Advanced web technologies coursework 1 :

The Axel's French rap collection

Axel Rambaud
Beng computing year 3
Napier student number : 40286996

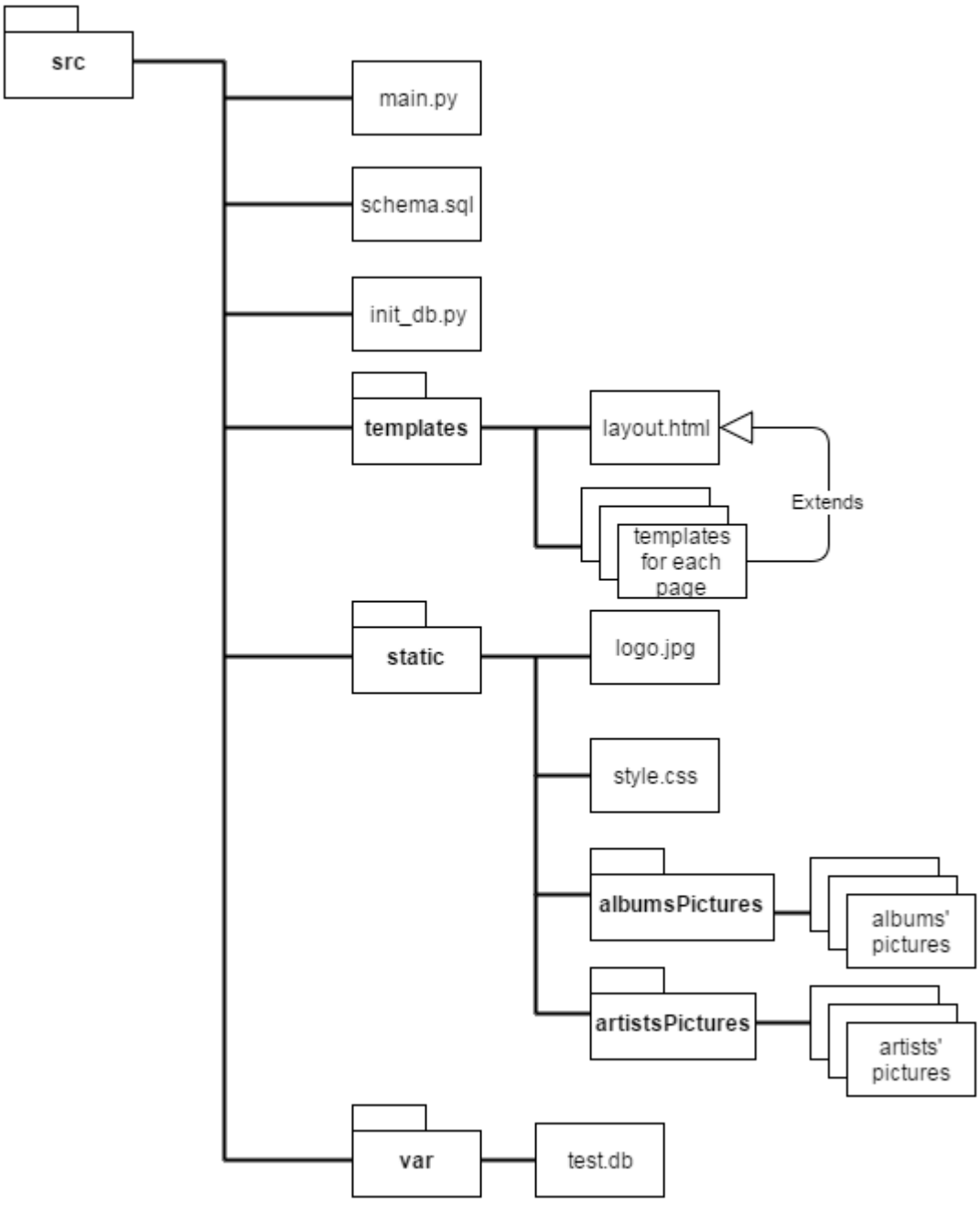
1. Introduction :

This web-app is a collection of French rap music, that lists a few artists with some of their albums, and the tracks contained in each of these albums.

