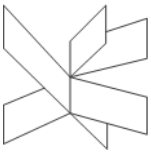


VIAPets – Project Description

Students	Supervisors
Ana-Maria Patriche – 302976	
Bartosz Kołando – 354539	Mona Wendel Andersen
Elina Grumbina – 355013	Joseph Chukwudi Okika
Piotr Gała – 355451	
Neegam Singh Kunwar - 355461	

Software Engineering

Semester 1

[11.10.2024]

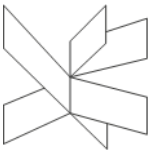
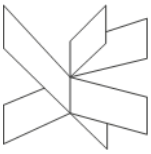


Table of contents



1. Problem Domain

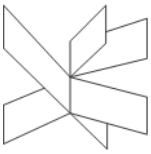
Mister Bob Oldenuff is a retired football manager who owns a combined pet shop and kennel in Northern Europe, called VIAPets. The team has already assembled a software system for a different project led by Mister Bob.

VIAPets runs from one location; the two activity sectors are separated by room distribution. The business started as a pet shop that later grew to accommodate the kennel, where customers can bring their pets to be hosted for various periods of time. They plan to help rehome animals surrendered by customers soon. The business currently refrains from selling pet food.

Competitors are not a major concern, as they do not offer the same package of services. Customer relations are important, and so are the handled animals. The staff is involved in the entire process.

The current animal management system is focused on customer information (name, e-mail, purchase, time of purchase, final price). Differentiating between pets for sale and hosted pets implies separating them by room and presence or absence of a price tag. It has proven insufficient in terms of maintaining a clear distinction between the animals. A major conflict with one of the clients occurred, when an overzealous employee sold a pet from the kennel, mistaking it for one of the pets from the pet shop. This is being referred to by other customers as the ‘Chihuahua Catastrophe’ and is harming the business’ reputation.

A better method to distinguish between pets for sale and pets hosted in the kennel is necessary. The information that Mister Bob plans to keep track of is focused on animals, customers and bookings. All three categories need to be able to connect with each other, animal information must be able to transfer between customers and shop ownership, in case of rehoming.

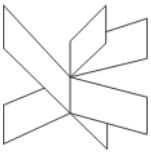


Customers	Animals	Bookings
- Name - Phone number - E-mail - Pet - Date and time of sale (if applicable) - Final price (if applicable)	- Name (if applicable) - Price (if applicable) - Colour(s) - Age - Gender - Species (cats, dogs, fish, birds, rodents, various) - Breed (for dogs and cats) - Breeder name (for dogs and cats) - Possible predators (for fish) - Saltwater/Freshwater (for fish) - Preferred food type (for birds) - Internally visible information over whether the animal bites or not - Comments	- Customer information - Period of stay - Animal information

Table 1 - Information fields and their contents, based on Mister Bob's request

He also wants a website with the following pages:

- General introduction of the business and its history
- Staff: information and photos about him and his employees
- Petshop: information and photos about pets on sale
- Kennel: information about booking availability (maximum ten pets at once) but not the price (20$ per night, regardless of animal type, but he wants to be able to



change it himself when accepting new bookings). Will only host dogs, cats and birds.

- Optional extra page with more information that the owner might decide to add in the future

The owner and the staff prefer simple software solutions. The client interaction is maintained through phone and on-location conversations, and Mister Bob prefers that it remains that way.

