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W4D1 Homework

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

CREATE TABLE USERS (

USERID INTEGER PRIMARY KEY NOT NULL,

FIRSTNAME VARCHAR(25) NOT NULL,

LASTNAME VARCHAR(25) NOT NULL,

BIRTHDATE DATE NOT NULL,

EMAIL VARCHAR(50));

CREATE TABLE ORDERS (

ORDERID INTEGER NOT NULL PRIMARY KEY,

ORDERDATE DATE,

ORDERSTATUS VARCHAR(25),

ORDERTOTAL NUMBER(1,3),

ORDERADDRESS VARCHAR(25),

USERID NUMBER(2),

CONSTRAINT FK\_USER\_ID

FOREIGN KEY (USERID)

REFERENCES USERS (USERID));

CREATE TABLE ORDER\_ITEM (

ORDERITEMDID INTEGER NOT NULL PRIMARY KEY,

QUANTITY NUMBER(3),

UNITCOST NUMBER(3),

DESCRIPTION VARCHAR(255),

ORDERID NUMBER(2),

CONSTRAINT FK\_ORDER\_ID

FOREIGN KEY (ORDERID)

REFERENCES ORDERS (ORDERID));

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 -** Doctrine Query Language
  + Command in DQL is SELECT.
    - Example:  
      SELECT FIRSTNAME,LASTNAME FROM USERS;  
      SELECT \* FROM ORDERS WHERE ORDERSTATUS =’Pending’;  
      SELECT \* FROM ORDER\_ITEM WHERE QUANTITY > 10;
* **DML** – Data Manipulation Language
  + Commands in DML are INSERT, UPDATE and DELETE
    - Examples:  
      -INSERT INTO USERS VALUES(0,'Mark Anthony','Andes','20-OCT-1995','markanthony.andes@yahoo.com');

-INSERT INTO ORDERS VALUES(0,'07-JUL-2016','Pending',10,'Zhuhai,China',0);

- INSERT INTO ORDER\_ITEM VALUES(0,10,300,'This order will be delivered today.',0);  
- UPDATE USERS SET FIRSTNAME = 'Mark';

- UPDATE ORDERS SET ORDERTOTAL = 100;

-UPDATE ORDER\_ITEM SET DESCRIPTION = 'This order will be NOT delivered today.';

-DELETE FROM ORDER\_ITEM WHERE QUANTITY > 5;

-DELETE FROM ORDERS WHERE ORDERDATE ='07-JUL-2016';

-DELETE FROM USERS WHERE LASTNAME ='Andes';

* **DDL** - Data Definition Language
  + Commandes in DDL are CREATE,ALTER,DROP,TRANCATE

Examples:  
  
-CREATE TABLE USERS (

USERID INTEGER PRIMARY KEY NOT NULL,

FIRSTNAME VARCHAR(25) NOT NULL,

LASTNAME VARCHAR(25) NOT NULL,

BIRTHDATE DATE NOT NULL,

EMAIL VARCHAR(50));

-CREATE TABLE ORDERS (

ORDERID INTEGER NOT NULL PRIMARY KEY,

ORDERDATE DATE,

ORDERSTATUS VARCHAR(25),

ORDERTOTAL NUMBER(1,3),

ORDERADDRESS VARCHAR(25),

USERID NUMBER(2),

CONSTRAINT FK\_USER\_ID

FOREIGN KEY (USERID)

REFERENCES USERS (USERID));

-CREATE TABLE ORDER\_ITEM (

ORDERITEMDID INTEGER NOT NULL PRIMARY KEY,

QUANTITY NUMBER(3),

UNITCOST NUMBER(3),

DESCRIPTION VARCHAR(255),

ORDERID NUMBER(2),

CONSTRAINT FK\_ORDER\_ID

FOREIGN KEY (ORDERID)

REFERENCES ORDERS (ORDERID));

-ALTER TABLE USERS DROP COLUMN LASTNAME;  
-ALTER TABLE ORDERS DROP COLUMN ORDERTOTAL;  
-ALTER TABLE ORDER\_ITEM DROP COLUMN UNITCOST;  
- DROP TABLE USERS  
- DROP TABLE ORDERS  
- DROP TABLE ORDER\_ITEM  
-TRANCATE TABLE USERS  
- TRANCATE TABLE ORDERS  
- TRANCATE TABLE ORDER\_ITEM

* **DCL** - Data Control Language
  + Commande in DCL are GRANT , ROLLBACK and COMMIT;

Examples:  
CREATE USER TUTOR IDENTIFIED BY oracle;  
GRANT CONNECT, RESOURCE TO TUTOR;  
ROLLBACK;  
COMMIT;