

2-A Introduction to SQL

Part A



- 1 What is a database?**
- 2 The tools we're going to use**
- 3 Basic instructions and clauses**

What is a TABLE?

A TABLE

ID	First name	Name	Email	Phone
1	Jean	Valjean	jvaljean@gmail.com	0666349392
2	Victor	Hugo	hugobg@gmail.com	0669456789
3	Cécile	From France	cdf@yahoo.fr	0617589022
4	Michel	Delpeche	michou@hotmail.com	0677559900
5	Octave	Parango	99franc@me.com	0669696969
6	Dark	Vader	jesuistonpere@outlook.com	0666666666

A column

ID	First name	Name	Email	Phone
1	Jean	Valjean	jvaljean@gmail.com	0666349392
2	Victor	Hugo	hugobg@gmail.com	0669456789
3	Cécile	From France	cdf@yahoo.fr	0617589022
4	Michel	Delpeche	michou@hotmail.com	0677559900
5	Octave	Parango	99franc@me.com	0669696969
6	Dark	Vader	jesuistonpere@outlook.com	0666666666

The different types of data

- INTEGER
- FLOAT / REAL
- TEXT
- DATETIME
- NULL

A line

ID	First name	Name	Email	Phone
1	Jean	Valjean	jvaljean@gmail.com	0666349392
2	Victor	Hugo	hugobg@gmail.com	0669456789
3	Cécile	From France	cdf@yahoo.fr	0617589022
4	Michel	Delpeche	michou@hotmail.com	0677559900
5	Octave	Parango	99franc@me.com	0669696969
6	Dark	Vader	jesuistonpere@outlook.com	0666666666

Schema

Client_ID	First name	Name	Email	Product_ID
1	Jean	Valjean	jvaljean@gmail.com	1
2	Victor	Hugo	hugobg@gmail.com	1
3	Cécile	From France	cdf@yahoo.fr	3
4	Michel	Delpeche	michou@hotmail.com	2
5	Octave	Parango	99franc@me.com	5
6	Dark	Vader	jesuistonpere@outlook.com	6

Product_ID	purchased item	Revenues
1	Apples	15
2	Pears	20
3	Bananas	10
4	Hazelnuts	8
5	Mangoes	25
6	Watermelons	12

What is SQL?

Relational Database Management System



Why use databases?

- Speed
- Regularity
- Simple analytics
- Dynamic Content
- Replicability

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Google Cloud Platform & MySQL



Setup

— Go to: <https://bit.ly/2svkxll>

— Open Cloud Shell

— Type

- `gcloud sql connect introductiontosql --user=student_1`
- `mdp:jedha4ever`

Create a database in your name

- **CREATE DATABASE fullName ;**
- **USE fullName ;**

Tips before you start

- Just like in natural language, programming syntax is important. **Don't forget commas, semicolons and so on, otherwise your code won't work.**
- Spaces don't matter in SQL

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CREATE TABLE

```
CREATE TABLE table_name (  
    column_name_1 data_type,  
    column_name_2 data_type,  
    column_name_3 data_type  
);
```

```
CREATE TABLE food_trucks (  
  id INTEGER,  
  name TEXT,  
  rating REAL,  
  food_type TEXT  
);
```

INSERT INTO

```
INSERT INTO food_trucks  
  (id, name, rating, food_type)  
VALUES  
  (1, 'Camion qui fume', 4.5, 'Burgers' );
```

```
INSERT INTO food_trucks  
(id, name, rating, food_type)  
VALUES  
(2, 'Chairman Bao', 4.7, 'Chinese' ),  
(3, 'Curry Up Now', 4.2, 'Indian Fusion' ),  
(4, 'El Tonayense', 4.6, 'Mexican' );
```

SELECT FROM

- **SELECT name from food_trucks;**
- **SELECT * FROM food_trucks;**
- **SELECT name, rating FROM food_trucks;**

UPDATE

```
UPDATE food_trucks  
SET rating = 0;
```

```
UPDATE food_trucks  
SET rating = 5  
WHERE id = 3;
```

ALTER TABLE

```
ALTER TABLE food_trucks  
ADD COLUMN twitter_handle TEXT;
```

```
ALTER TABLE food_trucks  
DROP COLUMN twitter_handle;
```

DELETE FROM


```
DELETE FROM food_trucks  
WHERE twitter_handle IS NULL;
```

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Any questions?

