**Software Solution for Zoo Bazaar**



By SAIA Software – Group 6

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# 1. Introduction

The purpose of this document is to define our project and describe it. This document will also include planning for the following first six week of the project starting on February 8th until March 26th as well as the next 4 iterations which lasts until 19th June.

This project was assigned to us by André Postma to practice knowledge we acquired during the lectures. This project is how we show that we can co-operate to accomplish a common goal. In this case our client, Zoo Bazaar would like to automate the management of their employees and animals. The entire project will take eighteen weeks.

# 2. Team

Our team consists of four members:

* Ard Koornstra, (4058127, ard.koornstra@student.fontys.nl)
* Andrei Tifrea, (4150104, 455422@student.fontys.nl)
* Ilja Pronins (306810, [i.pronins@student.fontys.nl](mailto:i.pronins@student.fontys.nl))
* Popescu Stefan (458476, stefan.popescu@student.fontys.nl)

Our team representative is Andrei Tifrea. Andrei will be in contact with the client and will be responsible for organizing meetings. During the meetings we will be taking the minutes. You can contact us by email.

# 3. Client

The client for our project is the company Zoo Bazaar (daughter company of Jupiter). We will stay connected with Ms. Thayyakathe Raveendran who will represent the company Zoo Bazaar. We are going to have contact with our client by sending her emails to schedule meetings to:

* Settle the basic requirements.
* Keep our client informed on the progress of the deliverables.
* Present the final product.

Ms. Thayyakathe Raveendran can be reached at the following e-mail address: [s.thayyakatheraveendran@fontys.nl](mailto:s.thayyakatheraveendran@fontys.nl)

# 4. Current Situation

The company Zoo Bazaar is planning to open their very first zoo in Eindhoven funded by the parent company “Jupiter.”

Zoo Bazaar has the following departments: HR, caretakers, and security (who work during the night while the other departments go home). The employees in these departments all have their own tasks and need to have access to various parts of the system. There is also an administrator, who has full access and editing rights to everything, and a general manager, who can see all information but not change it.

The company currently manages all their employees and animals on paper, this potentially could lead to a lot of issues, as it is slow and likely to cause errors.

There are other project teams working on the same project, and for this reason we must be focused and professional to show our best skills to the client.

# 5. Problem Description

Currently management is using, among others, paper notes to store data about employees, their responsibilities (such as feeding animals) and the animals. This way of storing data is unhandy, unreliable and can cause confusion by accident, because of a great human factor in this entire process. With opening of new zoo, they would like to prevent any of such problems by hiring us to create software that would minimize the possible damage cause by poor organize-method.

# 6. Project Goal

The project goal is to help Zoo Bazaar by creating and developing a software application so that they can manage their employees and animals more efficiently and also assign work shifts to employees. This system needs to have functionality to manage the list of animals in the zoo and their welfare, but also office tasks like sales and customer service. They also would like to have a website for the employees where they can perform multiple tasks such as viewing their schedule, information, hourly wage, and personal information and much more. The main priority is on the employee management, the welfare of the animals, compatibility between the animals, as well as the website for the employees.

# 7. Deliverables

By the end of the 3rd iteration, we will deliver a fully working application that addresses the main problems (management of animals and management of employees).

Our client is having the following problems and we will make a software solution able to solve them:

1. Managing animals (add, searching, viewing, remove animals and adjust animal details).
2. Managing employees (add, searching, viewing, remove employees and adjust employee details).
3. Creating and updating a schedule for employees, and for feeding the animals.
4. Various administration tasks (customer service, ticket sales, etc.).
5. Documentation (URS, Project plan, UML class diagram)
6. Website for the employees where they can see their schedule as well as their personal profile
7. Automatic email for the new hired employees.
8. Relations between animals.
9. Feeding schedule
10. scheduler algorithm (so it takes into consideration the number of habitats and based on that it modifies the number of employees per shift)
11. Colours for the shifts in schedule (based on the number of employees currently assigned to that shift)
12. Employee comparison when adding an employee (in case an employee is added with an already existing BSN)
13. Statistics regarding the tickets

During the 4th iteration we will mostly polish the application and implement new features regarding the schedule, employee management and statistics.

