



# Pet4Life

## The app for taking care of your pets

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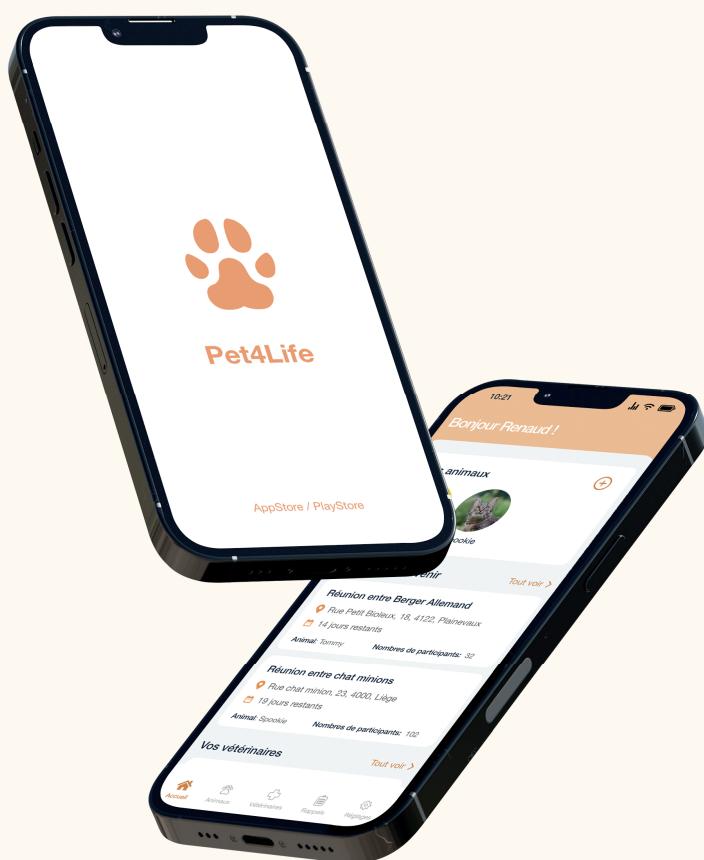
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# Introduction

This report presents the work I plan to do as part of the mobile application development course, in the web specialization of the Graphic Techniques bachelor's degree.

The project's objective is to create an application dedicated to pet management. This application primarily targets individuals who own pets and it can simplify the organisation of their pet-related activities, such as walks, competitions, and much more.

Throughout this report, I'm going to talk about the challenges I'll face the execution of this project, as well as the solutions I intend to implement.



## Why this project ?

I chose to discuss this project due to my personal experience of having owned a pet in the past. I also noticed that my mother spent a huge amount of time to organize activities related to our pet. Specifically for group walks, looking for advice or other relevant information, which was principally found in *Facebook* groups, various websites and some mobile applications.

So the idea of creating an all-in-one pet management application came to my mind. This application, which would try to help private individuals, will save time and simplify the organisation of their pet-related activities.

When I shared this idea with my friends and family, no one, and I mean no one, was against it. I then took a look and analyse the existing competitors and to my great surprise nobody had yet developed an application that met precisely these needs. I just noticed a potential competitor named Breedy, but it only deals with breeders, which is not at all my principal target.

### COMPETITORS



# Teacher's basic requirements

The main objective of the project is to design and create a personal mobile application using the *Flutter* technology and its associated language called *Dart*. The choice of the subject is completely free (up to the student) as long as the teacher approves the idea and thinks there is enough creativity.

The project must be documented in detail and must have a repository on the *Github* platform. This repository must include a "*Read.me* repository"<sup>\*1</sup> file that presents all of the project's functionalities, the application's design mock-up and illustrations that explain some design examples.



<sup>1\*</sup> Link to the public repository : <https://github.com/VanMeerbergenRenaud/pet4life>

## The basic functionalities to implements are :

- User identification and authentication management;
- Create a user friendly home screen;
- Create a detail screen to display more information about a resource;
- Update information with the database;
- Add notifications to interact with the user.

## **Design & conception**

Once the objectives of the application were clearly defined, I started the design phase. It's not my favourite part, but it's essential.

Designing for a mobile application differs from designing for a website because of the difference in screen height and the lack of certain standard navigation features, such as the ability to go back to another page or reload the page.