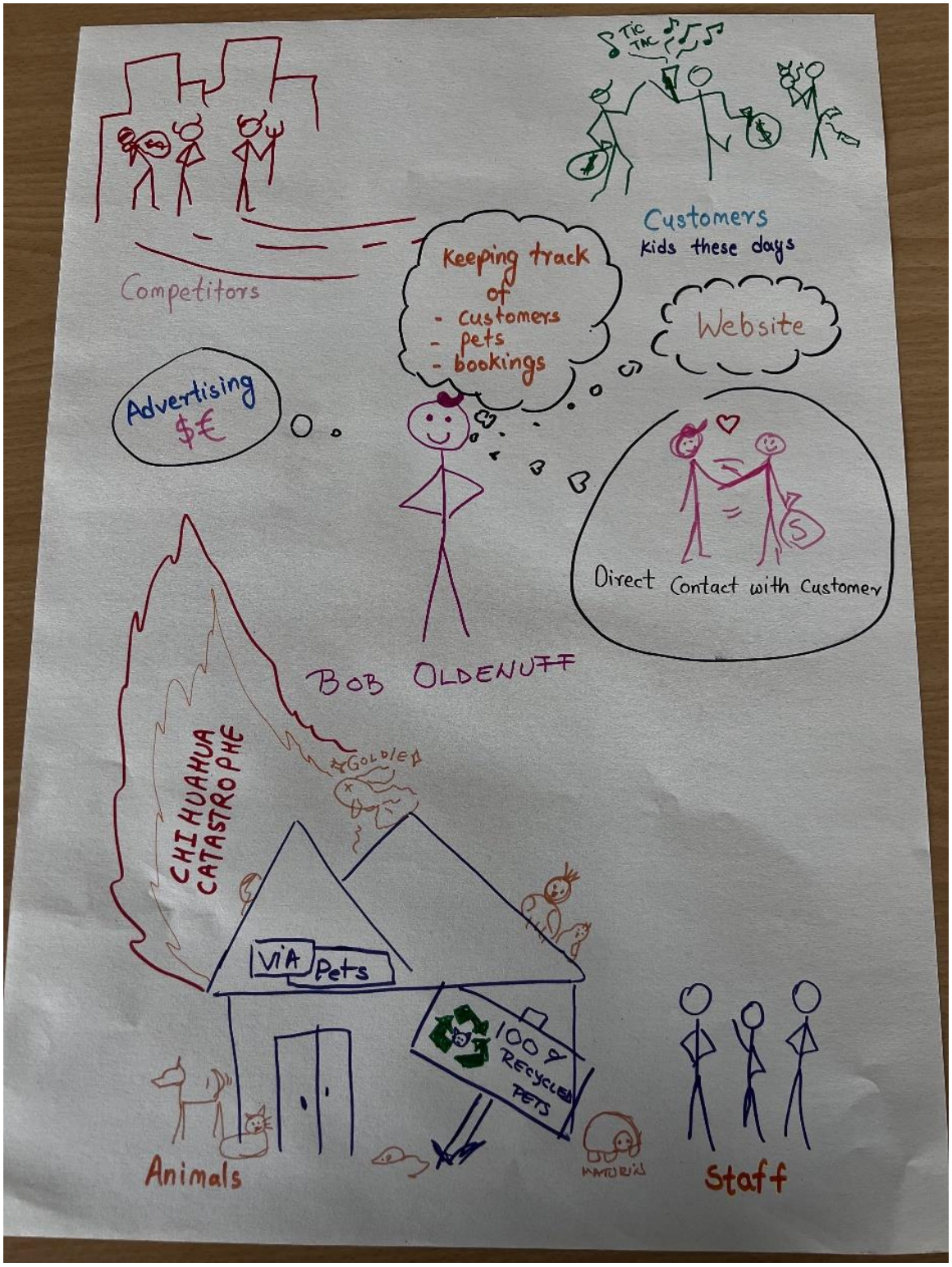
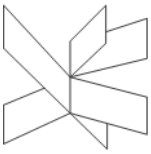


Image 1 - 1 Rich Picture of Bob's Problem Domain



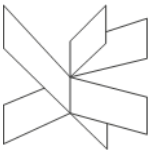
2. Problem statement

Main Problem:

How can we create a better method to distinguish between pets for sale and pets hosted in the kennel?

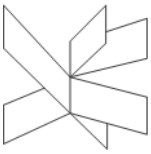
Sub-questions:

- What can we improve the software to manage the pets easier.
- What are the biggest problems with organizing the workflow?
- How can we better link customers with animals to avoid confusion.



