



Durée 02 Heures – Documents interdits

Soit la base de données MYSQL suivante:

```
CREATE TABLE customer(id int(11) NOT NULL,  
  fname char(30) DEFAULT NULL,  
  lname char(30) DEFAULT NULL,  
  address char(35) DEFAULT NULL,  
  PRIMARY KEY (id));
```

```
CREATE TABLE employee(id int(11) NOT NULL,  
  fname char(30) DEFAULT NULL,  
  lname char(35) DEFAULT NULL,  
  address char(35) DEFAULT NULL,  
  sex char(1) DEFAULT NULL,  
  PRIMARY KEY (id));
```

```
CREATE TABLE product(id int(11) NOT NULL,  
  name char(15) DEFAULT NULL,  
  description char(30) DEFAULT NULL,  
  size char(18) DEFAULT NULL,  
  color enum('rouge','bleu','vert','blanc') DEFAULT NULL,  
  quantity int(11) DEFAULT NULL,  
  unit_price decimal(15,2) DEFAULT NULL,  
  PRIMARY KEY (id));
```

```
CREATE TABLE sales_order (id int(11) NOT NULL,  
  cust_id int(11) DEFAULT NULL,  
  order_date date DEFAULT NULL,  
  emp_id int(11) DEFAULT NULL,  
  total decimal(20,2) DEFAULT NULL,  
  PRIMARY KEY (id),  
  FOREIGN KEY (cust_id) REFERENCES customer (id));
```

```
CREATE TABLE sales_order_items(id int(11) NOT NULL,  
  prod_id int(11) NOT NULL DEFAULT,  
  quantity int(11) DEFAULT NULL,  
  PRIMARY KEY (id,prod_id),  
  FOREIGN KEY (id) REFERENCES sales_order (id) ON UPDATE  
  CASCADE,  
  FOREIGN KEY (prod_id) REFERENCES product (id) ON UPDATE  
  CASCADE);
```

Partie 1 (10 pts): Cocher la (les) bonne (s) réponse (s).

(1 pt) Que faire pour exporter la base de données 'fact' ?

- Mysqldump -h localhost -u root -p d:/fact.sql <fact
- ✓ *Mysqldump -h localhost -u root -p -rd:/fact.sql fact*
- Mysql -h localhost -u root -p export fact to d:/fact.sql
- Mysqldump -h localhost -u root -p -r fact d:/fact.sql

(1 pt) Créer l'utilisateur 'amar' avec un mot de passe 'a' et un privilège select sur 'fact' :

- Create user amar with select on fact.* identified by (a)
- Grant select to amar@localhost on fact.* identified by 'a'
- ✓ *Grant select on fact.* to amar identified by 'a'*
- Create user amar identified by 'a' with select priv on fact.sql

(1 pt) Comment afficher les droits de l'utilisateur root ?

- Show privileges for root@localhost
- ✓ *Show grants for root@localhost*
- Show grants from root@localhost
- Select privileges from mysql.user

(1 pt) Que se passera-t-il si on supprime une ligne de la table sales_order ?

- Le client correspondant sera supprimé.
- Les lignes de la facture seront supprimées.
- ✓ *Un message d'erreur est retourné par MYSQL et aucune ligne n'est supprimée.*
- La ligne est supprimée et rien ne se passera.

(1 pt) Quelles sont les propositions vraies ?

- Mysqldump est le serveur de mysql qui doit toujours être en marche
- On peut se connecter avec l'utilisateur omar@localhost de n'importe quel ordinateur du réseau local.
- ✓ *Mysql est le client mysql sans le quel on ne peut se connecter au serveur*

(2 pt) La requête donnant la liste des clients qui n'ont rien acheté en 2007 est :

- ✓ *Select * from customer where id not in (select cust_id from sales_order where year(order_date)=2007);*
- Select c.* from customer c, sales_order s where c.id<>s.cust_id and year(s.order_date)=2007;

- Select * from customer c join (select cust_id from sales_order where year(order_date)=2007) as m on c.id<>m.cust_id;

(2 pt) Le produit le moins cher est :

- Select id,name from produit where min(unit_price)
- ✓ Select id,name from product order by unit_price limit 1
- ✓ Select id,name from product where unit_price=(select min(unit_price) from product)
- Select id,name from product group by id,name having min(unit_price)

(1 pt) Les produits dont la quantité en stock est inférieure ou égale à 100 :

- Select * from product where quantity < 100
- Select * from product where quantity not in (select id from product where quantity>100)
- ✓ Select * from product where id not in (select id from product where quantity>100)

Partie 2 (8 pts): Donner les requêtes SQL correspondantes :

1. Chiffre d'affaires du client 1 en 2007. (1 pt)

```
Select sum(total) From sales_order where cust_id=1 and year(order_date)=2007;
```

2. Produits de couleur rouge ayant un prix inférieur à tous ceux de couleur bleu. (1 pt)

```
Select * from product where color='rouge' and unit_price < all ( Select unit_price  
From product Where color='bleu');
```

3. Liste des ventes de 2007 des clients n'ayant rien acheté en 2006. (2 pt)

```
Select p.id,p.name,Sum(i.Quantity)  
From product p, sales_order s, sales_order_items i  
Where p.id=i.prod_id and s.id=i.id and year(s.order_date)=2007 and  
s.cust_id not in (select cust_id from sales_order where year(order_date)=2006)  
Group by p.id, p.name;
```

4. Liste des employés ne traitant qu'un seul client. (2 pt)

```
Select * From employee Where id in (Select emp_id From sales_order  
Group by emp_id Having count(cust_id)=1);
```

5. Le client ayant acheté la plus grande quantité de produits. (2 pt)

```
Select * From customer Where id in ( Select cust_id From sales_order s, ( Select id,  
sum(quantity) Q From sales_order_items Group by id ) As C Where s.id=c.id and  
c.Q=( Select max(Q) From(Select sum(quantity) Q From sales_order_items Group by id )  
as c ) );
```

Partie 3 (3 pts):

Les trois trigger qui permettent de gérer le champ TOTAL de sales_order automatiquement.

```
CREATE TRIGGER add_item AFTER INSERT ON sales_order_items  
FOR EACH ROW  
begin  
select unit_price into @p from product where id=new.prod_id;  
update sales_order set total=total+(@p * new.quantity) where  
id=new.id;  
end;  
CREATE TRIGGER upd_item BEFORE UPDATE ON sales_order_items  
FOR EACH ROW  
begin  
select unit_price into @p from product where id=new.prod_id;  
update sales_order set total=total-(@p * old.quantity)+(@p *  
new.quantity) where id=new.id;  
end;  
CREATE TRIGGER del_item BEFORE DELETE ON sales_order_items  
FOR EACH ROW  
begin  
select unit_price into @p from product where id=old.prod_id;  
update sales_order set total=total-(@p * old.quantity) where  
id=old.id;  
end;
```