

Running Title: Pawing Packs Pet Clinic

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1. Introduction

Technology gives a lot of impact in terms of utilizing and accessing any kind of information. Modern society everyone uses different technologies. And also now everything has been systematized. Among those systems I choose a pet clinic system. Currently there are some pet clinic systems. But none of them are designed with microservices architecture. By using microservices architecture we can improve productivity, speed, flexibility in using technologies and scalability. Those are the few advantages. Therefore my aim is to implement a pet clinic system with new features by using microservices architecture. And give benefits for clients.

And also this system is supposed to replace manual paper-based processes in pet clinics, particularly when it comes to appointment scheduling.

2. Problem Statement

- I. When going through the current pet clinic systems, they do not have the following facilities in one system.
 - Make an appointment online
 - Buy Accessories and Foods
 - Vaccination Details
 - Notification
- II. Because of a pet owner's busy schedule they forget the next vaccination date for their pet and appointments time.
- III. Hard to maintain the system when adding new features.

3. Solution

I planned to implement those facilities into one system with microservices architecture. Therefore, the solution to overcome those problems is "Pawing Packs" web application.

4. Motivation

Everyone loves their pets. So they try to give best things for them. They like to buy vitamins, nutrition food items, branded accessories and all these things with doctor's recommendation. And also without time wasting in their busy life schedule.

Therefore this is the motivation for building this application for those who love and care about their pets.

5. Architecture Design

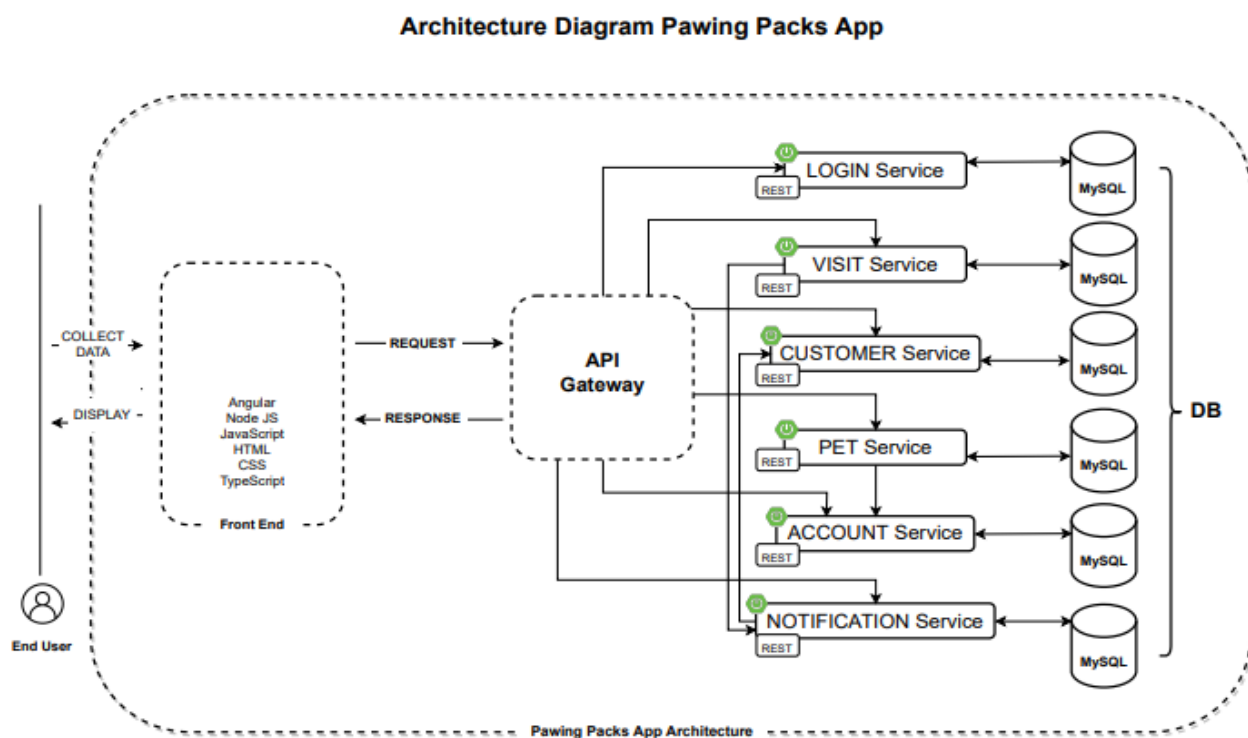


Figure 1 – Architecture Diagram

Application services

- **UI + API Gateway** - serves both static site and implement façade for internal services
- **Visit Service** – provides functionality to book visits for pet owners
- **Customers Service** – serves information about pet owners and their pets (customers)
- **Pet services** – serves information about accessories and foods
- **Account Service** – calculate billing for accessories and foods (pet services)

- **Notification Services** – Remind customer about their appointments

6. Product Requirement

- This application generally is only available after user authentication. Others can just visit applications, but when they do functions they want to prove their identity by login to the application.
- Each user has only one role.
- User can log in with their username and password. They should want to enter the details of their pets. Type, Breed, Name, Age etc.
- Customers can visit the vet or buy things for their pets. And also they get reminders about their pet's vaccination date or for time and date visit doctor as notification.
- Customers can make their payments online.



Figure 2 – Sample User Interface

7. Gantt Chart

Activity	Timeline (2022-02-01 to 2022-04-30)											
	Feb				March				April			
	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th
Title												
Proposal												
Collecting Information												
Background Study												
Planning												
User Interface												
Login Service												
Visit Service												
Customer Service												

Table 1