ALOUANI Fadi

BTS SIO 1
groupe 1
B1
20/01/26

TD4 :BDD LECLERC-suite

Sommaire

Introduction

Ce TP a pour objectif de nous initier à la conception et à l'exploitation d'une base de données relationnelle. À partir d'un **Modèle Conceptuel de Données (MCD)** représentant des clients et leurs catégories socioprofessionnelles, nous avons appris à le transformer en **Modèle Relationnel de Données (MRD)**, puis à créer la structure correspondante dans une base de données.

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Question :1

Reprendre votre base de données du TD4 et ajouter les tables & champs manquants.

	Table ▲	Action	
☐	achat	⭐	▦ Brov
☐	categorie	⭐	▦ Brov
☐	client	⭐	▦ Brov
☐	produit	⭐	▦ Brov

Question :2

insérez les enregistrements ci-dessous dans la base de données

			num	nom	prix
✏ Edit	⧉ Copy	⊖ Delete	1	PS4	400.00
✏ Edit	⧉ Copy	⊖ Delete	2	Lave linge éco++	700.00
✏ Edit	⧉ Copy	⊖ Delete	3	Iphone 8	850.00
✏ Edit	⧉ Copy	⊖ Delete	4	Ipod nano	200.00
✏ Edit	⧉ Copy	⊖ Delete	5	Brosse à dent	3.00
✏ Edit	⧉ Copy	⊖ Delete	6	Pain	1.00
✏ Edit	⧉ Copy	⊖ Delete	7	SGS 7	750.00
✏ Edit	⧉ Copy	⊖ Delete	8	DVD	20.00
✏ Edit	⧉ Copy	⊖ Delete	9	Jeux PC	50.00

