBER	-	VARCHAR2(20)

Table created.

```

1 v CREATE TABLE sales_representatives(
2     id            VARCHAR2(6),
3     email         VARCHAR2(20),
4     first_name    VARCHAR2(10),
5     last_name     VARCHAR2(10),
6     phone_number  VARCHAR2(10),
7     commision_rate NUMBER(2),
8     supervisor_id VARCHAR2(4)
9 );
10
11 DESCRIBE sales_representatives;

```

TABLE SALES_REPRESENTATIVES

Column	Null?	Type
ID	-	VARCHAR2(6)
EMAIL	-	VARCHAR2(20)
FIRST_NAME	-	VARCHAR2(10)
LAST_NAME	-	VARCHAR2(10)
PHONE_NUMBER	-	VARCHAR2(10)
COMMISSION_RATE	-	NUMBER(2,0)
SUPERVISOR_ID	-	VARCHAR2(4)

Table created.

TABLE SALES_REP_ADDRESSES

Column	Null?	Type
ID	-	VARCHAR2(4)
ADDRESS_LINE_1	-	VARCHAR2(20)
ADDRESS_LINE_2	-	VARCHAR2(10)
CITY	-	VARCHAR2(10)
ZIP_CODE	-	VARCHAR2(10)

```
1 v CREATE TABLE sales_rep_addresses(  
2     id          VARCHAR2(4),  
3     address_line_1 VARCHAR2(20),  
4     address_line_2 VARCHAR2(10),  
5     city        VARCHAR2(10),  
6     zip_code    VARCHAR2(10)  
7 );  
8  
9 DESCRIBE sales_rep_addresses;
```

Table created.

TABLE TEAMS

Column	Null?	Type
ID	-	VARCHAR2(4)
NAME	-	VARCHAR2(10)
NUMBER_OF_PLAYERS	-	NUMBER(2,0)
DISCOUNT	-	NUMBER(2,0)

```
1 v CREATE TABLE teams(  
2     id          VARCHAR2(4),  
3     name        VARCHAR2(10),  
4     number_of_players NUMBER(2),  
5     discount    NUMBER(2)  
6 );  
7  
8 DESCRIBE teams;
```

TABLE CUSTOMERS

Column	Null?	Type
CTR_NUMBER	-	VARCHAR2(10)
EMAIL	-	VARCHAR2(30)
FIRST_NAME	-	VARCHAR2(10)
LAST_NAME	-	VARCHAR2(10)
PHONE_NUMBER	-	VARCHAR2(10)
CURRENT_BALANCE	-	NUMBER(5,2)
SRE_ID	-	VARCHAR2(4)
TEM_ID	-	VARCHAR2(4)
LOYALTY_CARD_NUMBER	-	VARCHAR2(6)

```
1 v CREATE TABLE customers(  
2     ctr_number  VARCHAR2(10),  
3     email       VARCHAR2(30),  
4     first_name  VARCHAR2(10),  
5     last_name   VARCHAR2(10),  
6     phone_number VARCHAR2(10),  
7     current_balance NUMBER(5,2),  
8     sre_id      VARCHAR2(4),  
9     tem_id      VARCHAR2(4),  
10    loyalty_card_number VARCHAR2(6)  
11 );  
12  
13 DESCRIBE customers;
```

TABLE CUSTOMERS_ADDRESSES

Column	Null?	Type
ID	-	VARCHAR2(6)
ADDRESS_LINE_1	-	VARCHAR2(25)
ADDRESS_LINE_2	-	VARCHAR2(10)
CITY	-	VARCHAR2(10)
ZIP_CODE	-	VARCHAR2(7)
CTR_NUMBER	-	VARCHAR2(6)

```

1 v CREATE TABLE customers_addresses(
2     id          VARCHAR2(6),
3     address_line_1 VARCHAR2(25),
4     address_line_2 VARCHAR2(10),
5     city        VARCHAR2(10),
6     zip_code    VARCHAR2(7),
7     ctr_number  VARCHAR2(6)
8 );
9
10 DESCRIBE customers_addresses;|

```

TABLE ORDERS

Column	Null?	Type
ID	-	VARCHAR2(9)
ORD_DATE	-	DATE
ORD_TIME	-	TIMESTAMP(6)
NUMBER_OF_UNITS	-	NUMBER(2,0)
CTR_NUMBER	-	VARCHAR2(6)

```

1 v CREATE TABLE orders(
2     id          VARCHAR2(9),
3     ord_date    DATE,
4     ord_time    TIMESTAMP,
5     number_of_units NUMBER(2),
6     ctr_number  VARCHAR2(6)
7 );
8
9 DESCRIBE orders;