3. Delimitation

1. **Animal management**:
    - The project will improve the system to clearly show the difference between pets for sale and hosted pets. (Data about pets will be stored in files).
2. **No customer interaction changes**:
    - Customer interactions (phone and in-person) will stay the same. We won't add any new ways to contact customers.
3. **Limited to pet separation**:
    - We won't address future plans like rehoming pets or selling pet food.
4. **Simple solutions**:
    - The system will stay easy to use, as Mister Bob and the staff prefer simple changes.



4. Choice of methods

This project requires a structured development; with the purpose of fulfilling Mister Bob's well-defined requirements, the Waterfall method has been determined to be the best fit for this project.

Waterfall methodology is a well-established project management workflow. Like a waterfall, each process phase cascades downward sequentially through five stages (requirements, design, implementation, verification, and maintenance).

This method cannot be followed all the way to the end of the project however.

Analysis:

Based on the information provided by Bob Oldenuff the system must include functionalities necessary for both the pet shop and kennel operation. For clear understanding of this case, a structured approach is necessary.

Design:

During this phase, a design for the system will be developed that meets all the requirements. In this stage, designs and blueprints for deliverables will be created.

Implementation:

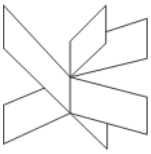
Once the design is finalized, it is time to implement it. This phase is conducted to ensure the structured methods are working. Any further design can be added if needed.

Testing:

After the software system is implemented, it is time for quality assurance. It is important to test all use cases to ensure a good user experience.

The maintenance stage will not be followed through.

Instead, after the testing stage, the project development will continue based on its results and further re-testing. The system will be readjusted to fit Mister Bob's needs and requirements, but also the guidance received from the project supervisors.



5. Time schedule

Final Deadline: December 20, 2024

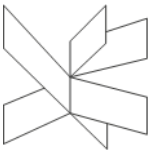
Total Expected Workhours: 27.5 hours * 10 ECTS per person(Calculated workload 1375 hours).

Tasks	Weeks	Notes
Project planning an analysis	41	Review project and clarify requirements.
System design creation(sketch)	43	Design system: user interface, system structure + pet info, customer info, and sales/booking pages.
Backend Development (Pet & Customer Data) +	44 – 50	Build backend for storing pet and customer data in files.
Frontend Development (System Screens)	44 – 50	Develop user interface for staff to view and update pet, sales, and kennel booking information. Create categories for pets.
Reporting & Data Management	49 – 50	Create reports for sales, bookings, and stock updates.
System Testing and Bug Fixing	50 – 51	Test all features (pets for sale, bookings, customer data, etc.). Fix issues.
System Delivery Deadline	51 – **Deadline**	Final system delivery to Mr. Bob.

Table 2 - Time schedule

Points of start

1. **Requirement Confirmation:** Starts on 7 of October.
2. **Design Review:** Starts on 21 of October.
3. **Backend Development:** Starts on 28 of October.
4. **Frontend Development:** Starts on 28 of October.
5. **Testing and Bug Fixing:** Starts on 9 of December.
6. **Documentation about project**: Starts on 9 of December.
7. **Final System Delivery:** Completed on 20 of December.



6. Risk assessment

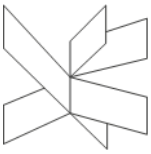
Risk assessment matrix.

Risks	Likelihood Scale: 1-5 5 = high risk	Severity Scale: 1-5 5 = high risk	Product of likelihood and severity	Risk mitigation e.g. Preventive- & Responsive actions	Identifiers	Responsible (one person)
Confusing animal tracking	5	3	15	Add specific categories for different types of animals	Difficulty distinguishing pets for sale vs. kennel	Ana
Overdependence on in-person booking	3	3	9	Develop a user-friendly website for online booking	Risk of reduced customer access	Piotr
Obsolete system	3	5	15	Upgrade to a modern system	Difficulties in improving operational efficiency	Bartek

Table 3 - Risk assessment matrix

Explanation: The “likelihood” identifies how likely a risk is to happen.

The “severity” estimates the impact it will have on the project if it happens. The “product of likelihood and severity” is the former two multiplied, giving a number that can be used to identify the most significant risks.



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