User Requirements Specifications

Group 2

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Functional Requirements

FR-01: *All employees can log into their accounts with their personal credentials* (Account must already exist in the system.)
FR-02: *Zoo manager can create accounts for HR (Human Resource) employees. HR employees can add accounts for other workers*.
FR-03: *HR employees support employee management.*

FR-04: *Animal administration employees support animal management.*

FR-05*: Animal administration employees manage the transfers of animals to other zoos.*

FR-06: *Schedule makers support schedule creation.*

FR-07: *Resource planners support task assignment.*

FR-08: *Webpage supports ticket acquisition.*

FR-09: *Webpage supports schedule viewing (for employees).*

Nonfunctional Requirements

NFR-01: Performance: The application shall handle a large number of users and requests without significant slowdown or downtime. The application shall have a fast response time, with minimal latency and page load times, and be optimized for performance on both high-end and low-end devices.

NFR-02: Usability: The application shall have a user-friendly interface that is easy to navigate and understand for both novice and experienced users.

NFR-03: Reliability: The application shall be reliable, with minimal crashes or errors, and have a backup system in place to prevent data loss.

NFR-04: Security: This requirement specifies how the system must protect sensitive data and prevent unauthorized access. It might include factors such as authentication and encryption.

NFR-05: Maintainability: This requirement specifies how easy it is to modify, extend, or fix the system. It might include factors such as modularity, code readability, and documentation.

Use Cases

Desktop application

✔ **UC-01:** Login to the application **| FR-01**

Actor: Zoo manager/Employee

Description: Login can only be done via submitting the correct credentials on the login page.

Prerequisites:

1. Actor must have an account already created in the system and a running application.
2. System requests for login information.

Main success scenario:

1. Actor enters their personal credentials (username and password) and confirms.
2. System validates the actor's credentials and logs them into their account.

Extensions:

1a. Actor enters incorrect credentials.
   1. System displays an error message.
   2. Return to MSS1.

✔ **UC-02:** Create account for new employees **| FR-02**

Actor: Zoo manager/HR employees

Description: Zoo manager creates accounts for HR personnel. HR employees create accounts for all other types of employees. They are given the written contract of the employees they need to add to the storage and the credentials communication is done via email or in-person meetings.

Prerequisites:

1. Actor is logged in (System is displaying the employee management page).

Main success scenario:

1. Actor indicates they want to add an employee on the employee creation subpage.
2. System asks for details about employee, contract and emergency contact.
3. Actor provides the details about the new employee and confirms the creation of the new account.
4. System adds the new employee to the storage and creates an account for that person with the information provided.

Extensions:

3a: Actor inputs incorrect or incomplete data.

.1 System informs the actor that the data was incorrect or incomplete.

.2 Return to MSS 2.

✔ **UC-03:** Search for specific employees | **FR-03**

Actor: Zoo manager/HR employees

Prerequisites:

1. Actor is logged in (System is displaying the employee management page).

Main success scenario:

1. Actor indicates they want to search for a specific employee or group of employees using the search feature and providing specific information.
2. System displays a list of active employees that match the criteria provided.

✔ **UC-04:** Edit an employee's details | **FR-03**

Actor: HR employee

Prerequisites:

1. Actor is logged in (System is displaying the employee management page).

Main Success Scenario:

1. Actor searches for the employee using the search feature (see UC-03 for details).
2. System displays a list of active employees that match the criteria provided (if the information provided is very specific, only one employee will be displayed).

3. Actor selects the employee they were looking for, indicating they want to edit his personal details.
4. System displays employee data and requests for changes.
5. Actor changes the relevant details and confirms his action.
6. System registers the action and returns the page to the original state.

Extensions:
5a: Actor inputs incorrect or incomplete data.
.1 System informs the actor that the data was incorrect or incomplete.
.2 Return to MSS 4.

UC-05: Edit an employee's contract | **FR-03**

Actor: HR employee

Description: Specific HR Employees are given the request to change the contract details of another employee via written request or email.

Prerequisites:
1. Actor is logged in (System is displaying the employee management page).

Main Success Scenario:
1. Actor searches for the employee using the search feature (see UC-03 for details).
2. System displays a list of active employees that match the provided criteria (if the information provided is very specific, only one employee will be displayed).
3. Actor selects the employee they were looking for, indicating they want to edit his contract details.
4. System displays employee's contract data and requests for changes.
5. Actor changes the relevant details and confirms his action.
6. System registers the action and returns the page to the original state.

Extensions:
5a: Actor inputs incorrect or incomplete data.
.1 System informs the actor that the data was incorrect or incomplete.
.2 Return to MSS 4.

UC-06: Edit an employee's emergency contact | **FR-03**

Actor: HR employee

Description: Specific HR Employees are given the request to change the emergency contact details of another employee via written request, email or phone call.

Prerequisites:

1. Actor is logged in (System is displaying the employee management page).

Main Success Scenario:

1. Actor searches for the employee using the search feature (see UC-03 for details).
2. System displays a list of active employees that match the provided criteria (in this case, if the information provided is very specific, only one employee will be displayed).
3. Actor selects the employee they were looking for, indicating they want to edit his emergency details.
4. System displays employee's contract data and requests for changes.
5. Actor changes the relevant details and confirms his action.
6. System registers the action and returns the page to the original state.

Extensions:

5a: Actor inputs incorrect or incomplete data.

.1 System informs the actor that the data was incorrect or incomplete.

.2 Return to MSS 4.

UC-07: View employee history | **FR-03**

Actor: HR employee

Prerequisites:

1. Actor is logged in (System is displaying the employee management page).

Main Success Scenario:

1. Actor indicates they want to see employee history navigating to the corresponding subpage.
2. System displays an empty page with a search feature and a sorting feature.
3. Actor searches for a specific group of employees using the search feature (see UC-03 for details).

4. System displays a list of all past and active employees that match the provided criteria.

Extensions:
3a: Actor wants to see all employees ordered by a specific category.
.1 System displays a list of all past and active employees ordered by the category indicated.
.2 End of use case.

✔ **UC-08:** Add animal to the system **| FR-04**
Actor: Animal administrator

Prerequisites:
1. Actor is logged in (System is displaying the animal management page).

Main Success Scenario:
1. Actor indicates they want to add an animal navigating to the corresponding subpage.
2. System asks for details about the animal and (if any) relationships it might have with other animals in the zoo.
3. Actor provides the details about the new animal and confirms the addition of the new animal.
4. System registers the action and returns the page to the original state.

Extensions:
3a: Actor inputs incorrect or incomplete data.
.1 System informs the actor that the data was incorrect or incomplete.
.2 Return to MSS 2.

✔ **UC-09:** Search for specific animals **| FR-04**
Actor: Animal administrator

Prerequisites:
1. Actor is logged in (System is displaying the animal management page).

Main success scenario:

1. Actor indicates they want to search for a specific animal or group of animals using the search feature and providing specific information.
2. System displays a list of animals that match the criteria provided.

✔ **UC-10:** Edit animal's details **| FR-04**

Actor: Animal administrator

Prerequisites:

1. Actor is logged in (System is displaying the animal management page).

Main Success Scenario:

1. Actor searches for the animal using the search feature (see UC-09 for details).
2. System displays a list of animals that match the provided criteria (in this case, if the information provided is very specific, only one animal will be displayed).
3. Actor selects the animal they were looking for, indicating they want to edit its details.
4. System displays animal's data and requests for changes.
5. Actor changes the relevant details and confirms the action.
6. System registers the action and returns the page to the original state.

Extensions:

5a: Actor inputs incorrect or incomplete data.

.1 System informs the actor that the data was incorrect or incomplete.

.2 Return to MSS 4.

✔ **UC-11:** Add animal relationship **| FR-04**

Actor: Animal administrator

Prerequisites:

1. Actor is logged in (System is displaying the animal management page).

Main Success Scenario:

1. Actor searches for the animal using the search feature (see UC-09 for details).
2. System displays a list of animals that match the provided criteria (in this case, if the information provided is very specific, only one animal will be displayed).
3. Actor selects the animal they were looking for, indicating they want to add a relationship.
4. System displays a list will all existing relationships for the selected animal.
5. Actor selects a type of relationship from the viable options (parent of, child of, mate of).
6. System provides a list of animals that are suitable for the selected type of relationship.
7. Actor selects the second animal for the relationship from the list and confirms the addition of the new relationship.
8. System registers the action and returns the page to the original state.

Extensions:

5a: Actor selects an already existing relationship and indicates they want to remove it.

.1 System registers the action.

.2 End of use case.

UC-12: View animal history **| FR-04**

Actor: Animal administrator

Prerequisites:

1. Actor is logged in (System is displaying the animal management page).

Main Success Scenario:

1. Actor indicates they want to see animal history navigating to the corresponding subpage.

2. System displays an empty page with a search feature and a sorting feature.
3. Actor searches for a specific group of animals using the search feature (see UC-09 for details).
4. System displays a list of all animals that match the provided criteria.

Extensions:
3a: Actor wants to see all animals ordered by a specific category.
.1 System displays a list of all animals ordered by the category indicated.
.2 End of use case.

UC-13: Transfer animal to another zoo **| FR-05**
Actor: Animal administrator

Prerequisites:
1. Actor is logged in (System is displaying the animal management page).

Main Success Scenario:
1. Actor searches for the animal using the search feature (see UC-09 for details).
2. System displays a list of animals that match the provided criteria (in this case, if the information provided is very specific, only one animal will be displayed).
3. Actor selects the animal they were looking for, indicating they want to add a transfer.
4. System displays animal data and requests for information about the transfer and the zoo.
5. Actor provides the details and confirms the transfer.
6. System registers the action and returns the page to the original state.

Extensions:

5a: Actor inputs incorrect or incomplete data.

.1 System informs the actor that the data was incorrect or incomplete.

.2 Return to MSS 4.

✔ **UC-14:** View transfers | **FR-05**

Actor: Animal administrator

Prerequisites:

1. Actor is logged in (System is displaying the animal management page).

Main Success Scenario:

1. Actor indicates they want to see all transfers navigating to the corresponding subpage.
2. System displays a page with a sorting feature (current, past or future transfers). By default, the page displays all current transfers. A “current transfer” is a transfer that either starts, is in progress or ends on the current date.
3. Actor selects a transfer and indicates they want to see more details about it.
4. System displays information about the animal, the zoo they are transferred to and the start and end dates.

Extensions:

4a: Actor wants to postpone or bring forward the start or the end date.

.1 System requests for the new date and which of the dates is modified.
.2 Actor provides the necessary information and confirms the changes.
.3 System registers the action and returns the page to the original state.
.4 End of use case.

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✔ **UC-15**: Create Zoo task | **FR-06**

Actor: Schedule Maker

Prerequisites:

1. Actor is logged in and navigated to the task management tab.

Main Success Scenario:

1. Actor inputs required information about the task.
2. System confirms the creation and makes it visible for the resource planners as *available*.