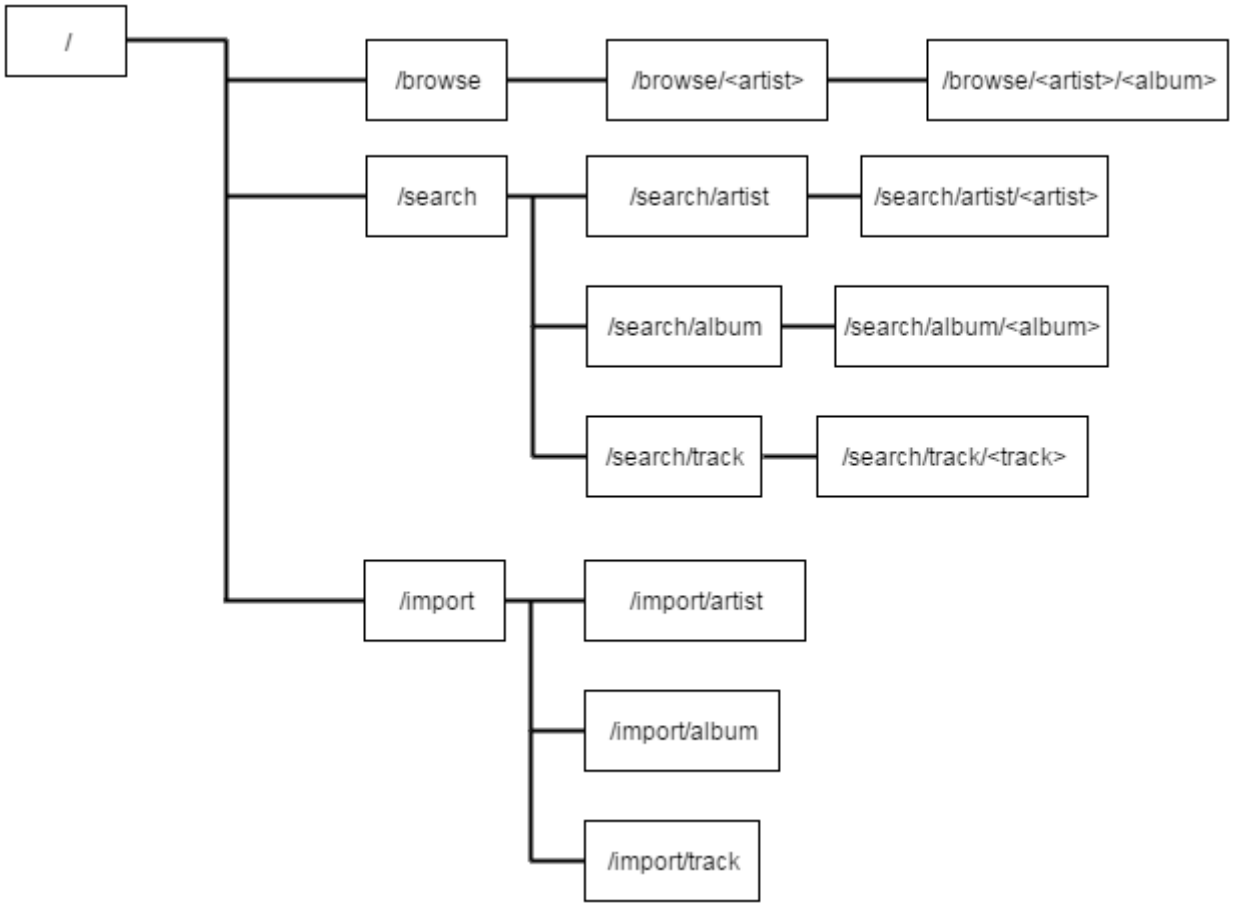
This web application offers the possibility to browse the artists, albums and tracks contained in the database, but also allows to add new elements to this database easily, and to search for a particular element contained in it.