## Diagram and architecture

To start the model, I first created a diagram showing the overall pagination of my application (its basic architecture).

It's generally recommended that you create wireframes, but I personally prefer to go straight to the full design of the application using *Adobe XD*, because I find that the wireframe creation stage isn't necessary if I know what I want.

To make this process easier, I found my main inspiration on reference platforms like *Dribbble*, *Behance* and *Pinterest*, which are popular for their quality resources for designers.

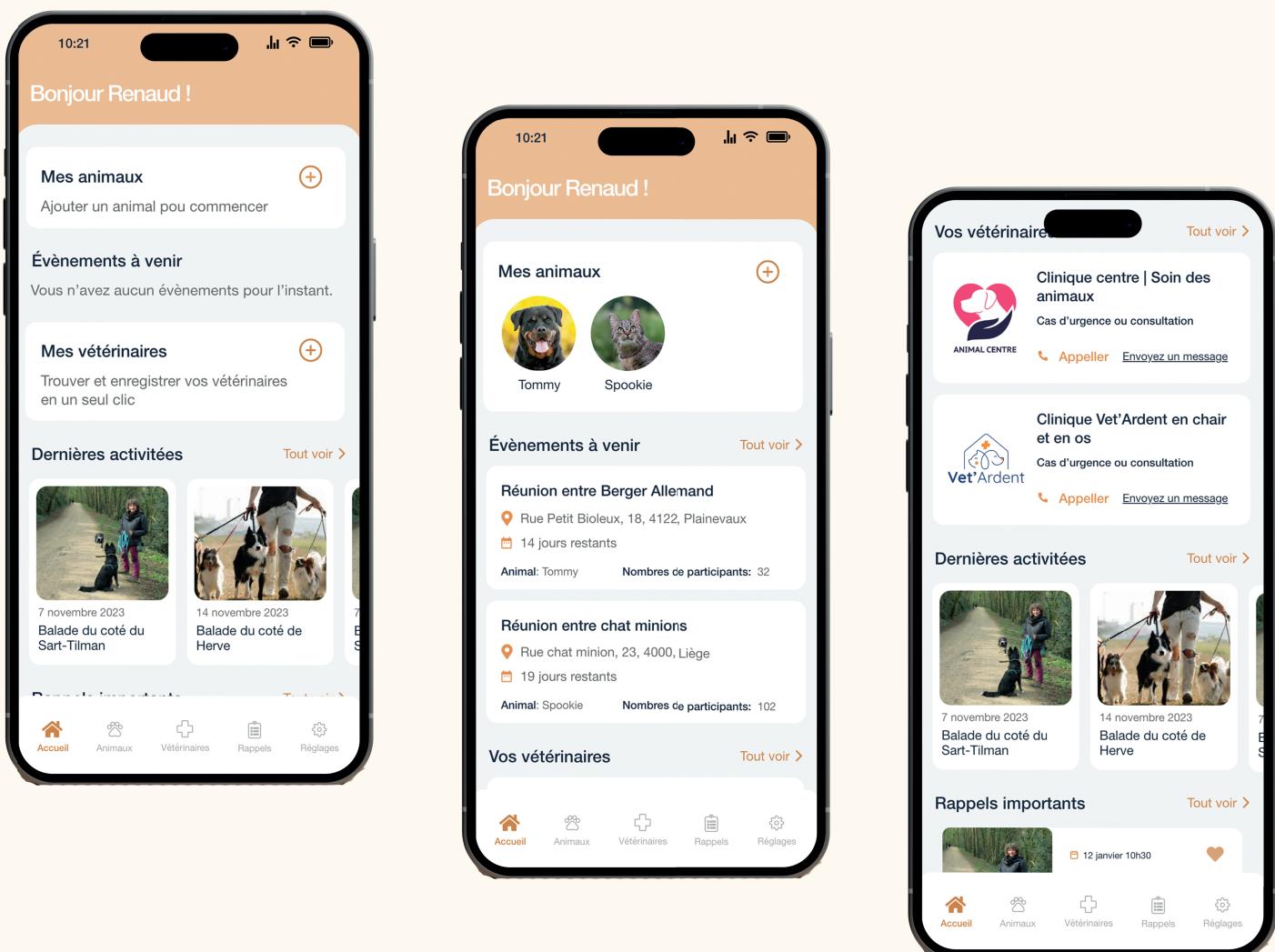


## Importance of inspiration

Inspiration played an important role. I had to look at the interfaces of my various competitors. Even if they don't have all the features I want to implement, starting from a well-structured base saves a lot of time.