```

```

1 v CREATE TABLE ordered_items(
2     quantity_ordered NUMBER(2),
3     quantity_shipped NUMBER(2),
4     odr_id           VARCHAR2(9),
5     itm_number       VARCHAR2(10)
6 );
7
8 DESCRIBE ordered_items;

```

TABLE ORDERED_ITEMS

Column	Null?	Type
QUANTITY_ORDERED	-	NUMBER(2,0)
QUANTITY_SHIPPED	-	NUMBER(2,0)
ODR_ID	-	VARCHAR2(9)
ITM_NUMBER	-	VARCHAR2(10)

3. Run the “sports data.sql” script in APEX to populate your tables

4. Check that no errors occurred when you ran the script.

```
1 v INSERT INTO inventory_list (id, cost, units)
2   VALUES('il010230124', 2.5, 100);
3
4 v INSERT INTO inventory_list (id, cost, units)
5   VALUES('il010230125', 7.99, 250);
6
7 v INSERT INTO inventory_list (id, cost, units)
8   VALUES('il010230126', 5.24, 87);
9
10 v INSERT INTO inventory_list (id, cost, units)
11   VALUES('il010230127', 18.95, 65);
12
13 v INSERT INTO inventory_list (id, cost, units)
14   VALUES('il010230128', 97.46, 8);
15
16 SELECT * FROM inventory_list;
```

ID	COST	UNITS
il010230124	3	100
il010230125	8	250
il010230126	5	87
il010230127	19	65
il010230128	97	8

```
1 v INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id )
2   VALUES('im01101044', 'gloves', 'catcher mitt', 'clothing', 'brown', 'm', 'il010230124');
3
4 v INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id )
5   VALUES('im01101045', 'under shirt', 'top worn under the game top', 'clothing', 'white', 's', 'il010230125');
6
7 v INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id )
8   VALUES('im01101046', 'socks', 'team socks with emblem', 'clothing', 'range', 'l', 'il010230126');
9
10 v INSERT INTO items (itm_number, name, description, category, color, "Size", ilt_id )
11   VALUES('im01101047', 'game top', 'team shirt with emblem', 'clothing', 'range', 'm', 'il010230127');
12
13 v INSERT INTO items (itm_number, name, description, category, ilt_id )
14   VALUES('im01101048', 'premium bat', 'high quaity baseball bat', 'equipment', 'il010230128');
15
16 SELECT * FROM items;
```

ITM_NUMBER	NAME	DESCRIPTION	CATEGORY	COLOR	Size	ILT_ID
im01101044	gloves	catcher mitt	clothing	brown	m	il010230124
im01101045	under shirt	top worn under the game top	clothing	white	s	il010230125
im01101046	socks	team socks with emblem	clothing	range	l	il010230126
im01101047	game top	team shirt with emblem	clothing	range	m	il010230127
im01101048	premium bat	high quaity baseball bat	equipment	-	-	il010230128

```

5 VALUES(TO_DATE('25-Nov-2016', 'DD-MM-YYYY'), TO_DATE('25-Nov-2016 09:00:00', 'DD-MM-YYYY hh24:mi:ss'), 14.99, TO_DATE('25-Jan-2017',
6
7 INSERT INTO price_history (start_date, start_time, price, end_date, end_time, itm_number)
8 VALUES(TO_DATE('25-Jan-2017', 'DD-MM-YYYY'), TO_DATE('25-Jan-2017 17:01:00', 'DD-MM-YYYY hh24:mi:ss'), 8.99, TO_DATE('25-Jan-2017',
9
10 INSERT INTO price_history (start_date, start_time, price, itm_number)
11 VALUES(TO_DATE('26-Jan-2017', 'DD-MM-YYYY'), TO_DATE('26-Jan-2017 09:00:00', 'DD-MM-YYYY hh24:mi:ss'), 15.99, 'im01101045');
12
13 INSERT INTO price_history (start_date, start_time, price, itm_number)
14 VALUES(TO_DATE('12-Feb-2017', 'DD-MM-YYYY'), TO_DATE('12-Feb-2017 12:30:00', 'DD-MM-YYYY hh24:mi:ss'), 7.99, 'im01101046');
15
16 INSERT INTO price_history (start_date, start_time, price, itm_number)
17 VALUES(TO_DATE('25-Apr-2017', 'DD-MM-YYYY'), TO_DATE('25-Apr-2017 10:10:10', 'DD-MM-YYYY hh24:mi:ss'), 24.99, 'im01101047');
18
19 INSERT INTO price_history (start_date, start_time, price, itm_number)
20 VALUES(TO_DATE('31-May-2017', 'DD-MM-YYYY'), TO_DATE('31-May-2017 16:35:30', 'DD-MM-YYYY hh24:mi:ss'), 149.00, 'im01101048');
21
22 SELECT * FROM price_history;