2. Design

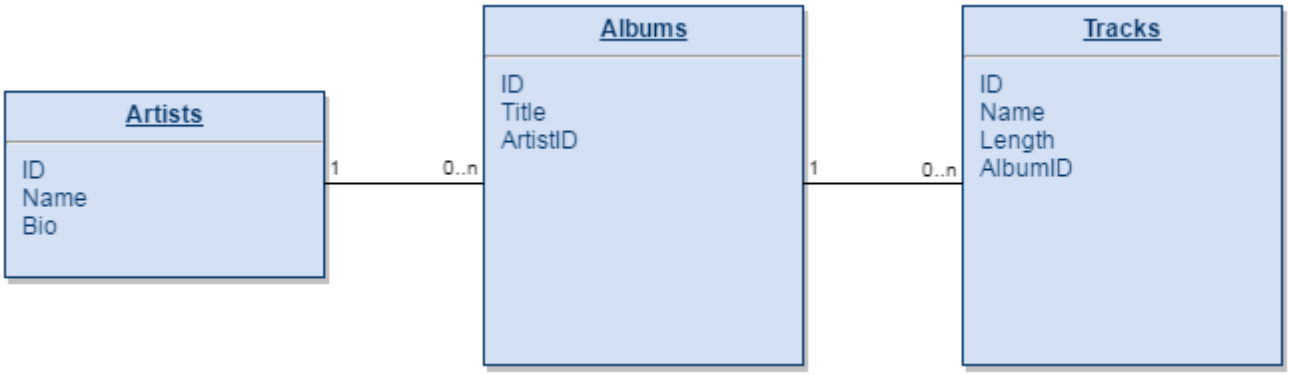
This web application follows this structure :



main.py is the file that needs to be executed with python to launch the application. It contains all the routes, for the right information to be displayed for every requests. Here are all the routes that can be accessed within the application:



Schema.sql is the file that describes the database's tables and what types of data each of them contains. It uses the SQLite library, which is a relational database management system that seemed appropriate to use for this application since it is quite simple to use, and still complete enough for an application of that size. The database follows this architecture :



init_db.py is the file to launch to initialize the database. It makes a call to a method defined in main.py that reads the file schema.sql, re-generating the database.

In the template folder are all the templates for every different pages. One of them, layout.html, is used to define the layout of the page, including the head of the html page, the logo and navigation bar. It also defines the position of the block content, which is filled by the other templates depending of which one is called. Every other templates extends the layout template.

The static folder contains all the pictures that can be displayed on the application, separated in two folders, one for the albums' pictures, the other for the artists' pictures. The logo is cotained directly in the root of the static folder. It also contains the css stylesheet, style.css, which is called by the layout template to describe the appearance of each elements.

Finally, the var folder contains the test.db file which is the database file, containing all the data relative to the artists, albums and tracks.

3. Enhancements

The first thing that would need to be enhanced is the importing feature, allowing to import, for example, tracks to an album, directly while browsing this album. Also, this system works with a small database, but it is hard to imagine a bigger application that would have to list all the albums of every artists in the database everytime a track needs to be added to the database.

One of the main problem of this application is also that it doesn't handle the french special characters such as the accented letters, which is restrictive for a French rap website since a lot of names could contain some.

The search feature would be a lot more useful if it could autocomplete as the user starts typing in the fields. Also, there could be a unique search bar for every data type (artist, album and track) that could return all the results for every data type.

Finally, there could be more data to display concerning each element, such as dates for albums, or style for artists. That would be more interesting for example to sort or filter the datas by specific criterias.

4. Critical evalutaion

I think this applications demonstrate well the possibilities offered by python flask or at least it covers all that we have learn from it for now. The application's structure is quite clear, the routes are intuitive, and the functionalities works mostly well.

It could be better if more data were provided for each element, if more time were spent on styling the application, but I tried to focus on what I thought was the important part of the coursework, which is the correct use of python Flask and working with a Levinus environment, and I think I did great on that side.

5. Personal evaluation

This coursework has been very interesting for me as I never did such a sebsite on my own in the past,

It is a good lesson of time management since it took me more time than I expected it would at the beginning because I was very confident as I already worked with linux and python in the previous years, so I wanted to make something great, and I am glad I managed to implement most of the features I wanted in the final version of the coursework.

I also really appreciated using python Flask which I thing is a great tool, and it was a real pleasure using it as I could really easily see all the links between my pages and how the whole thing works together. I think I will probably use it again in the future.

my progression has been quite fluent even if I have got quite stuck two or three times for one or two hours, especialy for the searching feature that I did last and that has been harder to implement than I thought, but in the end I'm happy with the work I produced for this coursework.

6. Resources and references

http://www.w3schools.com/
http://flask.pocoo.org/docs/0.11/
http://stackoverflow.com/