The biggest challenge I faced was creating the home page, which brings together all the useful information and features most used by users. It had to be attractive and easy to use, showing only the basic functionalities without being overloaded.

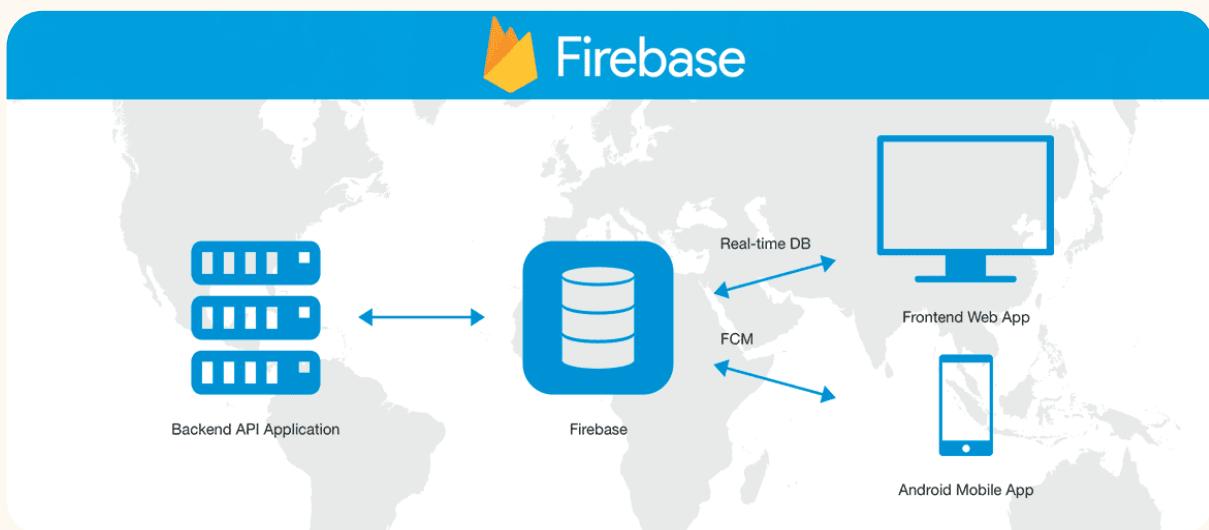
Once the home page is set up, the theme is defined and the other pages are just a replication of the components with minor adjustments. This takes time, but it's a less complex process.



Having completed the design, I was fully prepared for the integration and development phase.

This is where the real challenge begins: programming in a language that I have principally learned on my own, because my teacher only taught me the basics.

So I began my project by following his teachings, which helped me to build an exemplary architecture from the start, worthy of the quality of this project. My first step was to create an authentication and registration page and connect it to my database *Firebase*. This phase, although important, was not the most complex because we had studied it in detail in class.



### Challenges faced

The longest and most complex stage was the following: implementing my ambitious design while keeping the code clean. *Flutter* is a powerful tool for creating mobile applications. However, as with many software development kits (*SDKs*), it's sometimes tempting to tinker with the code to achieve your goals, even if that's not what my teacher expects of the quality of my code.

# Code

## Development state

I then spent more than a weekend developing the bottom navigation menu.

I watched a lot of tutorials on *Youtube* and *Github*, but none of them had a proper code architecture.

Most of them loaded the appearance of new text, but never the appearance of different pages, which isn't very useful in the end...

After a lot of searching and trying, I found a youtuber called *Nick Manning* who explained the basic concepts step by step, one video at a time. Even though he didn't give a navigation menu, I managed to remember the basics and by looking at the official documentation for the Flutter framework, I was able to create this splendid navigation menu 😊.



