

Project

Deadline: 31 December, 2024.

The TP sessions 9 – 13 are dedicated to the project.

1 Project description

The goal of the project is to design an application that uses a **postgreSQL** database to manage all the data.

You will choose and propose to me your own project.

Data. You must use publicly available data.

Functionality. You should decide the features to implement in your application. Here are some suggestions for general ideas:

- Give the option for users to create an individual account with a password.
- Save past queries in the database, and then suggest options for new search using most frequent past searches (done by a **query** in the database).
- Give option to sort the results by various parameters.

Project suggestions. Here are some project suggestions, but please, feel free to propose your own project:

- A library application for **USPN**.
- An application for remembering and storing all meals offered by **CROUS** for the past years.
- An application like the website **Goodreads**.
- An application to store food recipes.
- A database for movies and tv series.

Good Luck!

2 Submission

Here are the steps to follow for submitting your project:

Step 1, **deadline: 15/11/2024.**

Email to nabil.mustafa@univ-paris13.fr the following information:

- first and last names of all group members and their student ids,
- project title,
- a one paragraph project description,
- a link to the data that you plan to use (more data can be added later).

Step 2, **deadline: 31/12/2024.**

Email to nabil.mustafa@univ-paris13.fr the following files:

1. The **PDF** file of your report.
2. State the **Postgresql account** (for example, `l3info_xx`) where your project is stored.
3. **One Python script** that contains the main project code. This code **must** be executable on the computers in the **salles de TP**. I should be able to run your project application directly from the information you give me.

If it does not work on these computers, you get a 0 note for the project.

4. **All Python scripts** that were used to parse the input data into SQL commands.
5. Put all your data in a Gitlab project (set to private) here:
<https://gitlab.sorbonne-paris-nord.fr/>
and add me as a member (my account id: [nabil.mustafa](mailto:nabil.mustafa@univ-paris13.fr)) so I can access this data.

Step 3, **deadline: 06/01/2025.**

I will send you the time of your soutenance later.

The soutenance will take place on 06/01/2025 and 10/01/2025.

Soutenance will be group by group, but the project final note will be individual.

3 Administrative details

- At *most* three students in each project (for any exceptions, you must discuss with me for authorization).
- We have already covered various *pieces* of technology that you can use:
 - GUI (buttons, lists, forms) with `Qt5Python`,
 - connect to `postgreSQL` with a `psycopg2`,
 - display and interact with live maps using `folium` and `jinja2`,
 - parse CSV data with `Python`.
- You must use `Python` for the GUI as well as for parsing the input data.
- **You cannot use any other scripts and code from the internet. All code must be written by you.**

You will get a 0 project note if you use any unauthorized code.

The only exception is for GUI aspects (buttons, dropdown boxes, checkboxes, maps, etc.), for which you can use snippets of code from the internet.

- The final code **must** be executable on the computers in the salles de TP.

If it does not work on these computers, you get a 0 project note.

- You must submit a 10-15 page report in **PDF format**. It must contain:
 1. the functionality that you have designed in your application,
 2. list of tables together with their description,
 3. the list of all **primary**, **candidate** and **foreign** keys for all tables,
 4. for each table, explain why (or why not) it is in **BCNF** form, or in **3NF** form,
 5. the **SQL** queries associated to each functionality of your application,
 6. any difficulties you had while doing the project,
 7. for each group member, the precise contribution to the project.
- **The deadline for submitting the project code and the report is:**

31 December, 2024.