W4D1 Homework

Ana Katrina De Leon

1. Design the tables in database, attention their relationship and the constraint (primary key, foreign key)

CREATE TABLE USERS (

user\_id NUMBER NOT NULL,

first\_name VARCHAR(30),

last\_name VARCHAR(30),

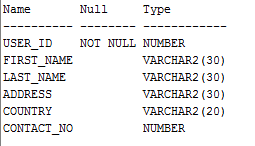
address VARCHAR(30),

country VARCHAR(20),

contact\_no NUMBER,

CONSTRAINT user\_pk PRIMARY KEY (user\_id)

);



CREATE TABLE ORDERS (

order\_id NUMBER NOT NULL,

user\_id NUMBER NOT NULL,

order\_date DATE,

ship\_address VARCHAR(30),

ship\_country VARCHAR(20),

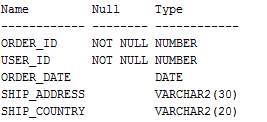
CONSTRAINT order\_pk PRIMARY KEY (order\_id),

CONSTRAINT fk\_user

FOREIGN KEY (user\_id)

REFERENCES USERS(user\_id)

);



CREATE TABLE ORDER\_ITEM (

order\_item\_id NUMBER NOT NULL,

order\_id NUMBER NOT NULL,

item\_desc VARCHAR(30),

item\_price DECIMAL(7,2),

item\_quantity NUMBER,

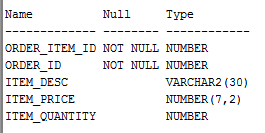
CONSTRAINT order\_item\_pk PRIMARY KEY (order\_item\_id),

CONSTRAINT fk\_order

FOREIGN KEY (order\_id)

REFERENCES ORDERS(order\_id)

);



1. What are DQL, DML, DDL and DCL for Database? And what their commands? And give examples for each one based the above tables “User”, “Order” and “OrderItem”.

* **DQL – Data Query Language**
  + Query which allows the retrieving of values inside a table
  + Commands:
    - SELECT

SELECT \* FROM users WHERE user\_id IN (1);

SELECT first\_name ||''||last\_name FROM users;

SELECT SYSDATE FROM orders;

SELECT \* FROM order\_item WHERE item\_desc LIKE 'B%';

* **DML – Data Manipulation Language**
  + Manipulating data inside the table
  + Commands:
    - INSERT

INSERT INTO users (user\_id, first\_name, last\_name, address, country, contact\_no) VALUES (1, 'Ana Katrina', 'De Leon', 'Santa Rosa Laguna City', 'Philippines', '09151237719');

INSERT INTO orders (order\_id, user\_id, order\_date, ship\_address, ship\_country) VALUES (1, 1, '07-JULY-2016', 'Santa Rosa Laguna City', 'Philippines');

INSERT INTO order\_item (order\_item\_id, order\_id, item\_desc, item\_price, item\_quantity) VALUES (1, 1, 'Bag', '200.00', '2');

* + - UPDATE

UPDATE USERS SET first\_name = 'Kat' WHERE user\_id = 1;

UPDATE ORDERS SET ship\_country = 'China' WHERE order\_id = 1;

UPDATE ORDER\_ITEM SET item\_desc = 'Car' WHERE order\_item\_id = 1;

* + - DELETE

DELETE FROM users;

DELETE FROM orders;

DELETE FROM order\_item;

* **DDL – Data Definition Language**
  + Used for defining data structures
  + Commands:
    - CREATE

CREATE TABLE USERS (

user\_id NUMBER NOT NULL,

first\_name VARCHAR(30),

last\_name VARCHAR(30),

address VARCHAR(30),

country VARCHAR(20),

contact\_no NUMBER,

CONSTRAINT user\_pk PRIMARY KEY (user\_id)

);

CREATE TABLE ORDERS (

order\_id NUMBER NOT NULL,

user\_id NUMBER NOT NULL,

order\_date DATE,

ship\_address VARCHAR(30),

ship\_country VARCHAR(20),

CONSTRAINT order\_pk PRIMARY KEY (order\_id),

CONSTRAINT fk\_user

FOREIGN KEY (user\_id)

REFERENCES USERS(user\_id)

);

CREATE TABLE ORDER\_ITEM (

order\_item\_id NUMBER NOT NULL,

order\_id NUMBER NOT NULL,

item\_desc VARCHAR(30),

item\_price DECIMAL(7,2),

item\_quantity NUMBER,

CONSTRAINT order\_item\_pk PRIMARY KEY (order\_item\_id),

CONSTRAINT fk\_order

FOREIGN KEY (order\_id)

REFERENCES ORDERS(order\_id)

);

* + - ALTER

ALTER TABLE USERS MODIFY contact\_no NUMBER;

ALTER TABLE ORDERS MODIFY (ship\_country VARCHAR2(15));

ALTER TABLE ORDER\_ITEM DROP CONSTRAINT order\_item\_pk;

* + - DROP

DROP TABLE users;

DROP TABLE orders;

DROP TABLE order\_item;

* **DCL – Data Control Language**
  + Used to control access to data store in a database
  + Commands:
    - GRANT

GRANT SELECT ON users TO public;

CREATE USER kat IDENTIFIED BY oracle;

GRANT SELECT, INSERT, UPDATE, DELETE ON users TO kat;

* + - ROLLBACK

INSERT INTO users (user\_id, first\_name, last\_name, address, country, contact\_no) VALUES (1, 'Ana Katrina', 'De Leon', 'Santa Rosa Laguna City', 'Philippines', '09151237719');

rollback;

DELETE FROM order\_item;

rollback;

ALTER TABLE ORDERS MODIFY (ship\_country VARCHAR2(15));

rollback;

* + - COMMIT

INSERT INTO users (user\_id, first\_name, last\_name, address, country, contact\_no) VALUES (1, 'Ana Katrina', 'De Leon', 'Santa Rosa Laguna City', 'Philippines', '09151237719');

COMMIT;

INSERT INTO orders (order\_id, user\_id, order\_date, ship\_address, ship\_country) VALUES (1, 1, '07-JULY-2016', 'Santa Rosa Laguna City', 'Philippines');

COMMIT;

INSERT INTO order\_item (order\_item\_id, order\_id, item\_desc, item\_price, item\_quantity) VALUES (1, 1, 'Bag', '200.00', '2');

COMMIT;