Extensions:

1a. Actor specifies an animal from the selected species.

1. System specifies the task is addressed to a certain animal.
2. Return to MSS2.

2a. Actor deletes a task marked as available.

1. System deletes the task from the list and removes it, disappearing from the resource planners as well.
2. End of use case.

2b. Actor selects a task and indicates they want to see more details about it.

1. System displays more information about the selected task.
2. End of use case.

- **UC-16**: Create a daily reoccurring zoo task **| FR-06**

Actor: Schedule Maker

Prerequisites:

1. Actor is logged in and navigated to the task management tab.
2. System display's a task creation form

Main Success Scenario:

1. Actor inputs required information about the task and selects a task to be repetitive.
2. System display's an option to choose between daily and weekly task
3. Actor selects an option to generate task daily and sets the start date to this week's Monday
4. System confirms the creation, schedules a task for 7 days this week, starting from Monday and makes it visible for the resource planners as *available*.

Extensions:

1a. Actor specifies an animal from the selected species.

1. System specifies the task is addressed to a certain animal.
2. Return to MSS2.

3a. Actor selects a start date which is not Monday.

1. System informs the user that daily task's start date must be Monday
2. Return to MSS step 2.

UC-17: Create a weekly reoccurring zoo task **| FR-06**

Actor: Schedule Maker

Prerequisites:

1. Actor is logged in and navigated to the task management tab.
2. System display's a task creation form

Main Success Scenario:

1. Actor inputs required information about the task and selects a task to be repetitive.
2. System display's an option to choose between daily and weekly task
3. Actor selects an option to generate task weekly and sets the start date to any day of this week
4. System confirms the creation, schedules a task for one selected day and makes it visible for the resource planners as *available*, stores this task as weekly.

Extensions:

1a. Actor specifies an animal from the selected species.

3. System specifies the task is addressed to a certain animal.
4. Return to MSS2.

3a. Actor selects a start date which is not the day in this week.

3. System informs the user that daily task's start date must be any time this week
4. Return to MSS step 2.

UC-18: Schedule shifts and regenerate repetitive tasks | **FR-06**

Actor: Schedule Maker

Prerequisites:

1. Actor is logged in and navigated to the shift scheduling tab.
2. System display's a shift generation page

Main Success Scenario:

1. Actor selects a week for which shifts and tasks should be generated.
2. System display's an empty list of shifts, because they were not yet generated
3. Actor indicates that the schedule should be generated.
4. System confirms the creation, schedules shifts for every working employee that has more than 0-hour contracts and reschedules the tasks that were previously created as daily or weekly

Extensions:

1a. Actor selects a week which has already shifts created.

1. The system displays a filled list of shifts.
2. Return to MSS3.

3a. Actor indicates to generate a schedule, but it already exists for selected week

1. System informs the user that schedule cannot be created because it already exists.
2. End of use case

UC-19: Delete scheduled shifts and generated tasks | **FR-06**

Actor: Schedule Maker

Prerequisites:

1. Actor is logged in and navigated to the shift scheduling tab.
2. System display's a shift generation page

Main Success Scenario:

1. Actor selects a week for which shifts and tasks should be deleted.
2. System display's a filled list of shifts for the selected week
3. Actor indicates that the schedule should be deleted.
4. System confirms the deletion and removes all the shifts and tasks for a selected week

Extensions:

1a. Actor selects a week which has no schedule for that week

1. The system displays an empty list of shifts.
2. Return to MSS3.

3a. Actor indicates to delete a schedule, but it does not exist

3. No response from the system
4. End of use case

✔ **UC-20**: Assign Caretaker to a Zoo Task manually **| FR-07**

Actor: Resource Planner

Prerequisites:

1. The actor is logged in and navigated to the task assignment page.
2. Animal care tasks have been created by the schedule maker.

Main Success Scenario:

1. Actor selects an available task, selects one of the available caretakers and confirms the assignment.
2. System displays only the available caretakers for the specific task.
3. Actor selects a caretaker and confirms the assignment.
4. System confirms the assignment and makes it visible for both schedule maker and caretaker.

Extensions:

2a. Actor navigates to the overview subpage and indicates a period for which they want to see the tasks.

1. System shows the tasks for the selected period.
2. Actor confirms the action.
3. System removes the employee from the task and makes the update visible for both schedule maker and caretaker
4. End of use case.

✔ **UC-21**: Assign Caretakers to a Zoo Tasks automatically **| FR-07**

Actor: Resource Planner

Prerequisites:

1. The actor is logged in and navigated to the task assignment page.
2. Animal care tasks have been created by the schedule maker.

Main Success Scenario:

1. System displays all the future tasks that have not been assigned.
2. Actor indicates to assign tasks automatically
3. System confirms the assignment and assigns all the scheduled and not assigned tasks

Extensions:

3a. System could not assign all the tasks because of lack of caretakers working on that day. User is informed about unassigned tasks.

Web application

UC-1: View information about the Zoo | FR-08

Actor: Any user

Prerequisites:

1. Actor opened the website the system displays the landing page.

Main Success Scenario

1. Actor indicates they want to find out more about the zoo by navigating to "About us" page.
2. System redirects the user to the "About us" page, displaying all information about the zoo and its contents.

Extensions:

1a. Actor indicates they want to see the gallery of the existing animals by navigating to "Gallery" page.

1. System redirects the user to the "Gallery" page, displaying all images of the zoo and the animals.
2. End of use case.

UC-2: Tickets acquisition | FR-08

Actor: Any user

Prerequisites:

1. Actor opened the website the system displays the landing page.

Main Success Scenario

1. Actor indicates they want to order tickets by navigating to "Tickets" page.
2. System redirects the user to the "Tickets" page, displaying information about the prices and requesting the number of tickets and the date.
3. Actor provides the necessary information and submits the request.
4. System redirects the actor to a page where they can see and scan their tickets.

Extensions:

1a. Actor inputs invalid or incomplete data.

1. System displays a message that the credentials were incorrect.

2. Return to MSS 2.

UC-3: Login to personal account on the Web application **| FR-09**

Actor: Any employee

Prerequisites:

2. Actor opened the website and navigated to the login page. (Their account has already been created and stored)
3. System requests for login information.

Main Success Scenario

3. Actor enters their personal credentials (username and password) and confirms.
4. System validates the actor's credentials and logs them into their account.

Extensions:

1a. Actor enters incorrect credentials.

3. System displays a message that the credentials were incorrect.
4. Return to MSS 1.

UC-4: Change personal details **| FR-09**

Actor: Any employee

Prerequisites:

1. Actor is already logged in to the personal account.

Main Success Scenario

1. Actor navigates to their profile page and indicates they want to edit their personal information.
2. System displays actor's current data and requests for changes.
3. Actor provides the relevant changes and confirms the action.
4. System registers the action and returns the actor to their profile page, displaying the updated version.

Extensions:

3a. Actor inputs invalid or incomplete data.

1. System informs the actor that the data was incorrect or incomplete.
2. Return to MSS 2.

UC-5: Review assigned tasks

Actor: Caretaker

Prerequisites:

1. Actor is already logged in to the personal account.

Main Success Scenario

1. Actor navigates to the schedule tab indicating they want to see next week's schedule.
2. System displays all the tasks of today assigned to the caretaker with some most important details

Extensions

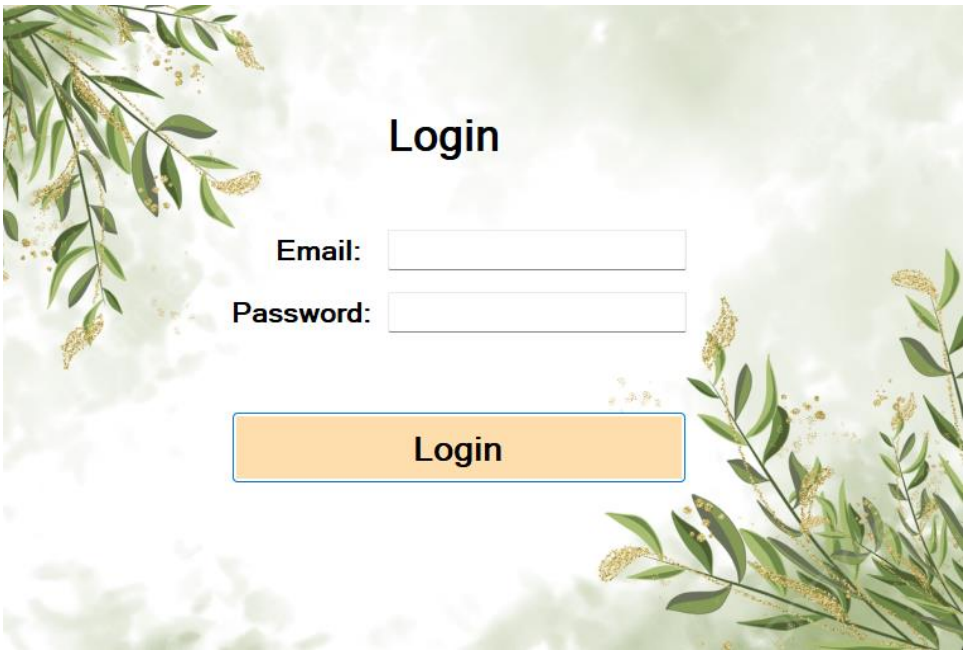
1a. The actor selects to review tomorrow's tasks.