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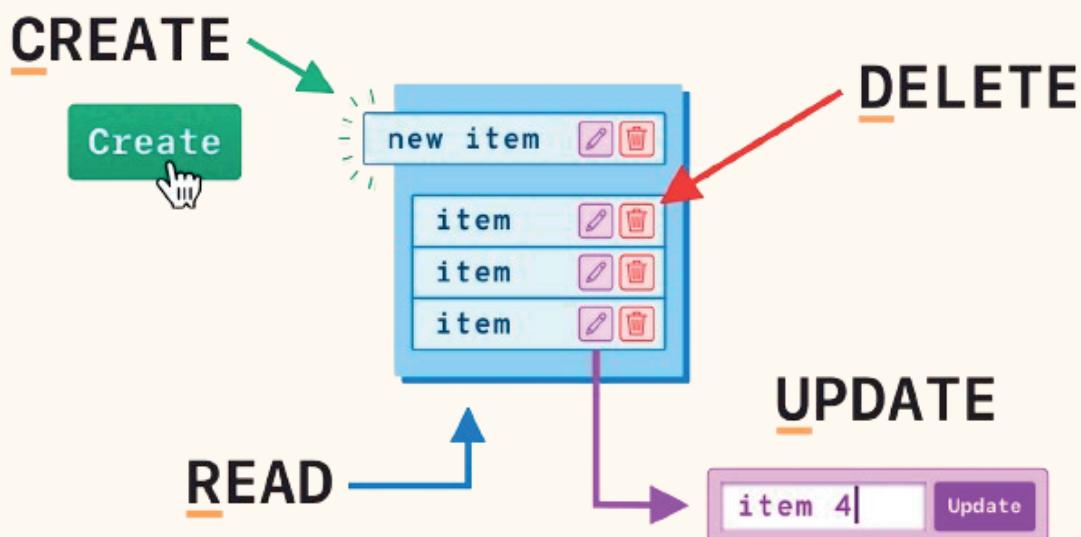
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S'abonner

## The CRUD

The next part consists of creating an animal, which is not the easiest part as it involves interacting with the *Firebase* database. This creation process is commonly known as a *CRUD* (Create Read Update Delete). It involves four main actions: initiating the creation of an animal, viewing its information, modifying that information, and finally the ability to delete that animal. This step is important and it's one of the basics that I haven't yet mastered in *Flutter*.

Again, I'll follow the same process I used to create my navigation menu. Thanks in advance to *Youtube* and *Github* 😊.



## Interactions between users

The next phase in the development of this application will be to allow interaction between different users and the visualisation of their pets. If you want to participate to an event created by another user, it would be useful to know who and what information is available about their pets.

For example, knowing if a dog is golden, vaccinated or well trained could be useful for other owners who want to feel comfortable walking in a group. It would also allow us to find out who is taking part in a competition, for example to identify our competitors.

Viewing other users' profiles is a complex feature to implement as it requires the protection of confidential information to avoid any security problems. This is a phase that requires special attention, as it requires great caution.

### The CRUD

Another feature I plan to develop is the ability to contact with a vet online. Users would be able to book an appointment or call their vet in an emergency via the application. To do this, I'll need to add the ability to create a different type of user, including the roles of patient and vet.

Adding a type, or more precisely a role, to a user is not as simple as it sounds. It can sometimes involve significant changes to the interface, the design and the concept of the database. As well as entering basic profile information, the vet would be able to add his clinic details, availability and share veterinary reports with patients (individually of course, not publicly). Obviously this part doesn't need to be developed yet. However, if I plan to create a complete application for my final dissertation, I'll have to develop it too.

## Conclusion

In brief, this pet management application project is all about making life easier for pet owners.

The thoughtful design, complete architecture and development process, not to mention the many challenges, provided me with a

great opportunity to learn the *Dart* language used with *Flutter*.

By building a solid foundation before moving on to design and integration, I was able to create an application that clearly met the expectations of the target audience. Without this methodical approach, the user experience would have been far less satisfying.

Solving various technical challenges required a smooth approach as well as constant exploration of inspiration and online resources. I expect many more challenges to come and I don't really know what they will be or how I will solve them, but that's part of my job.

To conclude, this report summarises what I have achieved so far and reflects my determination to create an application that meets a real need and has the potential to make hundreds or even thousands of people happier. The vision of a complete pet management platform is beginning to be created, promising an enriching and practical user experience for all.

Although there's still a long way to go, every step I take is another step towards a quality project. With perseverance and commitment, this application will become the essential tool for simplifying and enriching the relationship between owners and their precious companions.