# 8. Non-Deliverables

These non-deliverables are what the client could expect us to deliver but we will not, as we focus on other parts of the application first.

* We will not deliver any written manual for our application.

# 9. Constraints

We are going to use C# for the desktop part of the application. It has defined style and we do not plan to deviate too much from that. As for the web application we are going to use html and css.

The usage of bootstrap is prohibited.

There will be no additional funding provided for purchasing of software, for this reason we will be using Microsoft Visual Studio’s as all members of project team are able to use this without any additional costs.

We have pre-defined amount of time to complete the project which will limit the additional features we can provide. Project officially begins on 8 February 2022 and ends 17th June 2022.

# 10. Risks

Communication may be affected by the current Corona situation. We will mitigate this risk by having regular meetings on Microsoft Teams and we will be using git to collaborate on the project, take minutes, and update the documentation regularly. This will reduce the risk of communication problems.

Our lack of experience can also be seen as a risk to quality of the project. We intent to mitigate this risk by expanding our knowledge by attending lectures at Fontys on application development and researching needed subjects ourselves.

# 11. Phasing

Phase 1: (8.02.2022 - 20.02.2022) Analysis of the project

* Defining project goals
* Prepare and deliver the project plan

Phase: 2 (20.02.2022 – 01.03.2022) Design

* Prepare and deliver URS document
* Create UML-diagram
* Assigning tasks

Phase 3 (01.03.2022 – 14.03.2022): Implementation

* Creating Database
* Creating management tools for Animals. (Adding, searching, viewing, editing, removing)
* Creating management tools for assigning shifts to employees.

Phase 4 (14.03.2022- 21.03.2022): Testing

* Code testing
* Solving bugs
* Creating test plan

Phase 5 (21.03.2022- 23.03.2022): Presentation

* Present the application
* Gather feedback

Phase 6 (28.03.2022- 06.04.2022): Documentation

* Gather feedback from client
* Update the documents

**Iterative phasing:**

**Iteration 1** (28.03.2022- 15.04.2022)

**First week:**

* Update documentation
* Meet the client and tutor

**Second week:**

* Ask the client for more information
* Implement a login functionality
* Implement a profile modification functionality
* Schedule for the website
* Announcements for the employees when they login on the website

**Third week:**

* Finish the implementation
* Perform peer review
* Meet the tutor
* Hand in the deliverables

**Iteration 2** (20.04.2022- 08.05.2022)

**First week:**

* Update documentation
* Meet the client and tutor

**Second week:**

* Relations between animals
* Profile change (some fields locked)
* Schedule update
* Announcements for the employees when they login on the website

**Third week:**

* Finish the implementation
* Meet the tutor
* Hand in the deliverables

**Iteration 3** (16.05.2022- 08.06.2022)

**First week:**

* Update documentation
* Meet the client and tutor

**Second week:**

* Divide work between members of team SAIA
* Automatic email for the new hired employees
* Statistics
* Feeding schedule

**Third week:**

* Finish the implementation
* Meet the tutor and client
* Hand in the deliverables

**Iteration 4** (09.06.2022- 19.06.2022)

**First week:**

* Update documentation
* Meet the client and tutor

**Second week:**

* Divide work between members of team SAIA
* Modifications on the scheduler algorithm (so it takes into consideration the number of habitats and based on that it modifies the number of employees per shift)
* Colours for the shifts in schedule (based on the number of employees currently assigned to that shift)
* Employee comparison when adding an employee (in case an employee is added with an already existing BSN)
* Statistics regarding the tickets
* Hand in the deliverables

**Third week:**

* Meet the tutor and client