```

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
17-JUN-17	17-JUN-16 09.00.00.000000 AM	5	-	-	im01101044
25-NOV-16	25-NOV-16 09.00.00.000000 AM	15	25-JAN-17	25-JAN-17 05.00.00.000000 PM	im01101045
25-JAN-17	25-JAN-17 05.01.00.000000 PM	9	25-JAN-17	25-JAN-17 07.00.00.000000 PM	im01101045
26-JAN-17	26-JAN-17 09.00.00.000000 AM	16	-	-	im01101045
12-FEB-17	12-FEB-17 12.30.00.000000 PM	8	-	-	im01101046
25-APR-17	25-APR-17 10.10.10.000000 AM	25	-	-	im01101047
31-MAY-17	31-MAY-17 04.35.30.000000 PM	149	-	-	im01101048
17-JUN-17	17-JUN-16 09.00.00.000000 AM	5	-	-	im01101044
25-NOV-16	25-NOV-16 09.00.00.000000 AM	15	25-JAN-17	25-JAN-17 05.00.00.000000 PM	im01101045

```

1 v INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commision_rate, supervisor_id)
2   VALUES('sr01', 'chray@obl.com', 'Charles', 'Raymond', '0134598761', 10, 'sr01');
3
4 v INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commision_rate, supervisor_id)
5   VALUES('sr02', 'vwright@obl.com', 'Victoria', 'Wright', '0134598762', 5, 'sr01');
6
7 v INSERT INTO sales_representatives (id, email, first_name, last_name, phone_number, commision_rate, supervisor_id)
8   VALUES('sr03', 'bspeed@obl.com', 'Barry', 'Speed', '0134598763', 5, 'sr01');
9
10 SELECT * FROM sales_representatives;

```

ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISION_RATE	SUPERVISOR_ID
sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01

```

1 v INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_cod )
2   VALUES('sr01', '12 Cherry Lane', 'Denton', 'Detroit', 'DT48211');
3
4 v INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_cod )
5   VALUES('sr02', '87 Blossom Hill', 'Uptown', 'Detroit', 'DT52314');
6
7 v INSERT INTO sales_rep_addresses (id, address_line_1, address_line_2, city, zip_cod )
8   VALUES('sr03', '12 Junction Row', 'Skinflats', 'Detroit', 'DT52564');
9
10 SELECT * FROM sales_rep_addresses;

```

ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_COD
sr01	12 Cherry Lane	Denton	Detroit	DT48211
sr02	87 Blossom Hill	Uptown	Detroit	DT52314
sr03	12 Junction Row	Skinflats	Detroit	DT52564


```

1 v INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre_id, tem_id, loyalty_card_number)
2 VALUES('c00001', 'bob.thornberry@heatmail.com', 'Robert', 'Thornberry', '01234567898', 150.00, 'sr01', 't001', null);
3
4 v INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loyalty_card_number)
5 VALUES('c00012', 'Jjones@freemail.com', 'Jennifer', 'Jones', '01505214598', 0.00, 'lc1015');
6
7 v INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre_id, tem_id)
8 VALUES('c00101', 'unknown@here.com', 'John', 'Doe', '03216547808', 987.50, 'sr01', 't002');
9
10 v INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, loyalty_card_number)
11 VALUES('c00103', 'MurciaA@globaltech.com', 'Andrew', 'Murcia', '07715246890', 85.00, 'lc2341');
12
13 v INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre_id, tem_id)
14 VALUES('c01986', 'margal87@delphiview.com', 'Maria', 'Galant', '01442736589', 125.65
15 , 'sr03', 't003');
16
17 SELECT * FROM customers;

