

Développeur Web et Web Mobile

Base de données : animaux domestiques

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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 BY 'Po$e1d0n';
```

```
CREATE USER 'ani_user'@'localhost'  
IDENTIFIED 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 :

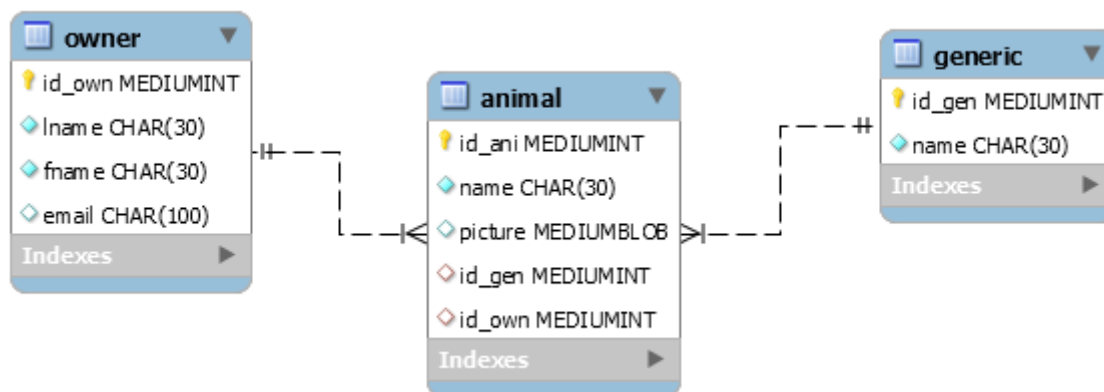
```
use mysql;
```

```
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_animal 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_an | 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)