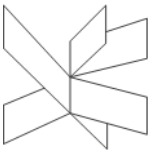

- Software System for VIAPets -
Project Description

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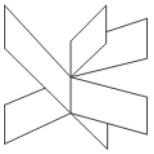
Software Technology Engineering

1st semester

09/10/2024



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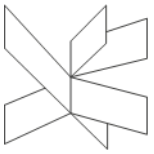


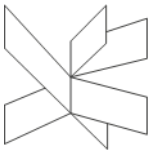
1. Problem Domain

These years, especially following the isolation caused by the pandemic, the market for pets has seen a notable increment. The time spent in lockdown led numerous individuals to seek the company of pets leading to an evident increase in the number of pet owners. A study done by the Danish Veterinary and Food Administration has shown that more than 45% of Danish households have a pet [Media Team, 2021][1]. As demand for pets has grown, the pet market has expanded, presenting new challenges for local kennels and pet shops.

In this specific case, the focus shifts to VIAPets, owned by Mr. Bob Oldenuff, who once led football teams to triumphs yet currently he navigates the realm of VIAPets. This establishment serves both as a pet store and a kennel for animals. Mr. Bob finds himself entangled in the challenge of managing his animals especially when it comes to distinguishing between the pets available for sale and those residing in the kennel. Amidst the confusion, a client's Chihuahua from the kennel was mistakenly sold at the pet shop. From this chaos, it becomes evident that there is a pressing demand for an improved system. Someone who can tell which pets are available and which are not while also keeping track of customer purchases and appointments.

The goal of this project is to create a system for Mr. Bob's VIAPets that are both simple and well-working. The system's main objectives are to track and manage all pets in the shop and the kennel whether they are for sale or kept in the kennel, in addition, it will keep track of sales records, consisting of the animal information, customer details, and sales history.

To reach the goal of the project it is necessary for the system to keep details on the shop and the kennel separated and distinguishable. All pets in the shop must come with the following information: color, gender, age, name and any notes about it. It is also important for dogs and cats to carry information about their breed and breeder. The system must also store the type of fish, whether or not they hunt other fish, whether they



live in saltwater or freshwater. It would be beneficial to add details on birds including the types they belong to and what they like to eat. Information on rodents should cover the different kinds as well as if they have a tendency to bite. Furthermore there needs to be a different kind of animal category “various” for the rest of the pets with details about what species they are necessary. Storing information about our customers is crucial. This includes things like their full names, the numbers they use to make calls, their email addresses, what kind of pet they chose to take home, the exact date and time when they made their purchase and what the final cost was, especially noting if a discount was applied. There is also an additional issue that must be taken into account which is Bob's future idea of taking pets from owners who cannot or will not care for them anymore and then find new homes for them by selling them.

The kennel and the pet store share details yet there is a difference, at the kennel animal prices are not listed since they are not for sale. The kennel also keeps records on how long a pet stays and gathers data about the pets from their owners. Even though the system must maintain information on pets being housed, the size of the kennel, and the cost for using the kennel, at this moment, there are 10 slots available for pets, each with a charge of 20 Euro, but don’t set that as a fixed unchangeable price in the system.

This matter holds significance as it casts a negative impact on both his clients and their animal companions leading to adverse effects on Mr. Bob's enterprise.

Addressing this problem could place Bob a step ahead of his competitors, resulting in a higher revenue and customer satisfaction. With an improved service, there will be less room for mistakes, such as the “Chiuaua incident”, which results in negative customer experience and impaired business reputation. Additionally, workers would feel less pressure knowing there is a smaller chance they will commit mistakes.

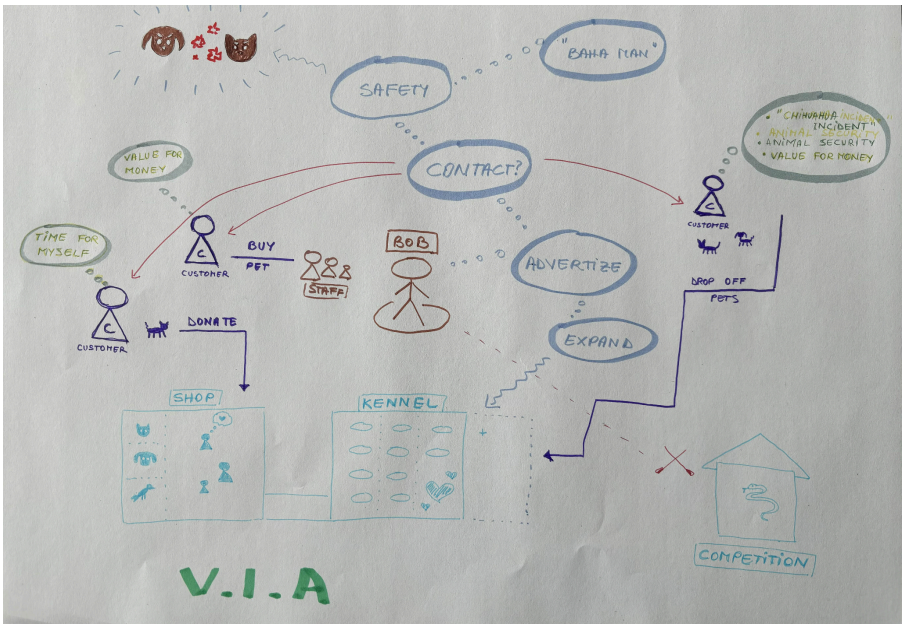


Figure 1: Rich Picture.