☐ Check all   With selected: ✏ Edit   ⧉ Copy   ⊖ [

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Question :3

Insérer les achats ci-dessous dans la base de données (en cas d'erreur, veuillez modifier votre base de données pour rendre les enregistrements possible) : • le 14/11/2016 : M. Voduk à acheter 2 pains et une brosse à dent • le 15/11/2016 : M. Voduk à acheter 1 pain et une PS4 • le 14/11 : le client n°1 à acheter le produit n°1 • le 10/11 : le client n°10 à acheter le produit 9 & le produit 8 à cette même date le client n°9 à acheter le produit n°1

```
SELECT * FROM `achat`
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 ∨ Filter rows: Search this table | Sort

Extra options

←T→				num_client	num_produit	date_achat	nombre
☐	🖊 Edit	⤳ Copy	⊖ Delete	1	1	2016-11-14	3
☐	🖊 Edit	⤳ Copy	⊖ Delete	1	3	2016-11-15	1
☐	🖊 Edit	⤳ Copy	⊖ Delete	9	1	2016-11-10	1
☐	🖊 Edit	⤳ Copy	⊖ Delete	10	8	2016-11-10	1
☐	🖊 Edit	⤳ Copy	⊖ Delete	10	9	2016-11-10	1

↑__ ☐ Check all With selected: 🖊 Edit ⤳ Copy ⊖ Delete 🖫 Export

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Question :4

En mode SQL, veuillez effectuer les requêtes de votre dossier 3.4 (à partir de la question 7)

(Les requête que j'ai taper sont dans les capture d'écran)
question dossier

Question 7 :

Question 8 :

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Question 9 :

Showing rows 0 - 9 (10 total, Query took 0.0003 seconds.)

SELECT ville FROM client;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ∨ Filter rows: Search this tabl

Extra options

←T→				ville
☐	🖉 Edit	🖹 Copy	⊝ Delete	Paris
☐	🖉 Edit	🖹 Copy	⊝ Delete	Paris
☐	🖉 Edit	🖹 Copy	⊝ Delete	Courbevoie
☐	🖉 Edit	🖹 Copy	⊝ Delete	Nanterre
☐	🖉 Edit	🖹 Copy	⊝ Delete	Paris
☐	🖉 Edit	🖹 Copy	⊝ Delete	Paris
☐	🖉 Edit	🖹 Copy	⊝ Delete	Courbevoie
☐	🖉 Edit	🖹 Copy	⊝ Delete	Paris
☐	🖉 Edit	🖹 Copy	⊝ Delete	Paris
☐	🖉 Edit	🖹 Copy	⊝ Delete	Nanterre

↑ ☐ Check all   With selected: 🖉 Edit   🖹 Copy   ⊝ Delete

Show all | Number of rows: 25 ∨ Filter rows: Search this tabl

Query results operations

Question 10 :

Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)

SELECT DISTINCT ville FROM `client`;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP cod

Show all | Number of rows: 25 ∨ Filter rows:

Extra options

─T→				ville
☐	🖉 Edit	🖹 Copy	⊝ Delete	Paris
☐	🖉 Edit	🖹 Copy	⊝ Delete	Courbevoie
☐	🖉 Edit	🖹 Copy	⊝ Delete	Nanterre

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Question 11 :

Question 12 :
La ville ayant toute les catégories est Paris
Question 13 :

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Question 14 :

Showing rows 0 - 4 (5 total, Query took 0.0003 seconds.)

SELECT num_produit FROM achat;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refr

Show all | Number of rows: 25 ∨   Filter rows: Search

Extra options

←T→	num_produit
☐ 🖉 Edit ⯗ Copy ⊝ Delete	1
☐ 🖉 Edit ⯗ Copy ⊝ Delete	1
☐ 🖉 Edit ⯗ Copy ⊝ Delete	3
☐ 🖉 Edit ⯗ Copy ⊝ Delete	8
☐ 🖉 Edit ⯗ Copy ⊝ Delete	9

↑ ☐ Check all   With selected: 🖉 Edit   ⯗ Copy   ⊝

Show all | Number of rows: 25 ∨   Filter rows: Search

Question 15 :

Showing rows 0 - 8 (9 total, Query took 0.0003 seconds.) [prix: **1.00...** - **850.00...**]

SELECT nom , prix FROM `produit` ORDER by prix;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ∨   Filter rows: Search this table

Extra options

←T→	nom	prix ▲ 1
☐ 🖉 Edit ⯗ Copy ⊝ Delete	Pain	1.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	Brosse à dent	3.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	DVD	20.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	Jeux PC	50.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	Ipod nano	200.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	PS4	400.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	Lave linge éco++	700.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	SGS 7	750.00
☐ 🖉 Edit ⯗ Copy ⊝ Delete	Iphone 8	850.00

↑ ☐ Check all   With selected: 🖉 Edit   ⯗ Copy   ⊝ Delete   🖥 Exp

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Question 16 :

	num_produit	date_achat
☐ Edit Copy Delete	3	2016-11-15
☐ Edit Copy Delete	1	2016-11-14
☐ Edit Copy Delete	1	2016-11-10
☐ Edit Copy Delete	8	2016-11-10
☐ Edit Copy Delete	9	2016-11-10

Question 17 :

	nom	prenom
☐ Edit Copy Delete	Ebote	Emma
☐ Edit Copy Delete	Gulya	Enzo
☐ Edit Copy Delete	Julyn	Chloé
☐ Edit Copy Delete	Lossu	Louis
☐ Edit Copy Delete	Qausi	Nathan
☐ Edit Copy Delete	Talam	Léa
☐ Edit Copy Delete	Tuuji	Ines
☐ Edit Copy Delete	Vetea	Léo
☐ Edit Copy Delete	Vimif	Lucas
☐ Edit Copy Delete	Voduk	Manon

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Question 18 :

Question 19 :

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Question 20 :

```
Run SQL query/queries on table leclerc.achat: ?

