Banco de Dados SQL (Structured Query Language)

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SQL (Structured Query Language)

- Criar banco de dados:

```
mysql> CREATE database 134a;
Query OK, 1 row affected (0.00 sec)
```

- Deletar banco de dados:

```
mysql> DROP database 134a;
Query OK, 0 rows affected (0.00 sec)
```

- **Crie uma base curso**

SQL (Structured Query Language)

- Manipulação/uso base de dados:

```
mysql> USE curso;
```

- Criar tabela na base de dados:

```
mysql> CREATE TABLE president (
-> last_name varchar(15) not null,
-> first_name varchar(15) not null,
-> state varchar(2) not null,
-> city varchar(20) not null,
-> birth date not null default '0000-00-00',
-> death date null
-> );
Query OK, 0 rows affected (0.00 sec)
```

SQL (Structured Query Language)

- Mostrar tabelas presentes na base de dados:

```
mysql> SHOW tables;
+----------------+
| Tables_in_134a |
+----------------+
| president |
+----------------+
1 row in set (0.00 sec)
```

SQL (Structured Query Language)

- Ver estrutura da tabela:

```
mysql> DESCRIBE president;
+------------+-------------+------+-----+------------+-------+-------------------------------
    --+
| Field | Type | Null | Key | Default | Extra | Privileges |
+------------+-------------+------+-----+------------+-------+-------------------------------
    --+
| last_name | varchar(15) | | | | | select,insert,update,references |
| first_name | varchar(15) | | | | | select,insert,update,references |
| state | char(2) | | | | | select,insert,update,references |
| city | varchar(20) | | | | | select,insert,update,references |
| birth | date | | | 0000-00-00 | | select,insert,update,references |
| death | date | YES | | NULL | | select,insert,update,references |
+------------+-------------+------+-----+------------+-------+-------------------------------
    --+
6 rows in set (0.00 sec)
```

SQL (Structured Query Language)

- Alguns comandos: insert, select, update, delete;

- Inserir valores:

```
mysql> INSERT INTO president values ('Washington',
'George',
'VA',
'Westmoreland County',
'17320212',
'17991214');
Query OK, 1 row affected (0.00 sec)
```

- Para listar valores inseridos anteriormente (SELECT):

```
mysql> SELECT * FROM president;
+------------+------------+-------+---------------------+------------+------------+
| last_name | first_name | state | city | birth | death |
+------------+------------+-------+---------------------+------------+------------+
| Washington | George | VA | Westmoreland County | 1732-02-12 | 1799-12-14 |
+------------+------------+-------+---------------------+------------+------------+
1 row in set (0.00 sec)
```

SQL (Structured Query Language)

- Inseriram os seguintes valores:

1. ('Van Buren', ' Martin',' NY',' Kinderhook',' 17821205 ',' 18620724');
2. ('Fillmore','Millard', 'NY','Cayuga County', '18000107','1874-03-08');
3. ('Roosevelt','Theodore','NY','New York','18581027','19190106‘);
4. ('Roosevelt','Franklin D.','NY','Hyde Park','18820130','19450412');
5. ('Adams','John','MA','Quincy','17670711','18480223')
6. ('Jefferson','Thomas','VI','Shadwell','17350413','18260704')
7. ('Madison','James','VI','Port Conway','17510316','18360628')
8. ('Monroe','James','VI',' Westmoreland County','17580428','18310704')
9. ('Jackson,Andrew','SC','Lancaster County','17670315','18450806')
10. ('Harrison','Willian Henry','VI,'Charles City County'','17730209','18410404')
11. ('Tyler','John','VI','Charles City County', '17900329','18620118')
12. ('Polk','James K. ','NC','Pineville','17951102','18490615')
13. ('Taylor','Zachary','VI','Barboursville','17841124','18500709')
14. ('Buchanan','James','PE','Mercersburg','17910423','18680601')
15. ('Carter,James','GE','Plains','19241001')
16. ('Bush','George H. W.','MA','Milton','19240612 ')
17. ('Clinton','Bill', 'AK','Hope', '1946-08-19')
18. ('Bush','George W.','CN','New Haven', '1946-07-06')

SQL (Structured Query Language)

- Listar usando condicionais, cláusula WHERE

```
mysql> SELECT * FROM president WHERE state="VA";
+------------+------------+-------+---------------------+------------+------------+
| last_name | first_name | state | city | birth | death |
+------------+------------+-------+---------------------+------------+------------+
| Washington | George | VA | Westmoreland County | 1732-02-12 | 1799-12-14 |
+------------+------------+-------+---------------------+------------+------------+
1 row in set (0.00 sec)
```

