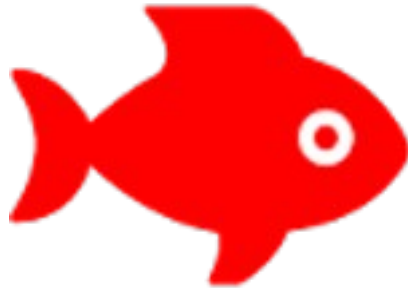# Advanced web technologies (set09103)
second coursework

Blubber

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1. Introduction

Blubber is a simple twitter-like website, where users can « blub » to post messages that are then displayed on the website.

Users of blubber, whose are called « blubbers », first need to create an account and then log in to view other persons blubs, and post their own blubs.

2. Design

Here is a diagram representing the structure of the web application :
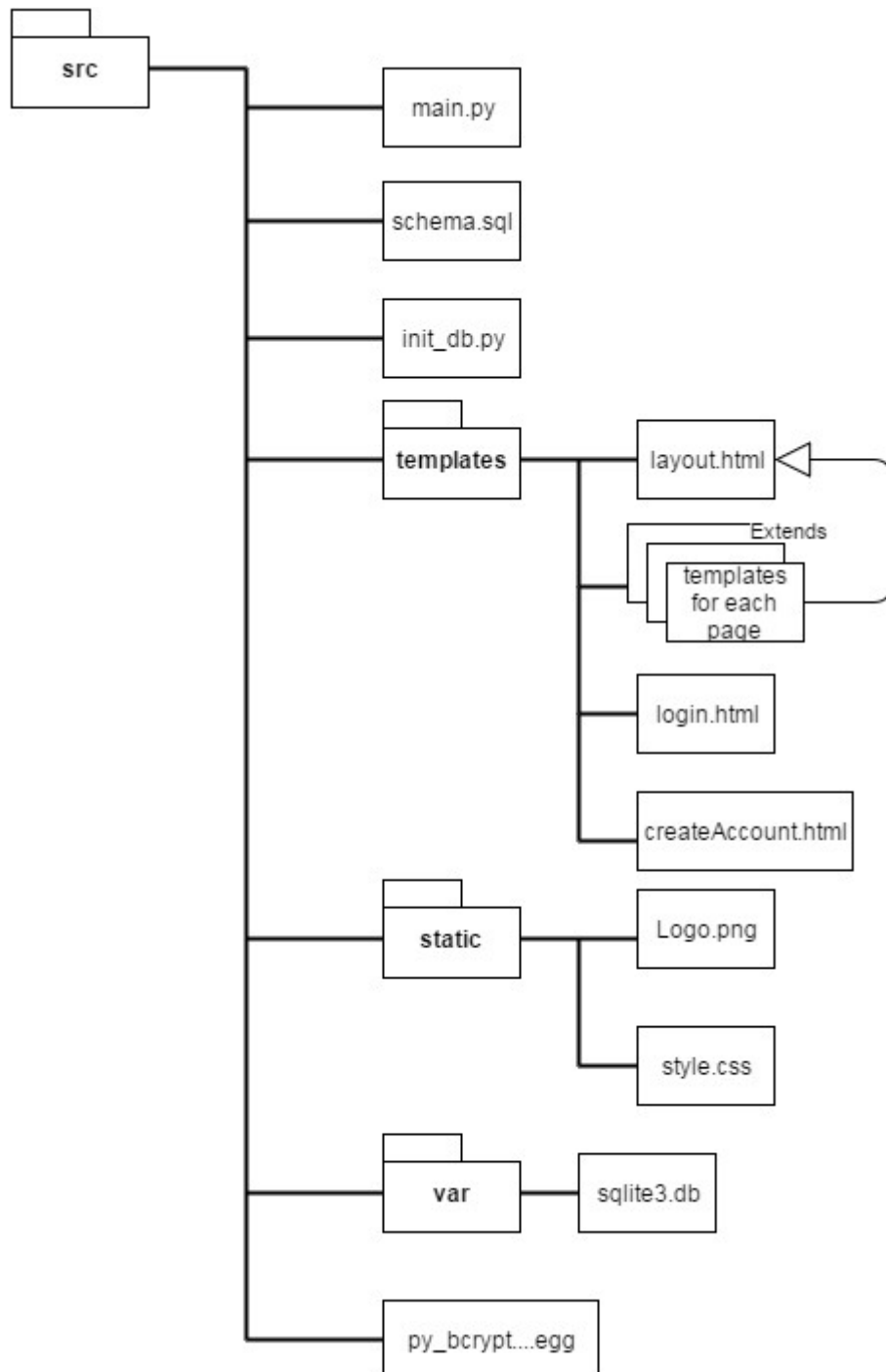
The main.py file is the file that needs to be executed with python to launch the application. It contains all the routes, for the right information to be displayed for every requests. Here are the routes that can be accessed within the application :
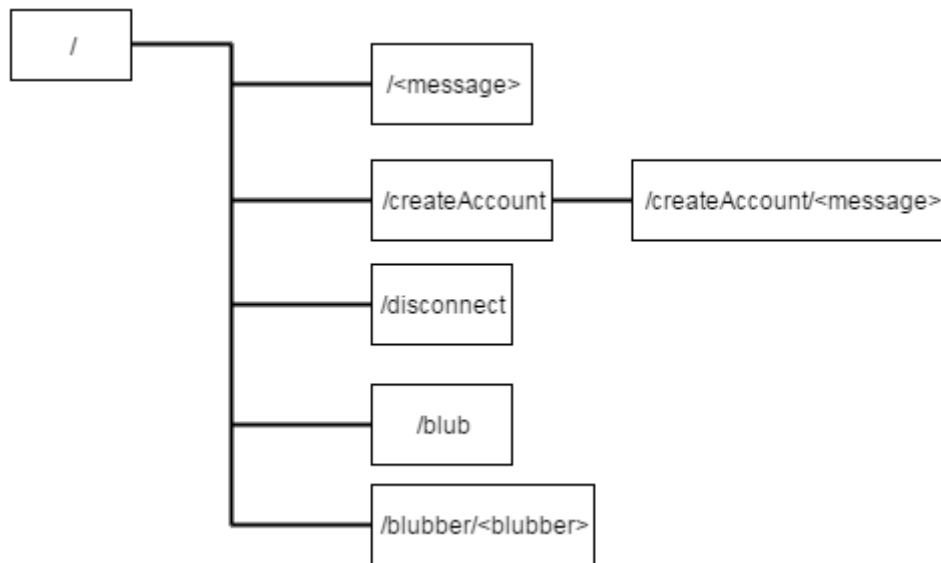
Schema.sql is the file that describes the database's tables and what types of data each of them contains. It uses the SQLite library, which is a relational database management system that seemed appropriate to use for this application since it is quite simple to use, and still complete enough for an application of that size. The database follows this architecture :
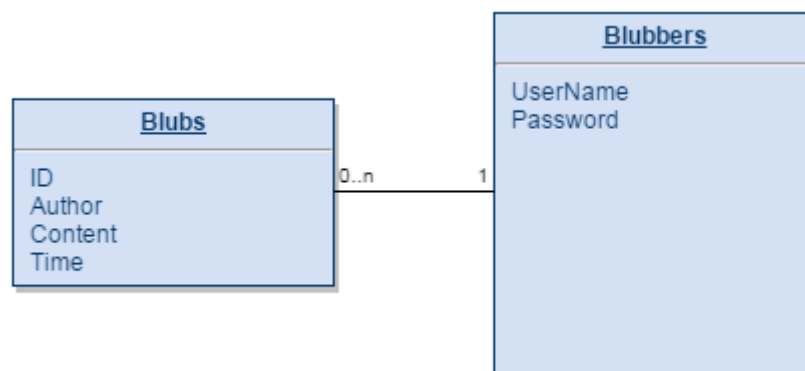
The Blubbers' passwords in the database are encrypted using the py-bcrypt library. This allows to store the passwords with more security since they can't be read if you don't have the password.