1 SELECT *
2 FROM achat
3 WHERE date BETWEEN '2014-01-01' AND '2014-12-31';
4 |
```

Question 21 :
faite sur le dossier

Question 22 :

✓ Showing rows 0 - 9 (10 total, Query took 0.0004 seconds.)

SELECT client.nom, client.prenom, categorie.nom AS nom_categorie FROM client, categorie WHERE categorie.num = client.num_categorie;

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 ∨   Filter rows: Search this table

Extra options

nom	prenom	nom_categorie
Qausi	Nathan	non renseigné
Ebote	Emma	ouvrier
Julyn	Chloé	ouvrier
Tuuji	Ines	ouvrier
Vimif	Lucas	cadre
Gulya	Enzo	cadre
Talam	Léa	cadre
Vetea	Léo	sans-emploi
Lossu	Louis	sans-emploi
Voduk	Manon	autres

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Question 23 :
N'ayant pas de colonne e-mail, j'en ai créé une.

Showing rows 0 - 9 (10 total, Query took 0.0004 seconds.)

SELECT client.email, categorie.nom AS nom_categorie FROM client, categorie WHERE categorie.num = client.num_categorie;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ⌄   Filter rows: Search this table

Extra options

email	nom_categorie
NULL	non renseigné
NULL	ouvrier
NULL	ouvrier
NULL	ouvrier
NULL	cadre
NULL	cadre
NULL	cadre
NULL	sans-emploi
NULL	sans-emploi
NULL	autres

Show all | Number of rows: 25 ⌄   Filter rows: Search this table

Question 24 :
Le champ e-mail n'étant pas rempli il est difficile de les distinguer, mais quand je regarde combien

Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)

SELECT email FROM client WHERE num_categorie = 3;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ⌄   Filter rows: Search this tab

Extra options

←T→	email
☐ 🖉 Edit 🗐 Copy ⊖ Delete	NULL
☐ 🖉 Edit 🗐 Copy ⊖ Delete	NULL
☐ 🖉 Edit 🗐 Copy ⊖ Delete	NULL

↑ ☐ Check all   With selected: 🖉 Edit 🗐 Copy ⊖ Delete

il y a du client cadre, il y en a bien 3 comme sur l'affichage ci-dessous

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Question 26 :
je n'ai pas de Mr fifi dans mes client alors j'ai remplacer avec ines

Showing rows 0 - 1 (2 total, Query took 0.0005 seconds.)

SELECT produit.nom FROM client, achat, produit WHERE client.num = achat.num_client AND produit.num = achat.num_produit AND client.prenom = 'Ines';

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ⌄ Filter rows: Search this table

Extra options

←T→			nom
☐ 🖉 Edit ┋┇ Copy ⊖ Delete			DVD
☐ 🖉 Edit ┋┇ Copy ⊖ Delete			Jeux PC

↑ ☐ Check all   With selected: 🖉 Edit ┋┇ Copy ⊖ Delete 🖥 Export

Question 29 :

Your SQL query has been executed successfully.

SELECT COUNT(*) num_produit FROM achat;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Extra options

num_produit
5

Query results operations

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Question 30 :

Your SQL query has been executed successfully.

```
SELECT COUNT(*) num_client FROM client;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [

Extra options

num_client
10

Query results operations

Question 31 :

✓ Showing rows 0 - 0 (1 total, Query took 0.0003 seconds.)

```
SELECT AVG(prix) AS prix_moyen, MIN(prix) AS prix_min, MAX(prix) AS prix_max FROM produit;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 ⌄   Filter rows: Search this table

Extra options

prix_moyen	prix_min	prix_max
330.444444	1.00	850.00

☐ Show all | Number of rows: 25 ⌄   Filter rows: Search this table

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Question 32 :

```sql
SELECT a.num_client, c.nom, c.prenom, a.num_produit, p.prix, a.nombre AS quantite, (a.nombre * p.prix) AS montant_total, a.date_achat FROM achat a JOIN client c ON a.num_client = c.num JOIN produit p ON a.num_produit = p.num LIMIT 0, 25;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Extra options

num_client	nom	prenom	num_produit	prix	quantite	montant_total	date_achat
1	Qausi	Nathan	1	400.00	3	1200.00	2016-11-14
1	Qausi	Nathan	3	850.00	1	850.00	2016-11-15
9	Voduk	Manon	1	400.00	1	400.00	2016-11-10
10	Tuuji	Ines	8	20.00	1	20.00	2016-11-10
10	Tuuji	Ines	9	50.00	1	50.00	2016-11-10

Question 33 :

```sql
SELECT SUM(a.nombre * p.prix) AS chiffre_affaire FROM achat a JOIN produit p ON a.num_produit = p.num;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 ⌄ | Filter rows: Search this table

Extra options

chiffre_affaire
2520.00

☐ Show all | Number of rows: 25 ⌄ | Filter rows: Search this table

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Question 34 :

```
SELECT c.nom, c.prenom, p.nom AS produit, a.nombre AS quantite, a.date_achat FROM achat a JOIN client c ON a.num_client = c.num JOIN produit p ON a.num_produit = p.num ORDER BY c.nom, a.date_achat LIMIT 0, 25;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Extra options

nom ▲ 1	prenom	produit	quantite	date_achat
Qausi	Nathan	PS4	3	2016-11-14
Qausi	Nathan	Iphone 8	1	2016-11-15
Tuuji	Ines	Jeux PC	1	2016-11-10
Tuuji	Ines	DVD	1	2016-11-10
Voduk	Manon	PS4	1	2016-11-10