1. System displays all the tasks for tomorrow assigned to the caretaker with some most important details

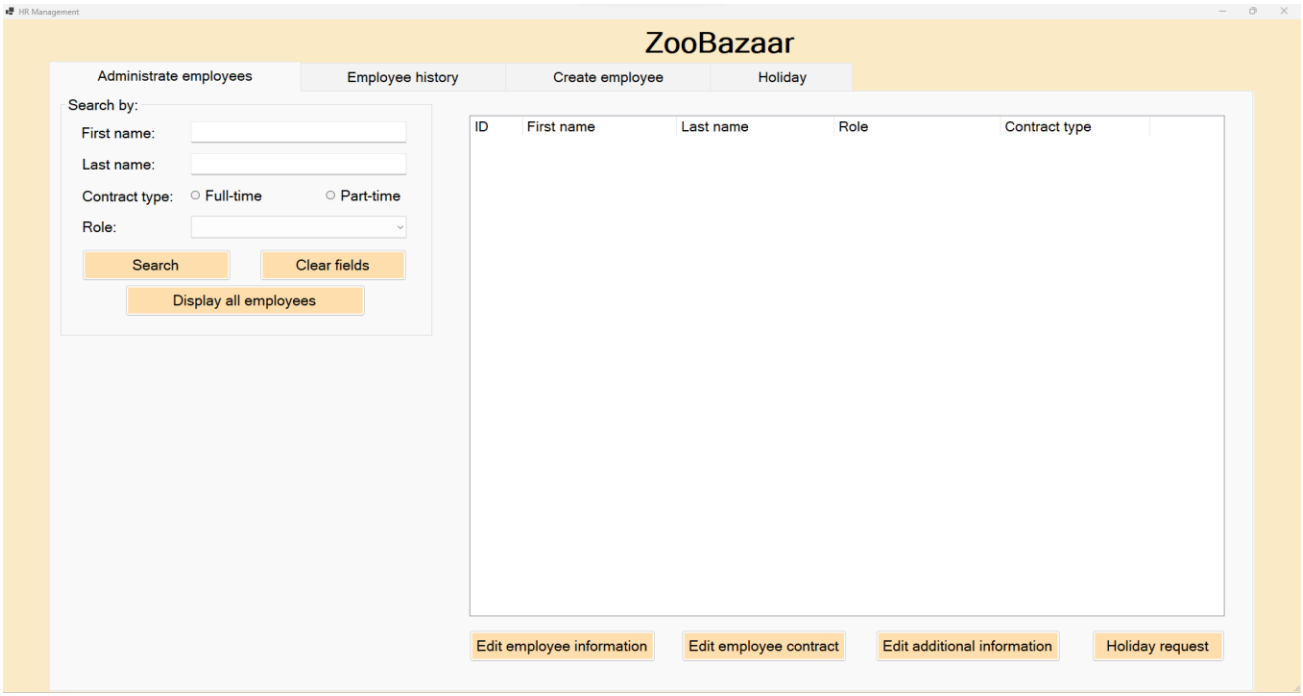
1b. The actor selects to review all tasks.

1. The system displays all the tasks assigned to the caretaker with some of the most important details.

Prototype



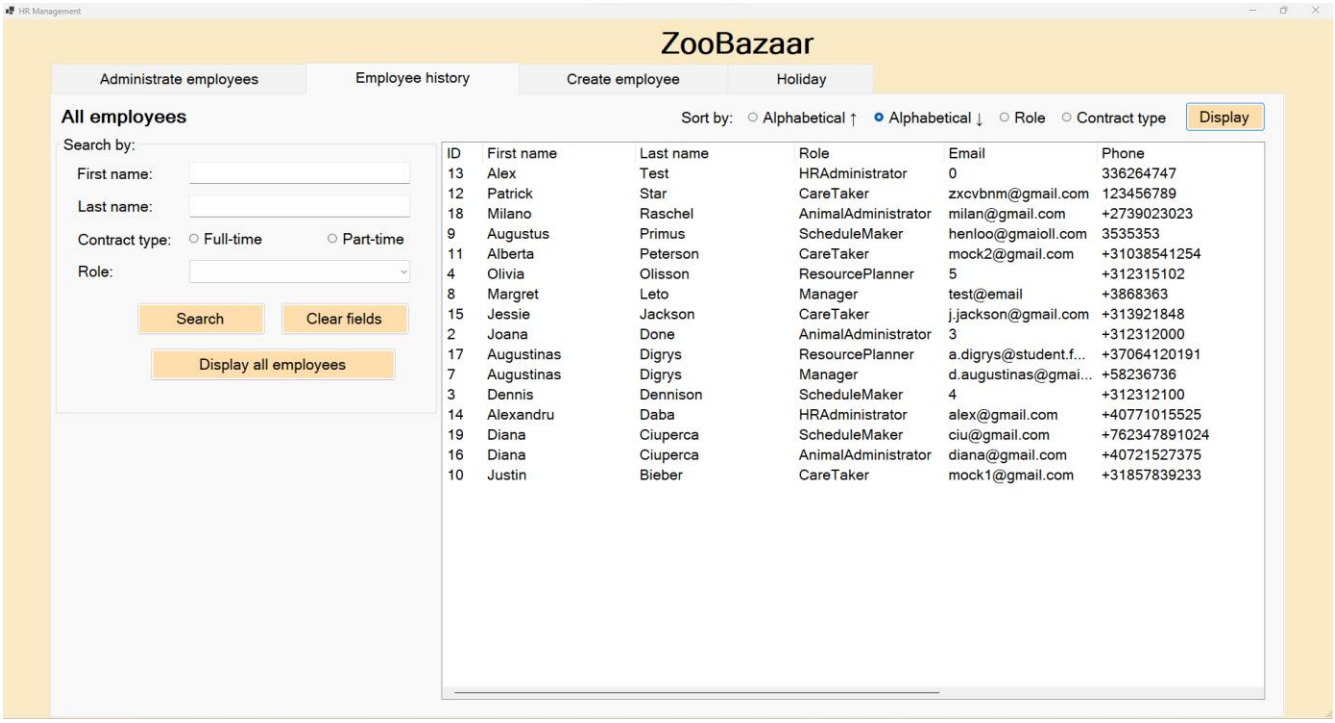
Page 1 – Login (The first window that appears when you open the application. User needs to enter their credentials in order to log into the application.)



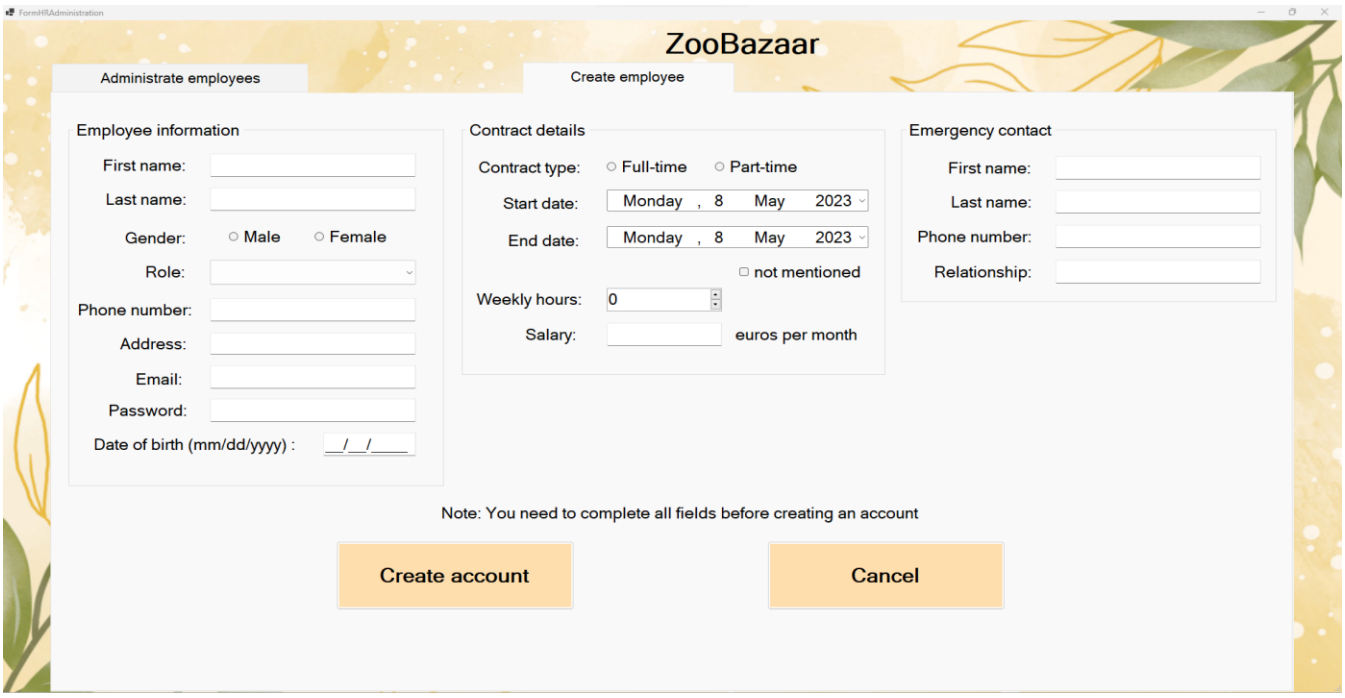
Page 2 - HR employee Main Page (If the user is an HR employee, this is the window that appears after they log in. They have a search function to look for specific employees and a different tab to see the entire history. They can either add another employee (which will create another account for them) or manage an already existing employee.). They can also see an employee's information.

Page 3 - HR employee can see and modify the emergency contact of an employee

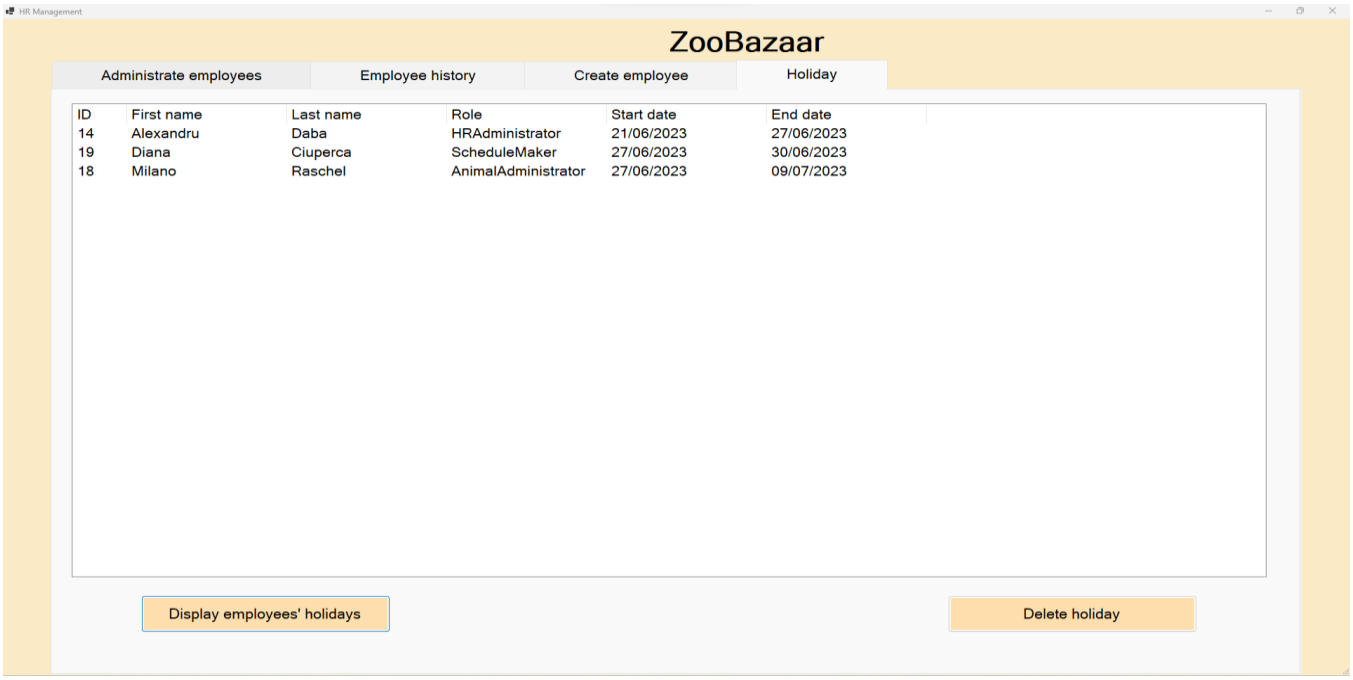
Page 4 – HR employee can see and modify the contract of an employee



