Développeur Web et Web Mobile

Base de données : animaux domestiques

GRETA 92 – La Garenne-Colombes
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Création de la base dans MySQL

Dans le Terminal :

```
mysql -u root –p
```

Dans la console MySQL :

```
USE mysql ;
CREATE DATABASE anidom
  CHARACTER SET utf8
  COLLATE utf8_general_ci;
```

Vérification :

```
SHOW DATABASES ;
```

```
+--------------------+
| Database           |
+--------------------+
| anidom             |
| information_schema |
| mysql              |
| performance_schema |
| phpmyadmin         |
| sys                |
+--------------------+
6 rows in set (0.00 sec)
```

Création des utilisateurs

Un utilisateur pour la gestion de la base de données (ani_admin) et un autre pour l'interrogation de cette base de données (ani_user) :

```
CREATE USER 'ani_admin'@'localhost'
IDENTIFIED WITH mysql_native_password BY 'Po$e1d0n';
```

```
CREATE USER 'ani_user'@'localhost'
IDENTIFIED WITH mysql_native_password BY 'Po$e1d0n';
```

Vérification :

```
SELECT host, user FROM user;
```

```
+-----------+------------------+
| host      | user             |
+-----------+------------------+
| localhost | ani_admin        |
| localhost | ani_user         |
```

```
| localhost | mysql.infoschema |
| localhost | mysql.session    |
| localhost | mysql.sys        |
| localhost | root             |
| localhost | uwamp            |
+-----------+------------------+
7 rows in set (0.00 sec)
```

Création des privilèges des utilisateurs

```
GRANT SELECT
  ON anidom.*
  TO 'ani_user'@'localhost';
```

```
GRANT ALL
  ON anidom.*
  TO 'ani_admin'@'localhost';
```

Vérification :

```
SHOW GRANTS FOR 'ani_user'@'localhost';
```

```
+-----------------------------------------------------+
| Grants for ani_user@localhost                       |
+-----------------------------------------------------+
| GRANT USAGE ON *.* TO `ani_user`@`localhost`        |
| GRANT SELECT ON `anidom`.* TO `ani_user`@`localhost` |
+-----------------------------------------------------+
2 rows in set (0.00 sec)
```

```
SHOW GRANTS FOR 'ani_admin'@'localhost';
```

```
+-------------------------------------------------------------+
| Grants for ani_admin@localhost                              |
+-------------------------------------------------------------+
| GRANT USAGE ON *.* TO `ani_admin`@`localhost`               |
| GRANT ALL PRIVILEGES ON `anidom`.* TO `ani_admin`@`localhost` |
+-------------------------------------------------------------+
2 rows in set (0.00 sec)
```

Test de connexion MySQL avec « ani_user »

Dans la console MySQL :

```
quit
```

Dans le Terminal :

```
mysql -u ani_user -p
```

Dans la console MySQL :

```
use mysql;
```

```
ERROR 1044 (42000): Access denied for user 'ani_user'@'localhost' to database 'mysql'
```

```
use anidom;
```

```
Database changed
```

Test de connexion MySQL avec « ani_admin »

Dans la console MySQL :

```
quit
```

Dans le Terminal :

```
mysql -u ani_admin -p
```

Dans la console MySQL :

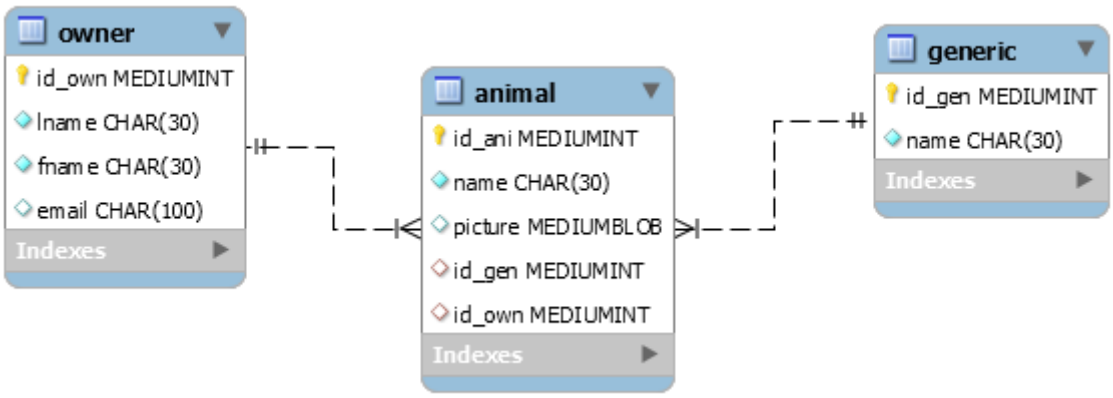
```
use mysql;
```

```
ERROR 1044 (42000): Access denied for user 'ani_admin'@'localhost' to database 'mysql'
```

```
use anidom;
```

```
Database changed
```