```

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUMBE
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	-

```

1 v INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number)
2 VALUES('ca0101', '83 Barrhill Drive', null, 'Liverpool', 'LP79HJK', 'c00001');
3
4 v INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number)
5 VALUES('ca0102', '17 Gartsquare Road', 'Starford', 'Liverpool', 'LP89JHK', 'c00001');
6
7 v INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number)
8 VALUES('ca0103', '54 Ropehill Crescent', 'Georgetown', 'Star', 'ST45AGV', 'c00101');
9
10 v INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number)
11 VALUES('ca0104', '36 Watercress Lane', null, 'Jump', 'JP23YTH', 'c01986');
12
13 v INSERT INTO customers_addresses (id, address_line_1, address_line_2, city, zip_code, ctr_number)
14 VALUES('ca0105', '63 Acacia Drive', 'Skins', 'Liverpool', 'LP83JHR', 'c00001');
15
16 SELECT * FROM customers_addresses;

```

ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE	CTR_NUMBER
ca0101	83 Barrhill Drive	-	Liverpool	LP79HJK	c00001
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

```

2 VALUES('or0101250', TO_DATE('17-Apr-2017', 'DD-MM-YYYY'), TO_DATE('17-Apr-2017 08:32:30', 'DD-MM-YYYY hh24:mi:ss'), 10, 'c00001');
3
4 v INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number)
5 VALUES('or0101350', TO_DATE('24-May-2017', 'DD-MM-YYYY'), TO_DATE('24-May-2017 10:30:35
6 ', 'DD-MM-YYYY hh24:mi:ss'), 5, 'c00001');
7
8 v INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number)
9 VALUES('or0101425', TO_DATE('28-May-2017', 'DD-MM-YYYY'), TO_DATE('28-May-2017 12:30:00
10 ', 'DD-MM-YYYY hh24:mi:ss'), 18, 'c00103');
11
12 v INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number)
13 VALUES('or0101681', TO_DATE('02-Jun-2017', 'DD-MM-YYYY'), TO_DATE('02-Jun-2017 14:55:30
14 ', 'DD-MM-YYYY hh24:mi:ss'), 10, 'c00001');
15
16 v INSERT INTO orders (id, odr_date, odr_time, number_of_units, ctr_number)
17 VALUES('or0101750', TO_DATE('18-Jun-2017', 'DD-MM-YYYY'), TO_DATE('18-Jun-2017 09:05:00
18 ', 'DD-MM-YYYY hh24:mi:ss'), 1, 'c01986');
19
20 SELECT * FROM orders;

```

ID	ODR_DATE	ODR_TIME	NUMBER_OF_UNITS	CTR_NUMBER
or0101250	17-APR-17	17-APR-17 08.32.30.000000 AM	10	c00001
or0101350	24-MAY-17	24-MAY-17 10.30.35.000000 AM	5	c00001
or0101425	28-MAY-17	28-MAY-17 12.30.00.000000 PM	18	c00103
or0101681	02-JUN-17	02-JUN-17 02.55.30.000000 PM	10	c00001
or0101750	18-JUN-17	18-JUN-17 09.05.00.000000 AM	1	c01986

```

1 ✓ INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number)
2   VALUES(5, 5, 'or0101250', 'im01101044');
3
4 ✓ INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number)
5   VALUES(5, 5, 'or0101250', 'im01101046');
6
7 ✓ INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number)
8   VALUES(5, 5, 'or0101350', 'im01101044');
9
10 ✓ INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number)
11   VALUES(18, 18, 'or0101425', 'im01101047');
12
13 ✓ INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number)
14   VALUES(10, 10, 'or0101681', 'im01101047');
15
16 ✓ INSERT INTO ordered_items (quantity_ordered, quantity_shipped, odr_id, itm_number)
17   VALUES(1, 1, 'or0101750', 'im01101048');
18
19 SELECT * FROM ordered_items;

```

QUANTITY_ORDERED	QUANTITY_SHIPPED	ODR_ID	ITM_NUMBER
5	5	or0101250	im01101044
5	5	or0101250	im01101046
5	5	or0101350	im01101044
18	18	or0101425	im01101047
10	10	or0101681	im01101047
1	1	or0101750	im01101048