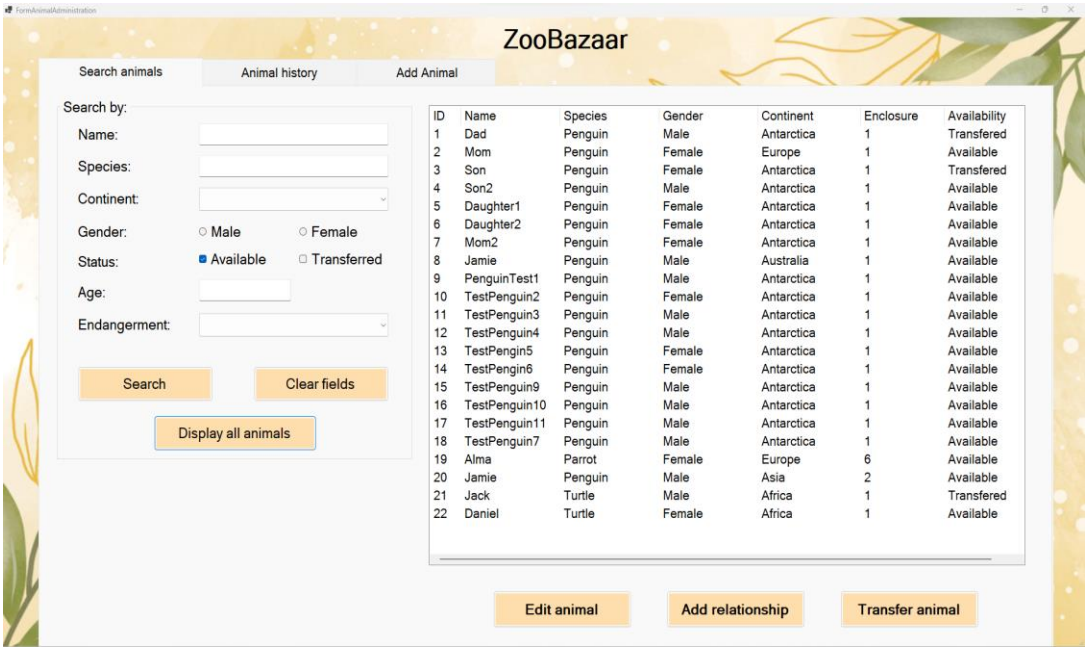
Page 5 - HR employee can see the history of all the current and past employees.



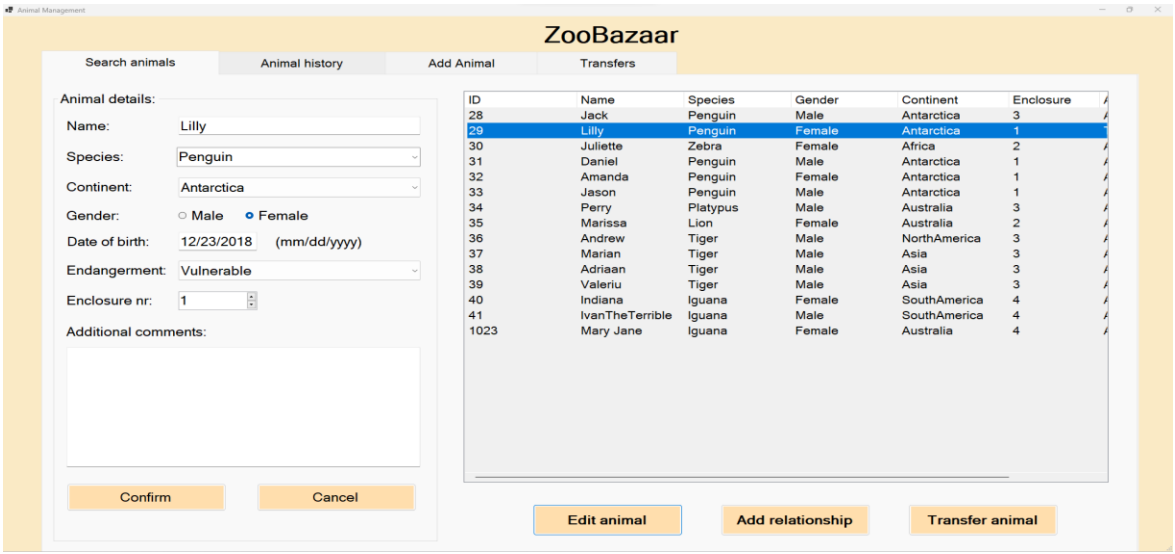
Page 6 - HR employee can create an account for employees.



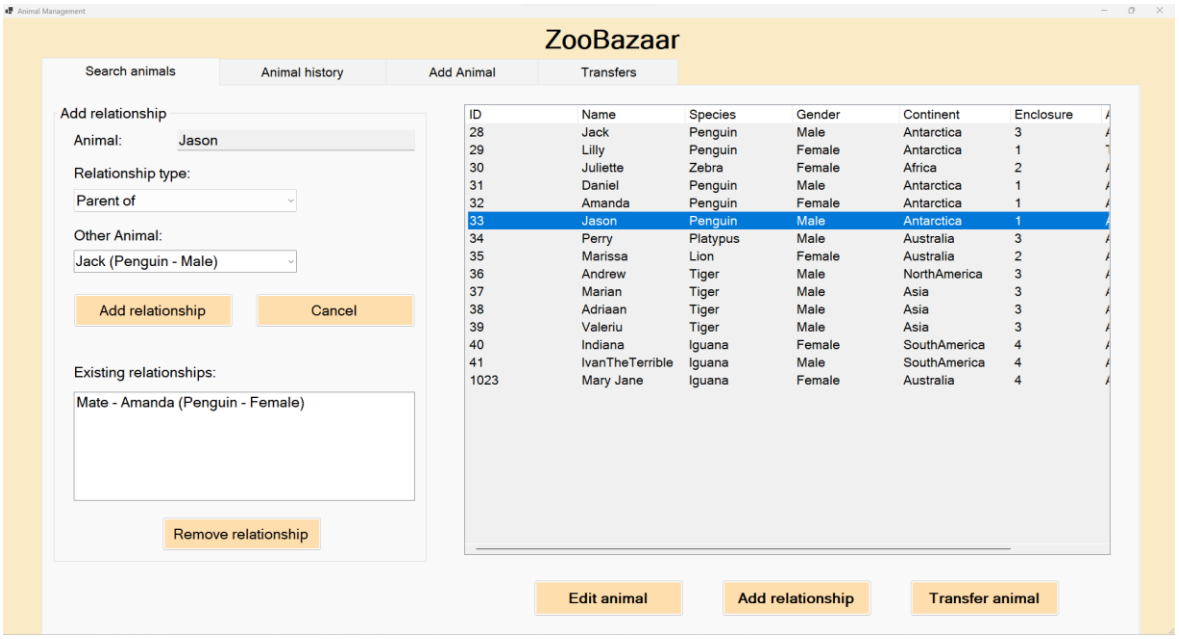
Page 7 – Holiday overview of employees



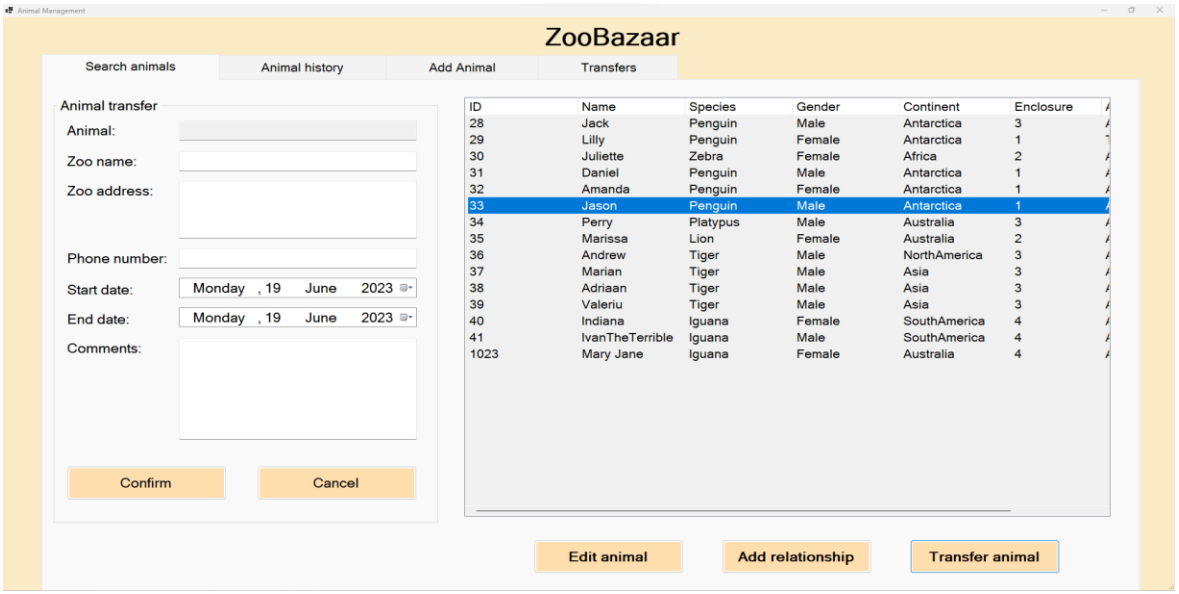
Page 8 – Animal Administrators can see and search for animals