Query results operations

Question 36 :

```
SELECT SUM(prix * nombre) AS ca, client.nom, client.email FROM produit, achat, client WHERE produit.num = achat.num_produit AND client.num = achat.num_client GROUP BY client.nom, client.email ORDER BY SUM(prix * nombre) DESC;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 ⌄ | Filter rows: Search this table

Extra options

			ca	nom	email
☐	✎ Edit	⊟ Copy ⊘ Delete	2050.00	Qausi	NULL
☐	✎ Edit	⊟ Copy ⊘ Delete	400.00	Voduk	NULL
☐	✎ Edit	⊟ Copy ⊘ Delete	70.00	Tuuji	NULL

⬆ ☐ Check all   With selected: ✎ Edit ⊟ Copy ⊘ Delete ⬛ Export

Question 37 :

```
SELECT p.nom AS produit, SUM(p.prix * a.nombre) AS ca FROM achat a JOIN produit p ON a.num_produit = p.num GROUP BY p.nom ORDER BY ca DESC LIMIT 0, 25;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Extra options

produit	ca ▼ 1
PS4	1600.00
Iphone 8	850.00
Jeux PC	50.00
DVD	20.00

Query results operations

🖨 Print   ⊟ Copy to clipboard   ⬛ Export   📊 Display chart   📋 Create view

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Question 38 :

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

SELECT c.nom, c.prenom, SUM(a.nombre) AS total_produits_achetes FROM achat a JOIN client c ON a.num_client = c.num GROUP BY c.num, c.nom, c.prenom HAVING SUM(a.nombre) >= 10 ORDER BY total_produits_achetes DESC;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

nom prenom total_produits_achetes

Query results operations

Create view

Bookmark this SQL query

Label: Let every user access this bookmark

il n'y en a aucun

Question 39 :

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 0 (1 total, Query took 0.0005 seconds.)

SELECT c.nom, c.email, SUM(a.nombre * p.prix) AS total_depense FROM achat a JOIN client c ON a.num_client = c.num JOIN produit p ON a.num_produit = p.num GROUP BY c.num, c.nom, c.email HAVING SUM(a.nombre * p.prix) > 1000 ORDER BY total_depense DESC;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 v | Filter rows: Search this table

Extra options

nom   email   total_depense
Qausi NULL   2050.00

Show all | Number of rows: 25 v | Filter rows: Search this table

Query results operations

Question 40 :

Showing rows 0 - 0 (1 total, Query took 0.0003 seconds.) [prix: 850.00... - 850.00...]

SELECT * FROM produit ORDER BY prix DESC LIMIT 1;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Extra options

←T→		num	nom	prix
Edit Copy Delete		3	Iphone 8	850.00

Check all   With selected: Edit Copy Delete Export

Query results operations

Print   Copy to clipboard   Export   Display chart   Create view

Question 41 :

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 0 (1 total, Query took 0.0009 seconds.) [nom: QAUSI... - QAUSI...] [prenom: NATHAN... - NATHAN...]

```sql
SELECT c.nom, c.prenom, c.email, a.nombre AS quantite_achetee, (a.nombre * p.prix) AS montant_depense FROM achat a JOIN client c ON a.num_client = c.num JOIN produit p ON a.num_produit = p.num WHERE p.prix = (SELECT MAX(prix) FROM produit) ORDER BY montant_depense DESC, c.nom, c.prenom;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 ∨ | Filter rows: Search this table

Extra options

nom	prenom	email	quantite_achetee	montant_depense
Qausi	Nathan	NULL	1	850.00

Show all | Number of rows: 25 ∨ | Filter rows: Search this table

Conclusion

À travers ce TP, nous avons pu comprendre les différentes étapes nécessaires à la mise en place d'une base de données, depuis la modélisation jusqu'à l'exploitation des données. La création des tables, l'insertion des enregistrements et l'utilisation de requêtes SQL ont permis de mieux maîtriser les commandes SELECT, JOIN, ORDER BY, DISTINCT et les fonctions de comptage.
Ce travail montre l'importance d'une bonne modélisation des données pour faciliter les requêtes et garantir la cohérence de la base. Les compétences acquises lors de ce TP sont essentielles pour le développement d'applications informatiques utilisant des bases de données relationnelles.