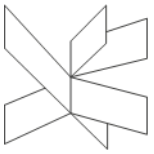
2. Problem statement

Main Problem:

How can Mr. Bob's 'VIAPets' improve its pet management system to clearly distinguish between pets for sale and those in the kennel, while also effectively tracking sales, kennel bookings and customer information to avoid confusion and prevent incidents, such as the accidental sale of pets from the kennel?

Sub-questions:

- What are the current inefficiencies in Mr. Bob's VIAPets' system for managing pets for sale versus pets in the kennel?
- What is the best way to design a system that allows Mr. Bob to keep accurate records of sales and bookings without causing confusion between the two?



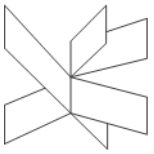
- What specific information is necessary to differentiate between pets for sale and those in the kennel?
- What types of data are crucial for maintaining the health and safety of pets in both environments?
- What can we do to provide Bob with a user-friendly system that accommodates his limited knowledge of technology?
- What strategies can be used to optimize VIA Pets' advertisement on a website?

3. Delimitation

Defining what topics will not be addressed in the project:

- There is no need for us to set up a system for handling payments and managing bookings online. The system is not required to manage the payments themselves but just to hold onto the details.
- Our attention will be dedicated to the essential features giving top priority to profiles of customers and pets along with the information about connections these pets have with their owners and so forth.
- There is no use of high-level AI or any mobile application.
- The system should not include login and password features.
- Storing details takes place using files not databases.
- While Bob is considering selling pet food in the future, this project will not focus on inventory management related to pet food

These delimitations will make the project more manageable and ensure it focuses on delivering a simple, core platform that meets essential needs.

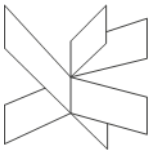


4. Choice of methods

The Waterfall methodology will be used to keep the project well structured, however we will keep in mind that it will not be followed strictly in order to fix and change . For planning and management: Our group will be organized according to the size of the tasks at hand.

Methods we will use:

- **Analysis:** Our date is taken out of the VIAPets.pdf file.
- **Experiments**: Various ways of data display will be tested to get with the most
- **Modeling**: Astah Professional will be used in order to design the structure of the program.
- **Code**: The previously created design will be implemented using IntelliJ.
- **Simulation**: We will place ourselves in Bob's position to simulate various scenarios and cases in which Bob might use our solution.
- **Communication**: Discord will be our main tool for communication with each other.
- **Presentation**: A comprehensive guide will be provided for Bob and his employees to help avoid confusion when using the system.

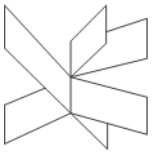


5. Time schedule

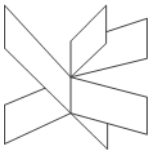
The following time schedule outlines the overall timeframe of the VIAPets Software System project, including key milestones and deadlines. The final deadline for project completion is set for **December 20, 2024**.

The project must be completed by Christmas to ensure the system is operational during the peak holiday season.

Milestone	Activities	Deadline
Analysis Completion:	Define project scope and objectives Analyze current operations	11.10.2024
Design Completion:	Think about the best way of arranging the system for being user friendly.	15.11.2024
Implementation Completion:	Creating the systems by transforming into code the design previously made.	29.11.2024
Testing Completion:	Check all functionalities of the system.	13.12.2024
Documentation:	Documenting each step throughout the execution of the project.	Made during every meeting and individual work.



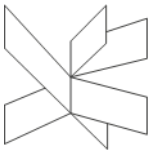
Weekly Team Assessments:	Minimum 3 meetings per week (At least one at VIA if possible) Inspect each member's work and give feedback.	9.10.2024 - 24.12.2024
Revisiting Group Contract:	Make sure that the conditions and statements are updated and correct.	At least once a month
Planned Completion Of Work:	Complete the project one week prior the deadline	13.12.2024
Final Deadline:	Final deadline of submitting the project	20.12.2024
Expected Workload:	members x 27.5 x 10 (ECTS) = 1375 hours	



6. Risk assessment

Risk Matrix

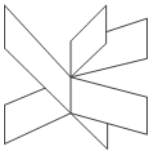
Risk Description	Likelihood (1-5)	Impact (1-5)	Risk Score (Likelihood x Impact)	Preventive Actions
Limited access to required data from VIA Pets	**3**	**4**	**12**	Make it a point to have frequent discussions with Mr. Bob so as to make clear what data is needed; put together a comprehensive list of data requests right at the start of the project
Inexperienced team members on specific technologies	**2**	**4**	**8**	Offer guidance on the tech tools in use and team up those who are new to the team



Wrong estimation of workload	**4**	**5**	**20**	Start by taking a close look at the amount of work to be done. Then divide these tasks into smaller parts to make it easier to guess how much time and effort they will need.
Changes in project scope due to client requests	**3**	**5**	**15**	From the very start make sure everyone knows what the project is all about. If anyone wants to change something later on, set up a system to check if it is a good idea.
Technical issues during system development	**4**	**4**	**16**	Set aside moments for checking things work as they should fix what does not and solving problems.

Summary of Risk Assessment

This risk assessment highlights several key factors that could disrupt the project. The highest risk score is associated with the **wrong estimation of workload.**



7. References

1. Team, Media. “Danes Favor Canines over Felines.” News, 20 Aug. 2021
2. VIA. “Guidelines Project Description, VIA Engineering 2024.”
3. VIA. “Software Engineering - Autumn Semester 2024.”
4. VIA. “Software System for VIAPets .”
5. Figure 1: VIA. “SEP1_rich_picture.jpg”