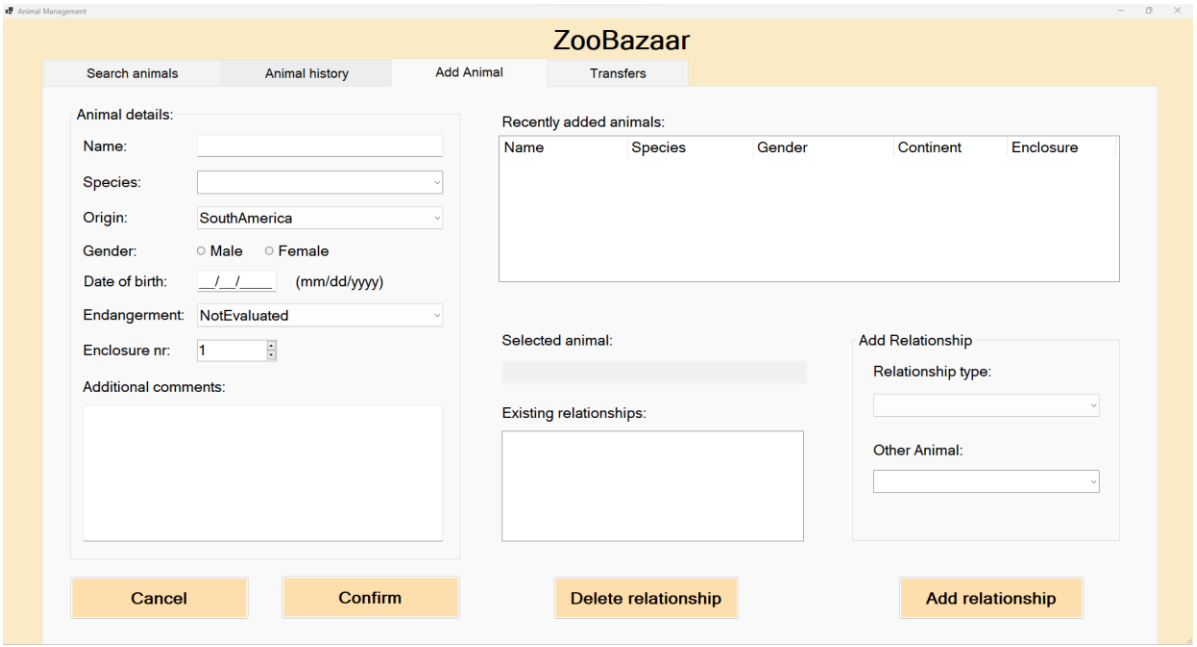
Page 9 – Animal Administrators can see and modify the details of animals



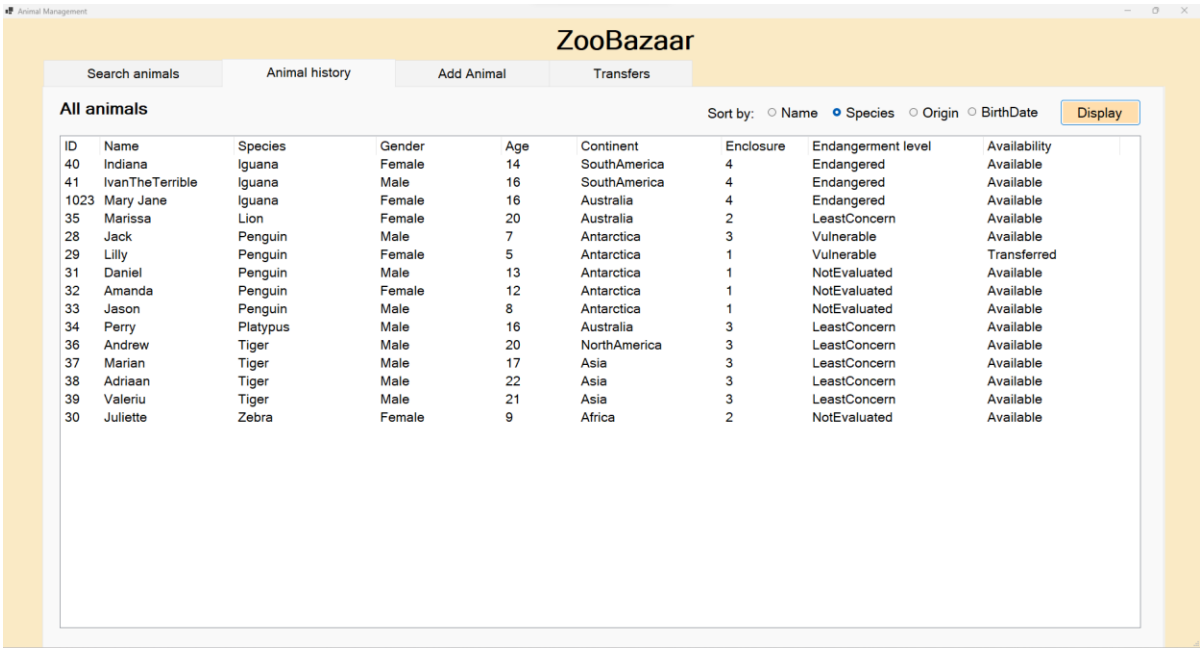
Page 10 – Animal Administrators can see and modify the relationships of animals



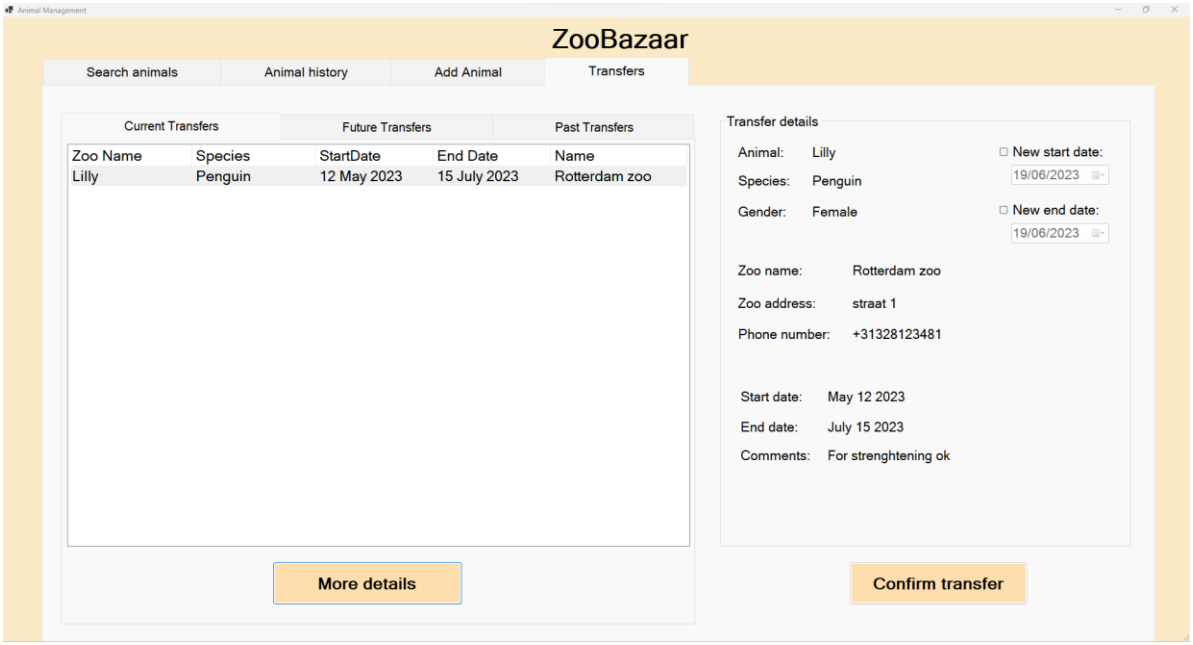
Page 11 – Animal Administrators can see and transfer animals



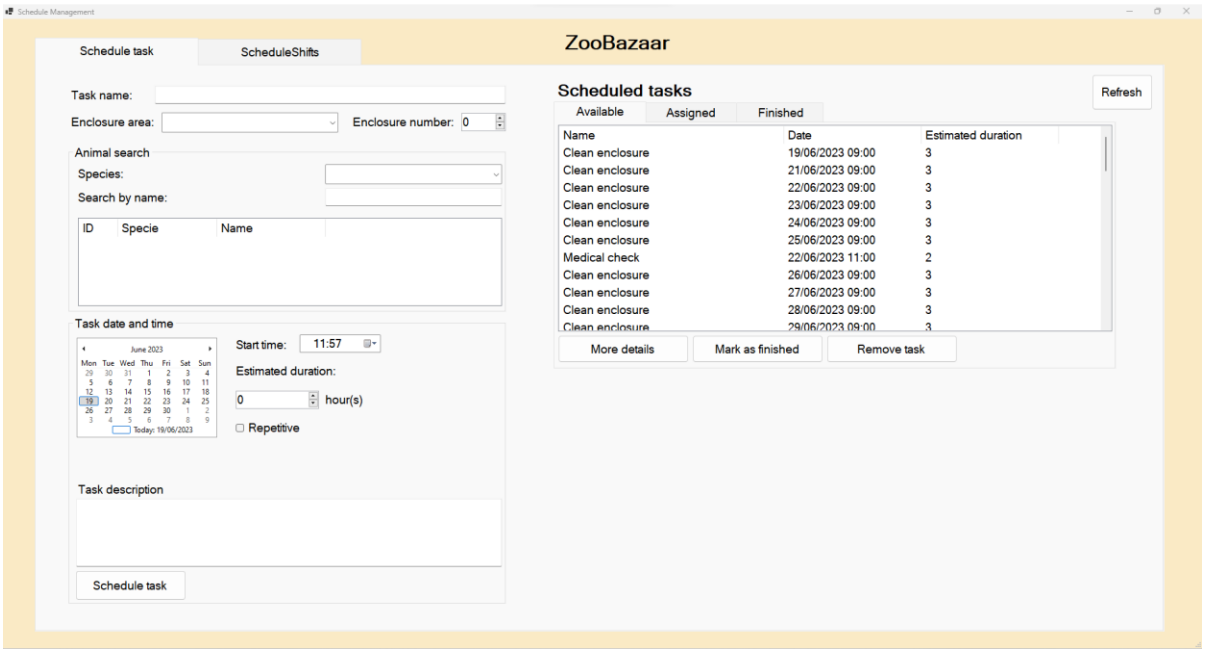
Page 12 – Animal Administrators can create animals and their relationships.