- Listar colunas específicas de acordo com o seleção de nomes:

```
mysql> SELECT state, first_name, last_name FROM president;
+-------+------------+------------+
| state | first_name | last_name |
+-------+------------+------------+
| VA | George | Washington |
+-------+------------+------------+
1 row in set (0.00 sec)
```

SQL (Structured Query Language)

- Apagar registro da tabela

```
mysql> DELETE FROM president WHERE first_name="George";
Query OK, 1 row affected (0.00 sec)
```

- Alterar ou atualizar dados dos campos na tabela:

```
mysql> UPDATE president SET state="CA" WHERE first_name="George";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

- Operadores de comparação: < ; <= ; = ; != or <> ; >= ; >
- Operadores lógicos: AND ; OR ; NOT
- Comparação de valores especiais NULL: IS

SQL (Structured Query Language)

- Retornar todos campos para presidente em que o estado é "NY";

```
mysql> SELECT * FROM president WHERE state="NY";
+-----------+-------------+-------+---------------+------------+------------+
| last_name | first_name | state | city | birth | death |
+-----------+-------------+-------+---------------+------------+------------+
| Van Buren | Martin | NY | Kinderhook | 1782-12-05 | 1862-07-24 |
| Fillmore | Millard | NY | Cayuga County | 1800-01-07 | 1874-03-08 |
| Roosevelt | Theodore | NY | New York | 1858-10-27 | 1919-01-06 |
| Roosevelt | Franklin D. | NY | Hyde Park | 1882-01-30 | 1945-04-12 |
+-----------+-------------+-------+---------------+------------+------------+
4 rows in set (0.00 sec)
```

SQL (Structured Query Language)

- Listar registros conforme limite de campos estipulado

```
mysql> SELECT last_name, first_name FROM
   president WHERE state="NY";
+----------+------------+
| last_name | first_name |
+----------+------------+
| Van Buren | Martin |
| Fillmore | Millard |
| Roosevelt | Theodore |
| Roosevelt | Franklin D. |
+----------+------------+
4 rows in set (0.01 sec)
```

SQL (Structured Query Language)

- Listar last_name e aniversário dos presidentes que ainda estão vivos:

```
mysql> SELECT * FROM president WHERE death = NULL;
Empty set (0.00 sec)
```

- Note que: o operador de comparação não funciona neste caso;

```
mysql> SELECT last_name, birth FROM president WHERE death is
    NULL;
+-----------+------------+
| last_name | birth |
+-----------+------------+
| Ford | 1913-07-14 |
| Carter | 1924-10-01 |
| Reagan | 1911-02-06 |
| Bush | 1924-06-12 |
| Clinton | 1946-08-19 |
| Bush | 1946-07-06 |
+-----------+------------+
6 rows in set (0.00 sec)
```

SQL (Structured Query Language)

- Listar presidentes que nasceram no século 18;

```
mysql> SELECT last_name, birth FROM president WHERE birth<"1800-01-01";
+------------+------------+
| last_name | birth |
+------------+------------+
| Washington | 1732-02-12 |
| Adams | 1735-10-30 |
| Jefferson | 1735-04-13 |
| Madison | 1751-03-16 |
| Monroe | 1758-04-28 |
| Adams | 1767-07-11 |
| Jackson | 1767-03-15 |
| Van Buren | 1782-12-05 |
| Harrison | 1773-02-09 |
| Tyler | 1790-03-29 |
| Polk | 1795-11-02 |
| Taylor | 1784-11-24 |
| Buchanan | 1791-04-23 |
+------------+------------+
13 rows in set (0.00 sec)
```

SQL (Structured Query Language)

- Cri uma tabela: tbl_usuarios, com seguintes campos:
  - Id; int; not null; auto_increment → primary key
  - Nome; varchar(150); not null
  - Login; varchar(15); not null
  - Senha; varchar(15); not null
  - Idade; int; not null

- Veja se a estrutura está correta.
- Insira valores:

Sql> insert into tbl_usuarios (nome, login, senha,idade) values (Maria da Silva, msilva, password('comum'),30);

- Insira mais 5 usuários na tabela tbl_usuarios.
- Liste os usuários acima de 30 anos;
- Liste apenas o login de quem tem 30 anos;
- Atualize algum usuário para idade = 40;

SQL (Structured Query Language)

- Importação de arquivo para base:

```
mysql -u root -p curso < curso3.sql
```

- Exportação de base para arquivo:

```
mysqldump -u root -p curso > curso3.sql
```

http://dev.mysql.com/doc/refman/4.1/pt/table-types.html