Création des tables dans « anidom »




```
CREATE TABLE owner (
  id_own MEDIUMINT AUTO_INCREMENT PRIMARY KEY,
  lname char(30) NOT NULL,
  fname char(30) NOT NULL,
  email char(100) UNIQUE
) ENGINE = InnoDB;
```

```
CREATE TABLE generic (
  id_gen MEDIUMINT AUTO_INCREMENT PRIMARY KEY,
  name char(30) NOT NULL
) ENGINE = InnoDB;
```

```
CREATE TABLE animal (
  id_ani MEDIUMINT AUTO_INCREMENT PRIMARY KEY,
  name char(30) NOT NULL,
  picture MEDIUMBLOB,
  id_gen MEDIUMINT ,
  id_own MEDIUMINT,
  CONSTRAINT fk_own FOREIGN KEY (id_own) REFERENCES owner(id_own),
  CONSTRAINT fk_gen FOREIGN KEY (id_gen) REFERENCES generic(id_gen)
) ENGINE = InnoDB;
```

Vérification :

```
SHOW TABLES;
```

```
+------------------+
| Tables_in_anidom |
+------------------+
| animal           |
| generic          |
| owner            |
+------------------+
3 rows in set (0.00 sec)
```

Ajout des données dans les tables

4 propriétaires :

- Alexandre Le Grand
- Barack Obama
- Charles Baudelaire
- Winston Churchill

```
INSERT INTO owner(fname, lname, email)
VALUES ('Alexandre', 'Le Grand', 'alex@the-great.mk');

INSERT INTO owner(fname, lname, email)
VALUES ('Barack', 'Obama', 'barack@pot.us');

INSERT INTO owner(fname, lname, email)
VALUES ('Charles', 'Baudelaire', 'charles@boheme.fr');

INSERT INTO owner(fname, lname, email)
VALUES ('Winston', 'Churchill', 'winston@downing.uk');
```

Vérification :

```
SELECT * FROM owner;
```

```
+--------+------------+-----------+--------------------+
| id_own | lname      | fname     | email              |
+--------+------------+-----------+--------------------+
|      1 | Le Grand   | Alexandre | alex@the-great.mk  |
|      2 | Obama      | Barack    | barack@pot.us      |
|      3 | Baudelaire | Charles   | charles@boheme.fr  |
|      4 | Churchill  | Winston   | winston@downing.uk |
+--------+------------+-----------+--------------------+
4 rows in set (0.00 sec)
```

3 espèces génériques :

- Chat
- Cheval
- Chien

```
INSERT INTO generic(name) VALUES
  ('Chat'),
  ('Cheval'),
  ('Chien')
;
```

Vérification :

```
SELECT * FROM generic;
```

```
+--------+--------+
| id_gen | name   |
+--------+--------+
|      1 | Chat   |
|      2 | Cheval |
|      3 | Chien  |
+--------+--------+
3 rows in set (0.00 sec)
```

5 animaux :

- Rufus le chien appartient à Winston Churchill
- Nelson le chat appartient à Winston Churchill
- Bucéphale le cheval appartient à Alexandre Le Grand
- Tibère le chat appartient à Charles Baudelaire
- Bo le chien appartient à Barack Obama

```
INSERT INTO animal(name, id_gen, id_own)
VALUES('Rufus', 3, 4);

INSERT INTO animal(name, id_gen, id_own)
VALUES('Nelson', 1, 4);

INSERT INTO animal(name, id_gen, id_own)
VALUES('Bucéphale', 2, 1);

INSERT INTO animal(name, id_gen, id_own)
VALUES('Tibère', 1, 3);

INSERT INTO animal(name, id_gen, id_own)
VALUES('Bo', 3, 2);
```

Vérification :

```
SELECT * FROM animal;
```

```
+--------+-----------+------------------+--------+--------+
| id_ani | name      | picture          | id_gen | id_own |
+--------+-----------+------------------+--------+--------+
|      1 | Rufus     | 0x               |      3 |      4 |
|      2 | Nelson    | 0x               |      1 |      4 |
|      3 | Bucéphale | 0x               |      2 |      1 |
|      4 | Tibère    | 0x               |      1 |      3 |
```

```
|      5 | Bo        | 0x                |      3 |      2 |
+--------+-----------+-------------------+--------+--------+
5 rows in set (0.00 sec)
```

Interrogation de la base

Quel est le nom générique de chaque animal ?

```
SELECT a.name AS animal, g.name AS generic
FROM animal a, generic g
WHERE a.id_gen = g.id_gen;
```

Résultat :

```
+-----------+---------+
| animal    | generic |
+-----------+---------+
| Nelson    | Chat    |
| Tibère    | Chat    |
| Bucéphale | Cheval  |
| Rufus     | Chien   |
| Bo        | Chien   |
+-----------+---------+
5 rows in set (0.00 sec)
```

Quel le propriétaire de chaque animal ?

```
SELECT a.name AS animal, o.fname, o.lname, o.email
FROM animal a, owner o
WHERE a.id_own = o.id_own;
```

Résultat :

```
+-----------+-----------+------------+--------------------+
| animal    | fname     | lname      | email              |
+-----------+-----------+------------+--------------------+
| Bucéphale | Alexandre | Le Grand   | alex@the-great.mk  |
| Bo        | Barack    | Obama      | barack@pot.us      |
| Tibère    | Charles   | Baudelaire | charles@boheme.fr  |
| Rufus     | Winston   | Churchill  | winston@downing.uk |
| Nelson    | Winston   | Churchill  | winston@downing.uk |
+-----------+-----------+------------+--------------------+
5 rows in set (0.00 sec)
```