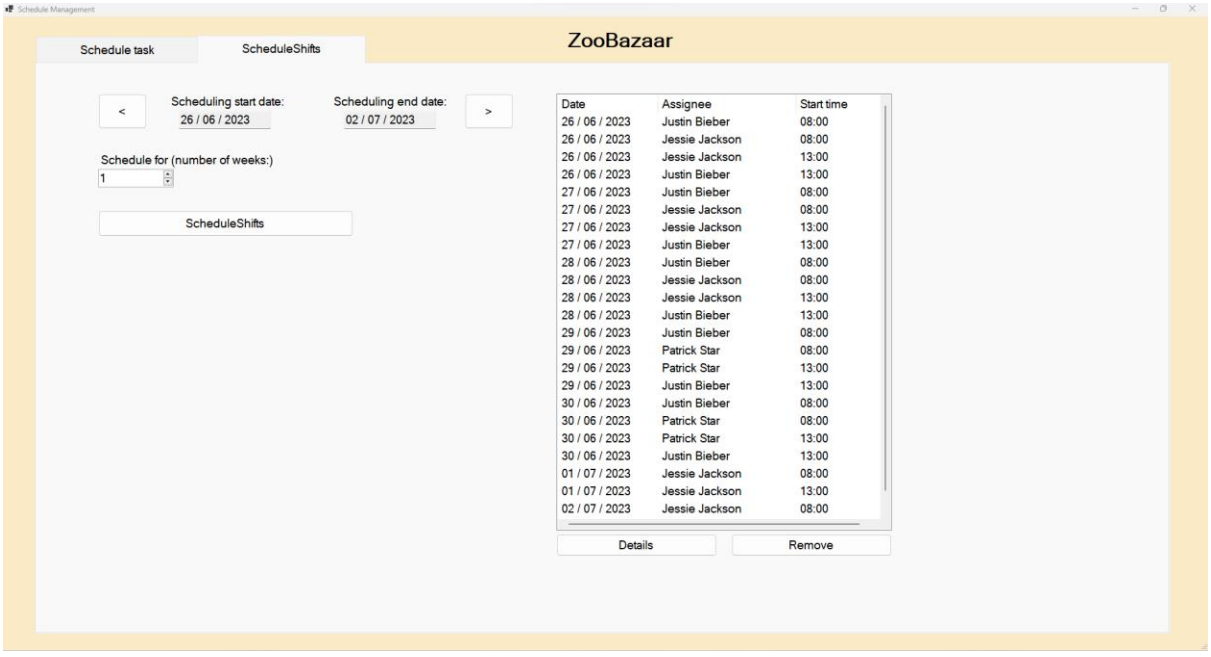
Page 13- Animal Administrators can view all current and past animals



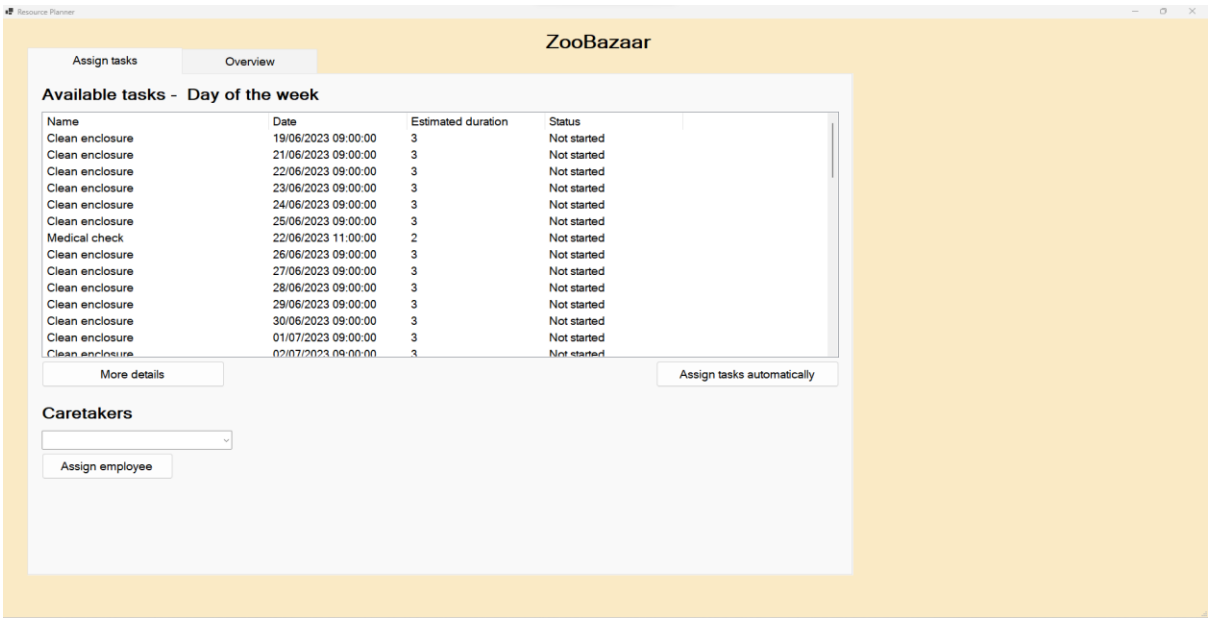
Page 14- Animal Administrators overview of transfers



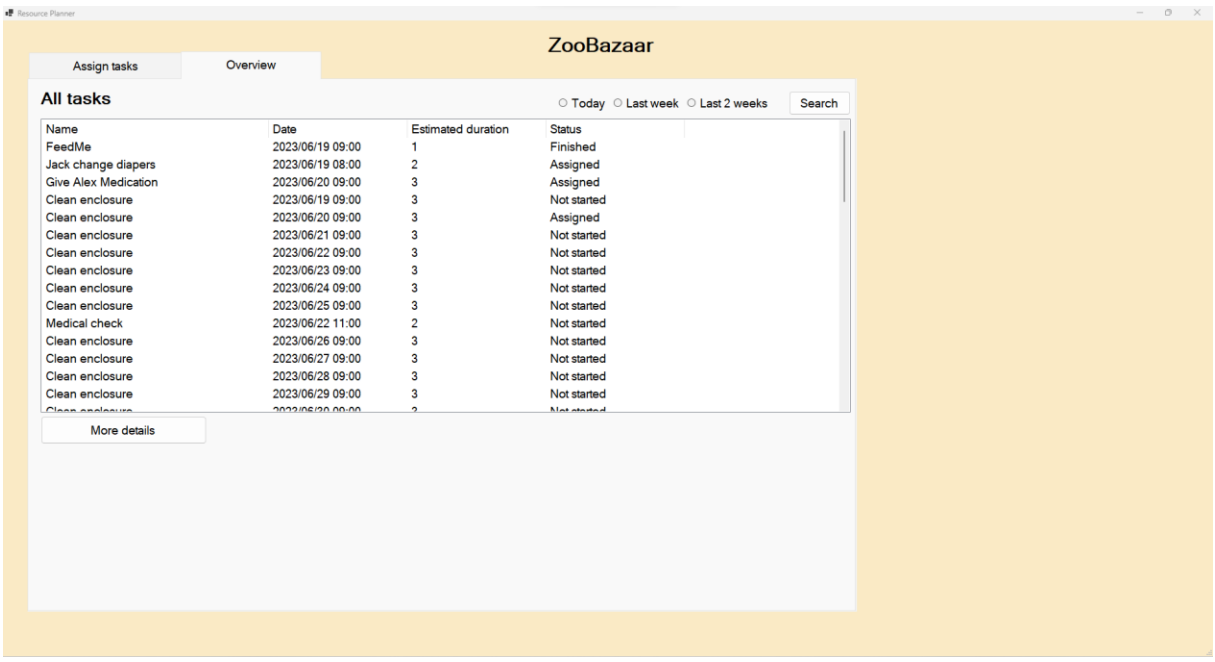
Page 14 – Schedule makers can see and modify different tasks.



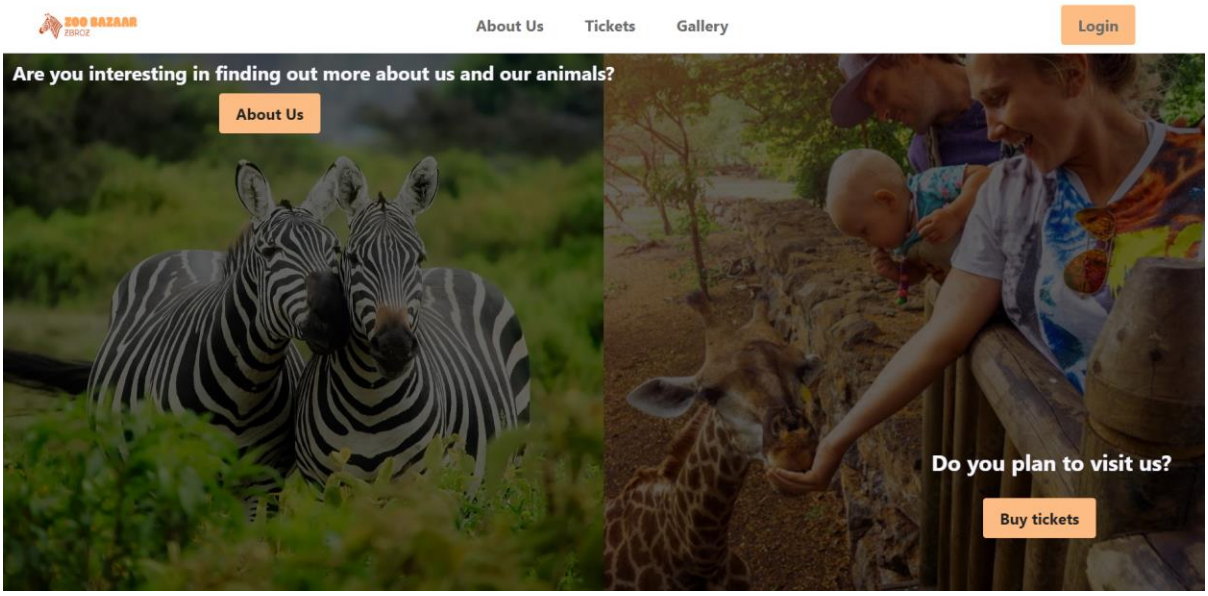
Page 15 – Schedule makers can create schedules for each week and also have an overview per week



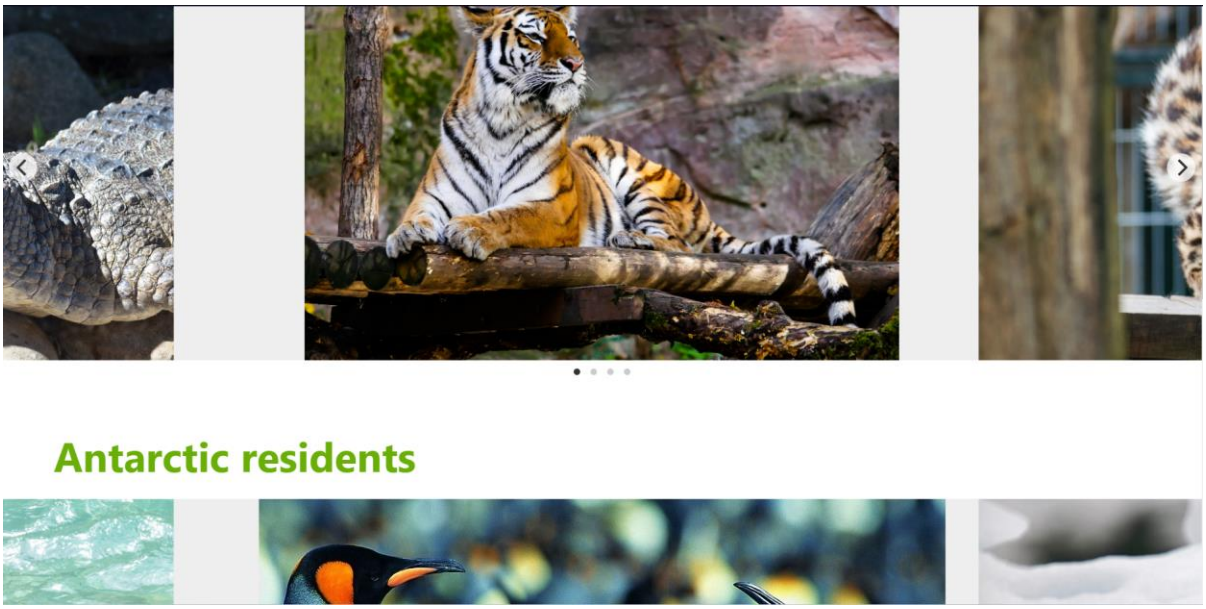
Page 16 – Resource planners can assign tasks



