W4D1 Homework

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

User

Order

OrderItem

**Answer:**

CREATE TABLE USERS (USER\_ID NUMBER(8) PRIMARY KEY NOT NULL, FIRST\_NAME VARCHAR(30) NOT NULL, LAST\_NAME VARCHAR(20) NOT NULL, USER\_ADDRESS VARCHAR(50) NOT NULL ,DATE\_CREATED DATE);

CREATE TABLE ORDER\_ITEM (ITEM\_ID NUMBER(8) PRIMARY KEY NOT NULL, ITEM\_NAME VARCHAR(20) NOT NULL, ITEM\_DETAILS VARCHAR(50) NOT NULL, ITEM\_PRICE NUMBER(5) NOT NULL);

CREATE TABLE ORDERS (ORDER\_ID NUMBER(8) PRIMARY KEY NOT NULL, USER\_ID NUMBER(8) NOT NULL,ITEM\_ID NUMBER(8) NOT NULL, FOREIGN KEY(USER\_ID) REFERENCES USERS(USER\_ID), FOREIGN KEY(ITEM\_ID) REFERENCES ORDER\_ITEM(ITEM\_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)** is the most concentrated focus of SQL for modern relational database users,   
Command: SELECT  
Sample:   
**SELECT** \* FROM USERS  
**SELECT** \* FROM ORDER\_ITEM  
**SELECT** \* FROM ORDERS  
**SELECT** A.FIRST\_NAME,A.LAST\_NAME,B.ITEM\_NAME,B.ITEM\_DETAILS,B.ITEM\_PRICE,C.ORDER\_ID FROM USERS A, ORDER\_ITEM B, ORDERS C  
WHERE C.USER\_ID = A.USER\_ID AND C.ITEM\_ID = B.ITEM\_ID

**DML (Data Manipulation Language) –** isa set of syntax use for selecting, inserting, updating and deleting data in the database.  
Sample:  
**INSERT** INTO USERS values(10000003, 'Chuck', 'Norris', 'Pasig City', SYSDATE);  
**INSERT** INTO ORDER\_ITEM values(1,'MacBook Air', 'An Apple product' , 60000);  
**UPDATE** users set user\_city = 'Manila' where LAST\_NAME = 'Bradey';  
**DELETE** FROM orders WHERE USER\_ID = 10000001

**DDL (Data Definition Language) –** isa standard for commands that define the different structures in a database. These statements create, modify, and remove database objects.  
Sample:  
**CREATE** TABLE USERS (USER\_ID NUMBER(8) PRIMARY KEY NOT NULL, FIRST\_NAME VARCHAR(30) NOT NULL, LAST\_NAME VARCHAR(20) NOT NULL, USER\_ADDRESS VARCHAR(50) NOT NULL ,DATE\_CREATED DATE);

**DROP** TABLE USERS  
**DROP** TABLE ORDER\_ITEM  
**DROP** TABLE ORDERS

**ALTER** table USERS ADD user\_city varchar(20);  
**ALTER** table order\_item ADD quantity number(4);

**DCL (Data Control Language) statements –** is a set of syntax used to control access to data stored in a database (Authorization)

Sample:

**Grant privileges**

GRANT CONNECT, RESOURCE TO testConnection;  
**Rollback -** is done to undo action in the transaction  
Rollback;

**COMMIT –** is done at the end of a transaction to make all the changes be saved.

COMMIT;