Part 2- Inserting rows to the system

1. Add a new team to the system

id	name	Number_of_players	discount
t004	Jets	10	5

```
1 v INSERT INTO teams(id, name, number_of_players, discount)
2   VALUES('t004', 'Jets', 10, 5);
3
4 SELECT * FROM teams;
```

t001	Rockets	25	10
t002	Celtics	42	20
t003	Rovers	8	-
t004	Jets	10	5

2. Add a new Customer with the following details to the system

ctr number	email	First name	Last name	Phone number	Current balance	Loyalty card number	tem id	sre id
c02001	brianrog@hootech.com	Brian	Rogers	01654564898	-5	lc4587		

```

1 ✓ INSERT INTO customers (ctr_number, email, first_name, last_name, phone_number, current_balance, sre_id, tem_id, loyalty_card_number)
2   VALUES('c02001', 'brianrog@hootech.com', 'Brian', 'Rogers', '01654564898', -5, null, null, 'lc4587');
3
4 SELECT * FROM customers;

```

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUM
c02001	brianrog@hootech.com	Brian	Rogers	01654564898	-5	-	-	lc4587
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	-

3. This information violates the check constraint that the current balance must not be less than zero. Change the current balance to 50 and rerun the query.

```

1 ✓ UPDATE customers
2   SET current_balance = 50
3   WHERE (current_balance = -5);
4
5 SELECT * FROM customers;

```

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEM_ID	LOYALTY_CARD_NUM
c02001	brianrog@hootech.com	Brian	Rogers	01654564898	50	-	-	lc4587
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	-

Part 1: Running ~~and~~ a script to populate the tables:

1) CREATE TABLE inventory_list (

		Column	Null?	Type
id	VARCHAR2(20);	ID	—	VARCHAR2(20)
cost	NUMBER(6);	COST	—	NUMBER(6,0)
units	NUMBER(4);	UNITS	—	NUMBER(4,0)
);				
DESCRIBE inventory_list;				

CREATE TABLE items (

item_number	VARCHAR2(20);
name	VARCHAR2(20);
description	VARCHAR2(30);
category	VARCHAR2(20);
color	VARCHAR2(10);
"Size"	VARCHAR2(4);
itl_id	VARCHAR2(20);
);	

DESCRIBE items;

CREATE TABLE price_history (

start_date	DATE;
start_time	NUMBER(4); TIMESTAMP;
price	NUMBER(4);
end_date	DATE;
end_time	TIMESTAMP;
itm_number	VARCHAR2(20)
);	

DESCRIBE price_history;

CREATE TABLE sales_representatives (

id VARCHAR2(6),

email VARCHAR2(20),

first_name VARCHAR2(10),

last_name VARCHAR2(10),

phone_number VARCHAR2(10),

commission_rate NUMBER(2),

supervisor_id VARCHAR2(4)

);

DESCRIBE sales_representatives;

CREATE TABLE sales_rep_addresses (

id VARCHAR2(4),

address_line_1 VARCHAR2(20),

address_line_2 VARCHAR2(10),

city VARCHAR2(10),

zip_code VARCHAR2(10)

);

DESCRIBE sales_rep_addresses;

CREATE TABLE teams (

id VARCHAR2(4),

name VARCHAR2(10),

number_of_players NUMBER(2),

discount NUMBER(2),

);

DESCRIBE teams;

CREATE TABLE customers

ctr_number VARCHAR2(10),

email VARCHAR2(30),

first_name VARCHAR2(10),

last_name VARCHAR2(10),

phone_number VARCHAR2(10),

current_balance NUMBER(5,2),

src_id VARCHAR2(4),

tem_id VARCHAR2(4),

loyalty_card_number VARCHAR2(6)

);

DESCRIBE customers;

CREATE TABLE customers_addresses

id VARCHAR2(6),

address_line_1 VARCHAR2(25),

address_line_2 VARCHAR2(10),

city VARCHAR2(10),

zip_code VARCHAR2(7),

ctr_number VARCHAR2(6)

);

DESCRIBE customers_addresses;

CREATE TABLE orders

~~order_id~~ id VARCHAR2(9),

odr_date DATE,

odr_time TIMESTAMP,

number_of_units NUMBER(2),

ctr_number VARCHAR(6)

);

DESCRIBE orders;

CREATE TABLE ordered_items (

quantity_ordered NUMBER(2),

quantity_shipped NUMBER(2),

odr_id VARCHAR2(9),

itm_number VARCHAR2(10)

);

DESCRIBE ordered_items;

ID	COST	UNITS
il010230124	3	100
il010230125	8	250
il010230126	15	82
il010230127	19	65
il010230128	97	8