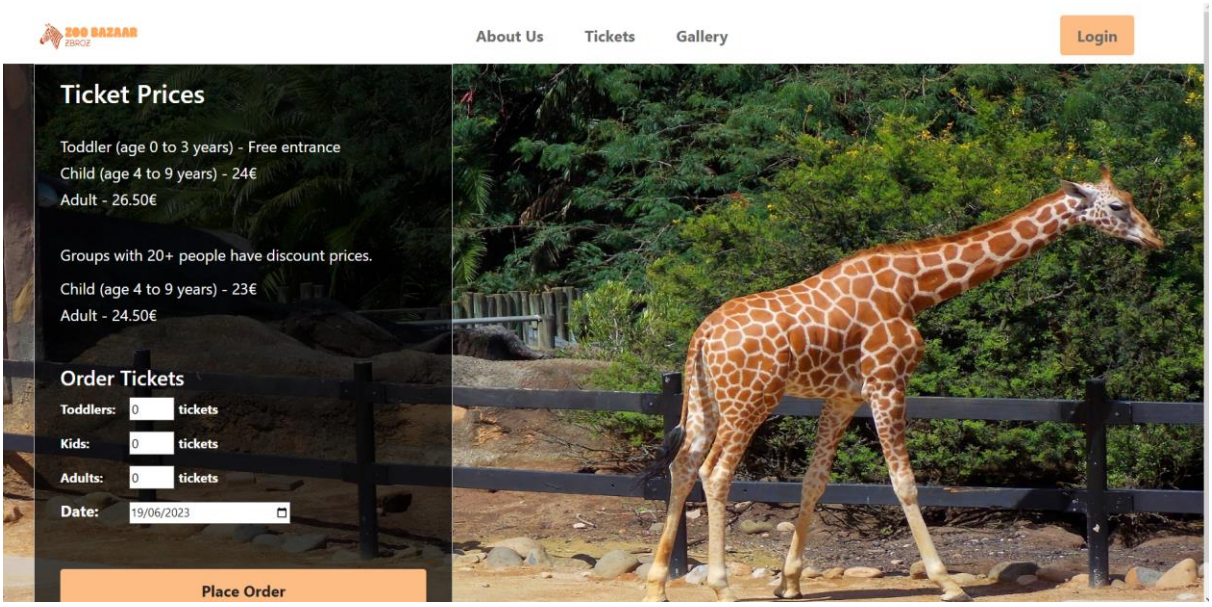
Page 17 – Resource planners can overview tasks