The var folder contains the sqlite3.db file which is the database file, containing all the data relative to blubs and blubbers.

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. Most of the other templates extends the layout template, except for the createAccount.html and login.html templates, because they can't have access to the buttons on the navigation bar since you need to be connected to click them.

When you first come to the website, you will arive at the login page since you are yet connected. You will need to connect with an account you previously created to initialize a session variable which will store your user name, so that you can browse the web app and post blubs with that user name. The advantage of the session variable is that it will always be kept through the pages, until you disconnect, which will erase that session variable.

This web appplication also uses flash messages that are displayed at various moments :
- When you create an account (wether if the creation of the account has been a success, or if it has been failure because the user name was already taken).
- When you succesfully log into the web application.
- When you succesfully post a blub.

The static folder contains the Logo.png file, which is the logo displayed on the top left hand corner of the page, and the style.css file, which is the stylesheet used by every templates to define the style of the elements of the pages.

3. Enhancement

The main thing that obviously needs to be enhanced is the design of the website. There has'nt been mush time given to design, and this results in a not so beautiful website. Since the design wasn't the focus of this coursework, more time has been allocated in the functionalities of the web app.

One good thing to add would be an upvote and sharing system for the website to be more interactive between the users.

It would also be good to have the latest blubs on the top of the web page instead of on the bottom, but since the times of posting are stored in the database are stored as Varchar type of format dd/mm/YYYY/HH/MM , ordering them using that field wouldn't really sort them by time since it would kind of reset every month (the day value going back to 01).

4. Critical evaluation

I think this application covers most of the possibilites offeres by python flask, or at least it covers all that we have learn about it for now. The application could be bigger since there are still functionalities to add, and there isn't a lot of different routes, but all the functionalities that are present in it works well.

5. Personal evalutaion

This coursework has been interesting for me as I discovered new possibilities offered by python flask that I didn't used on the first coursework and that I found really interesting to use.

As for the previous coursework, it has been a pleasure working with python flask which I think is a very intuitive and easy way to develop a web app and clearly see all the different parts of it, which makes the application easy to edit.

6. Resources and references

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