ITEM NUMBER	NAME	DESCRIPTION	Category	COLOR	Size	ICT_ID
im0101044	gloves	catcher mitt	Clothing	brown	m	il010230124
im0101045	under shirt	rop worn under the game top	clothing	white	s	il010230125
im0101046	socks	team socks with emblem	clothing	orange	l	il010230126
im0101047	game top	team shirt with emblem	clothing	orange	m	il010230127
im0101048	premium bat	high quality baseball bat	equipment			il010230128

START DATE	START TIME	Price	END DATE	END TIME	ETM NUMBER
17-JAN-17	17-JAN-16 09:00:00 AM	5			imollolol44
25-NOV-16	25-NOV-16 09:00:00 AM	15	25-JAN-17	25-JAN-17 05:00:00 PM	imollolol45
25-JAN-17	25-JAN-17 05:01:00 PM	9	25-JAN-17	25-JAN-17 07:00:00 PM	imollolol45
25-JAN-17	25-JAN-17 09:00:00 AM	16			imollolol45
12-FEB-17	12-FEB-17 12:30:00 PM	8			imollolol46
25-APR-17	25-APR-17 10:10:10 AM	25			imollolol47
31-MAY-17	31-MAY-17 04:35:30 PM	149			imollolol48
17-JUN-17	17-JUN-16 09:00:00 AM	5			imollolol44
25-NOV-16	25-NOV-16 09:00:00 AM	15	25-JAN-17	25-JAN-17 05:00:00 PM	imollolol45

ID	Email	First name	Last name	Phone number	Comission rate	Supervisor id
SR01	chray@obl.com	Charles	Raymond	0134598763	10	SR01
SR02	vwright@obl.com	Victoria	Wright	0134598762	5	SR01
SR03	bspeed@obl.com	Barry	Speed	0134598763	5	SR01

ID	Address line 1	Address line 2	City	Zip code
SR01	12 Cherry Lane	Denton	Detroit	DT48211
SR02	87 Blossom Hill	Uptown	Detroit	DT52314
SR03	12 Junction Row	6kinflats	Detroit	DT52564

ID	NAME	Number of players	Discount
t001	Rockets	25	10
t002	Celtics	42	20
t003	Rovers	8	-

ctr number	Email	First name	last name
c00001	bob.thornberry@heatmail.com	Robert	Thornberry
c00012	Jones@freemail.com	Jennifer	Jones
c00101	unknown@here.com	John	Doe
c00103	Marcia.t@globaltech.com	Andrew	Marcia
c01986	margal.87@delphiview.com	Marica	Galant

Phone number	current balance	src.id	tem.id	loyalty card number
01234567898	150	sr01	t001	-
01505214528	0	-	-	161015
03210547808	987.5	sr01	t002	-
07715240890	85	-	-	162341
01442736589	125.55	sr03	t003	-

ID	Address_line_1	Address_line_2	City	Zip_code	ctr.number
ca0101	83 Parrhill Drive		Liverpool	LP79HJK	C00001
ca0102	17 Gartsquare Road	Sturford	Liverpool	LP89JHK	C00001
ca0103	54 Rapchill Crescent	Georgetown	Sturford	ST95AGN	C00101
ca0104	36 Watercross Lane	-	Jump	JP23YTH	C01986
ca0105	63 Acacia Drive	skins	Liverpool	LP83JHR	C00001

ID	Order-date	Order-time	Number of units	ctr.number
or0101250	17-APR-17	17-APR-17 08:32:70 AM	5	C00001
or0101350	24-MAY-17	24-MAY-17 10:30:35 AM	5	C00001
or0101425	28-MAY-17	28-MAY-17 12:30:00 PM	18	C00103
or0101681	02-JUN-17	02-JUN-17 02:55:30 PM	10	C00001
or0101750	18-JUN-17	18-JUN-17 09:05:00 AM	1	C01986

quantity ordered	quantity shipped	ORDER ID	ITEM NUMBER
5	5	or0101250	im01101044
5	5	or0101250	im01101046
5	5	or0101350	im01101044
18	18	or0101425	im01101047
10	10	or0101681	im01101047
1	1	or0101750	im01101048

PART 2: Inserting rows to the system:

1)

~~Insert into~~

```
INSERT INTO teams (id, name, number_of_players, discount)
VALUES ('t004', 'Jets', 10, 5);
SELECT * FROM teams;
```

2)

```
INSERT INTO customers (ctr_number, email, first_name, last_name,
phone_number, current_balance, sex, id, rem_id,
loyalty_card_number)
VALUES ('c02001', 'brianrog@hootech.com', 'Brian', 'Rogers', '01654664
-5, null, null, 'c4587')
SELECT * FROM customers;
```

UPDATE customers

SET current_balance = 50

WHERE (current_balance = -5);

SELECT * FROM customers;

Database Design Project

Oracle Baseball League Store Database

Project Scenario:

You are a small consulting company specializing in database development. You have just been awarded the contract to develop a data model for a database application system for a small retail store called Oracle Baseball League (OBL).