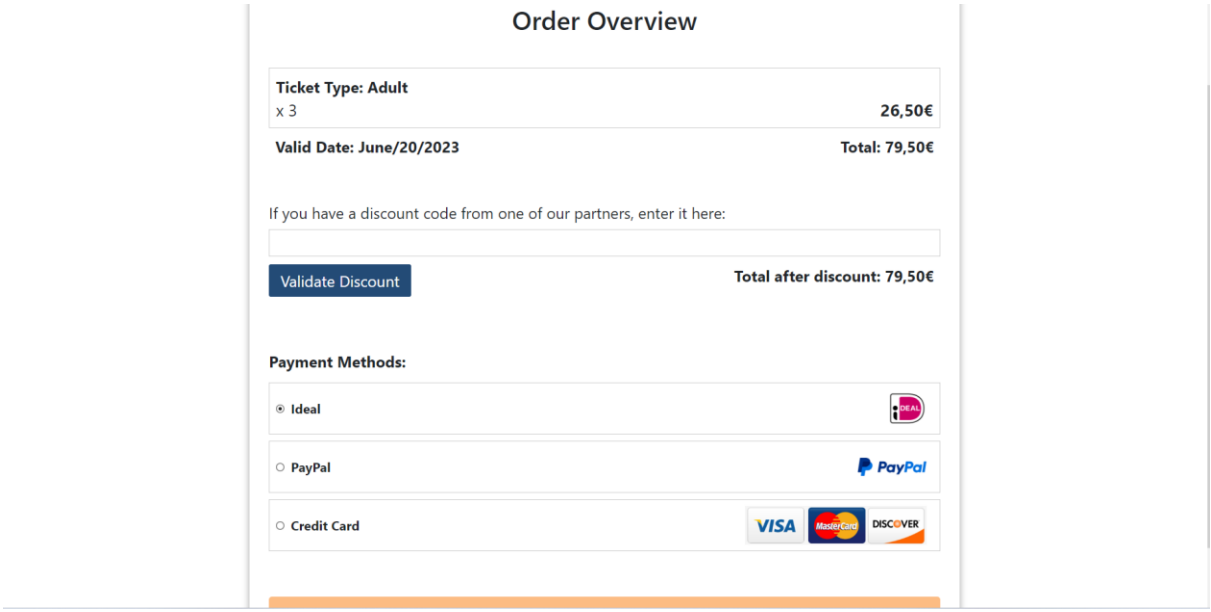
Page 18 – Visitors' landing page



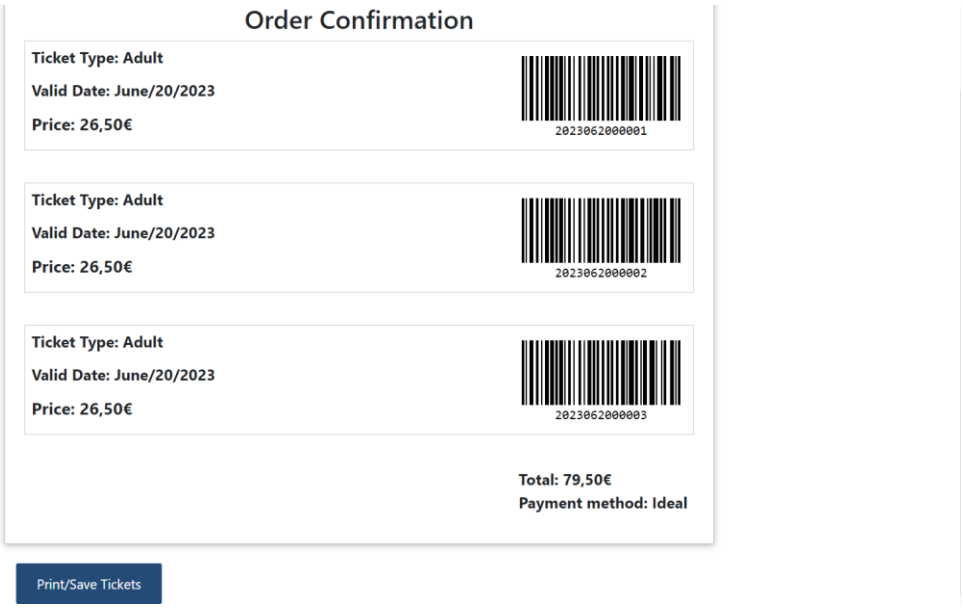
Page 19 – Visitors can view our gallery



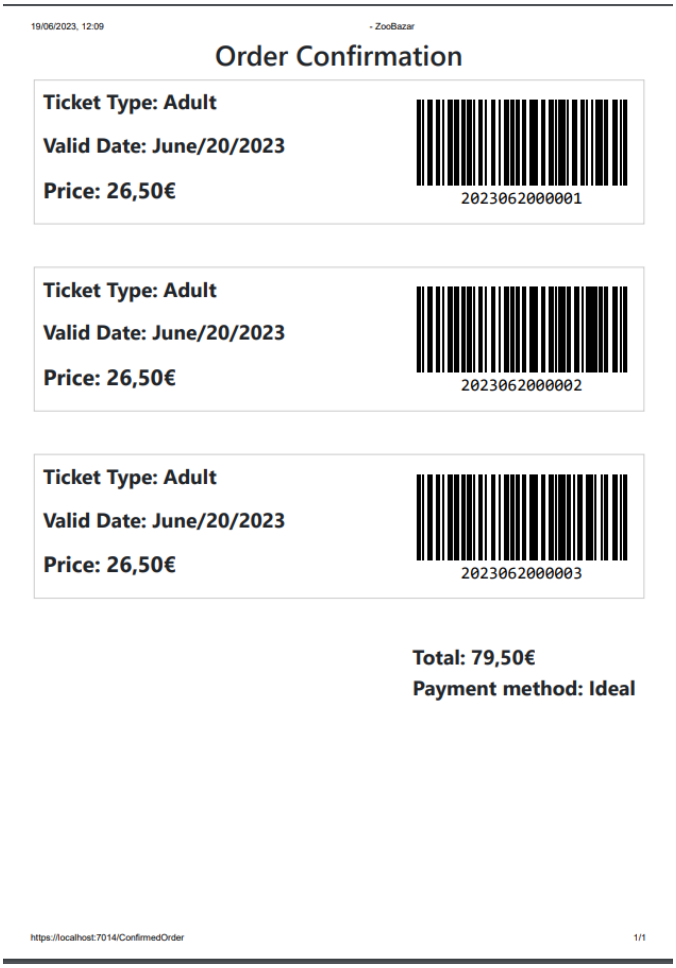
Page 20 – Buying tickets page



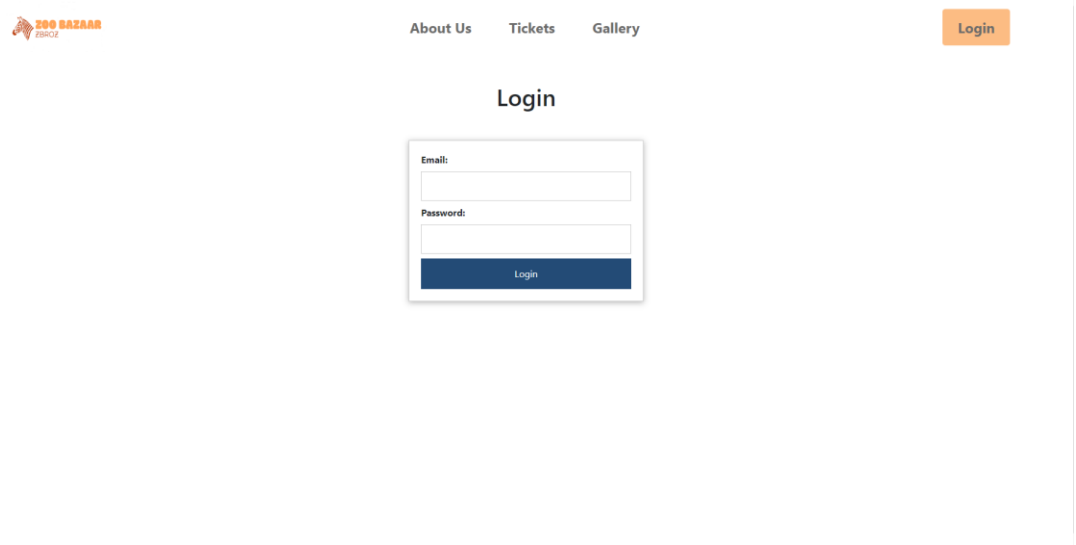
Page 21 – Payment confirmation page



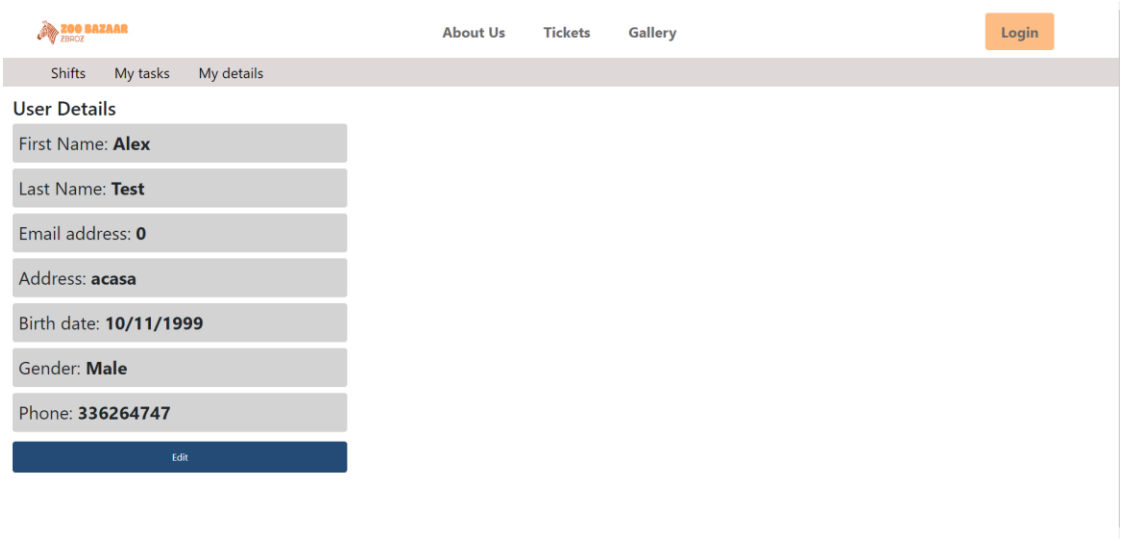
Page 22- Visitor's tickets after a successful purchase



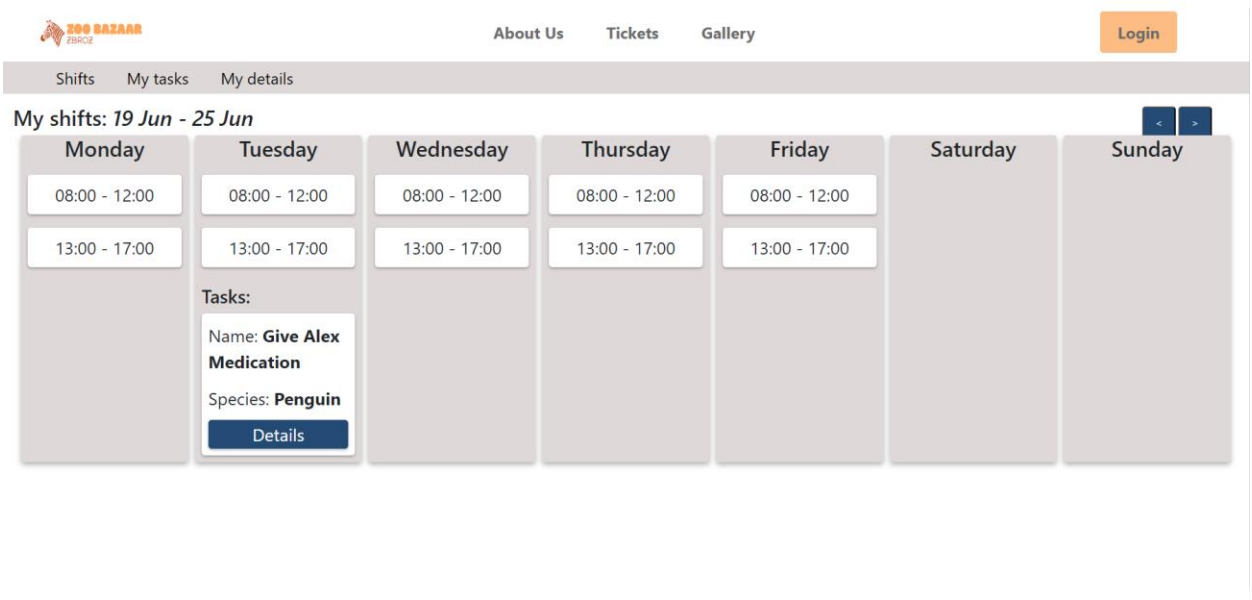
(Downloaded tickets view)



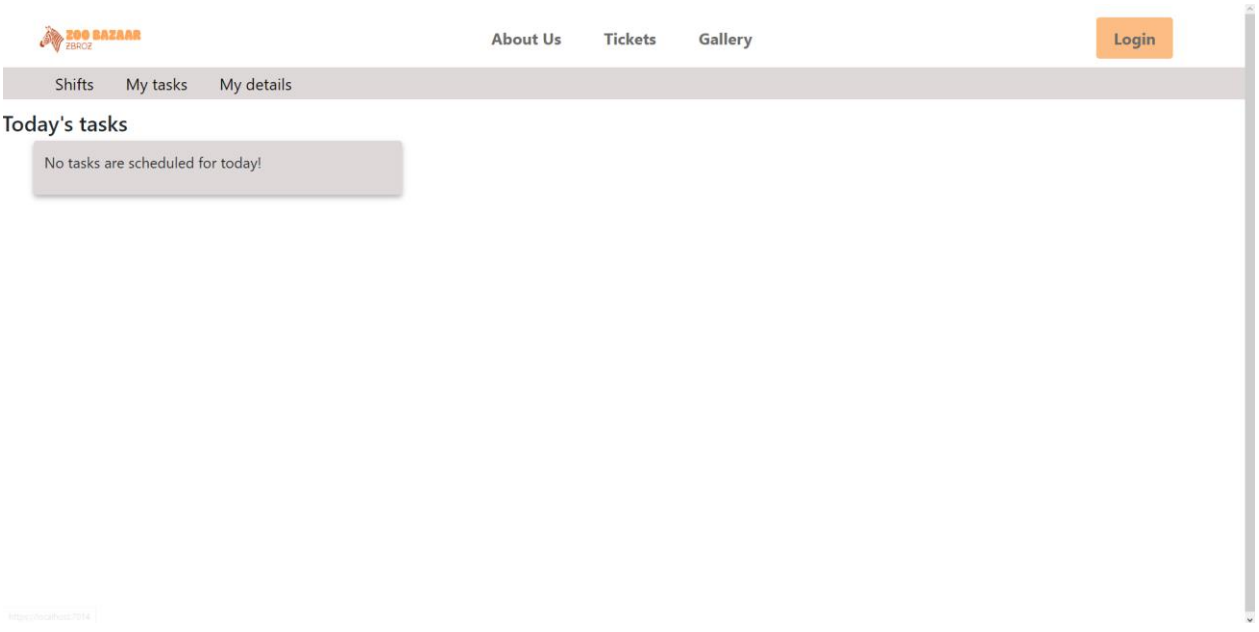
Page 23 – Caretaker login



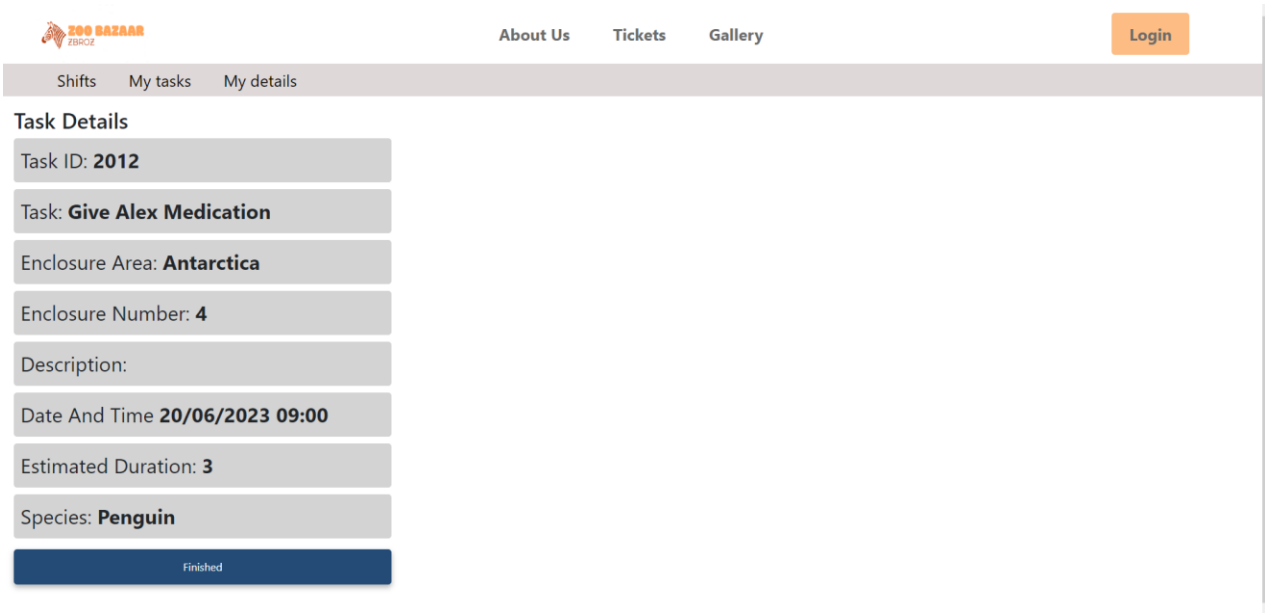
Page 24 - Caretaker's details page



Page 25 - Caretaker's weekly shift overview



Page 26 - Caretaker's tasks for today



Page 27 - Task's details and confirmation