The Oracle Baseball League store serves the entire surrounding community selling baseball kit. The OBL has two types of customer, there are individuals who purchase items like balls, cleats, gloves, shirts, screen printed t-shirts, and shorts. Additionally customers can represent a team when they purchase uniforms and equipment on behalf of the team.

Teams and individual customers are free to purchase any item from the inventory list, but teams get a discount on the list price depending on the number of players. When a customer places an order we record the order items for that order in our database.

OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

Section 6 Lesson 4 Exercise 2: Data Manipulation Language

Use DML operations to manage database tables (S6L4 Objective 2)

In this exercise you will populate and work with the data that is stored in the database system.

Part 1- Updating rows to the system

1. Run the following query to view the content of the price_history table:

```
SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR  
(end_time, 'HH24:MI')  
FROM price_history;
```

1	✓	SELECT start_date, TO_CHAR (start_time, 'HH24:MI:SS'), price, end_date, TO_CHAR
2		(end_time, 'HH24:MI')
3		FROM price_history;

START_DATE	TO_CHAR(START_TIME, 'HH24:MI:SS')	PRICE	END_DATE	TO_CHAR(END_TIME, 'HH24:MI')
17-JUN-17	09:00:00	5	-	-
25-NOV-16	09:00:00	15	25-JAN-17	17:00
25-JAN-17	17:01:00	9	25-JAN-17	19:00
26-JAN-17	09:00:00	16	-	-
12-FEB-17	12:30:00	8	-	-
25-APR-17	10:10:10	25	-	-
31-MAY-17	16:35:30	149	-	-

2. Obl is going to update the price of the premium bat so you will need to write a query that will close off the current price by adding the system date values to the end_date and end_time fields. To run this query you will need to both match the item number and identify that the end date is null. This ensures that you are updating the latest price.

```

1 v UPDATE price_history
2   SET end_date = CURRENT_DATE,
3       end_time = CURRENT_TIMESTAMP
4 WHERE itm_number = 'im01101048'
5   AND end_date IS NULL;

```

3. Rerun the select statement on the price_history table to ensure that the statement has been executed.

```

7 SELECT * FROM price_history;

```

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
17-JUN-17	17-JUN-16 09.00.00.000000 AM	5	-	-	im01101044
25-NOV-16	25-NOV-16 09.00.00.000000 AM	15	25-JAN-17	25-JAN-17 05.00.00.000000 PM	im01101045
25-JAN-17	25-JAN-17 05.01.00.000000 PM	9	25-JAN-17	25-JAN-17 07.00.00.000000 PM	im01101045
26-JAN-17	26-JAN-17 09.00.00.000000 AM	16	-	-	im01101045
12-FEB-17	12-FEB-17 12.30.00.000000 PM	8	-	-	im01101046
25-APR-17	25-APR-17 10.10.10.000000 AM	25	-	-	im01101047

4. Insert a new row that will use the current date and time to set the new price of the premium bat to be 99.99.

```

1 v INSERT INTO price_history (start_date, start_time, price, itm_number)
2   VALUES (CURRENT_DATE, CURRENT_TIMESTAMP, 99.99, 'im01101048');
3

```

5. Rerun the select statement on the price_history table to ensure that the statement has been executed.

START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
09-NOV-23	09-NOV-23 01.34.45.967319 AM	100	-	-	im01101048

Part 2: Deleting rows from the system

1. Bob Thornberry has contacted Obl to ask that the 83 Barrhill Drive address be removed from the system as he can no longer receive parcels at this address. Write a SQL statement that will remove this address from the system.

```

1 v DELETE FROM customers_addresses
2   WHERE address_line_1 = '83 Barrhill Drive'
3   AND ctr_number = 'c00001';

```


- Run a select statement on the customers_addresses table to ensure that the statement has been executed.

```
4 SELECT * FROM customers_addresses;
```

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

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