Zoo Bazaar

URS

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1. Agreements with clients

Our team has been given an exciting challenge: to create a Windows Form application for a zoo that will manage both employee information and animal care. We have been tasked with using C# as the primary programming language, and ensuring that the application can be used both on a website and Windows Form application. Additionally, we will be working with a SQL database to store and manage the data for both employees and animals.

Over the next six weeks, we will work collaboratively to design and develop the application, ensuring that it meets all of the requirements set out for us. We will need to create user-friendly interfaces for both the employee and animal management components, as well as ensuring that the application is secure and reliable. Ultimately, our goal is to create a high-quality, functional application that will enable the zoo to effectively manage its staff and provide the best possible care for its animals.

We also need to keep in mind that the app should be easy to extend and recreate, so we need to follow good programming practices, document our choices, and use appropriate design patterns. By doing this, we can ensure that the app can handle any changes that may arise in the future.

Our application has two core functionalities: employee management and animal care. To support employee management, we require an administration page that enables the administrator to manage the employee database. This page should provide the administrator with the ability to modify existing employee information, create new employee profiles, and remove outdated employee data.

For animal care, we need to develop a comprehensive system that allows us to track important information about each animal, including its name, location, health status, category, dietary needs, social relationships, and history. This system should also be accessible to the administrator, who can use it to manage the animals.

2. Functional Requirements

- FR-01: User Management
  - FR-01-A: User should be able to login to the system.
  - FR-01-B: User should be able to logout to the system.
- FR-02: Animal management
  - FR-02-A: Animal administrator should be able to Create new animal.
  - FR-02-B: Animal administrator should be able to Update an existing animal.
  - FR-02-C: Animal administrator should be able to Remove an animal.
  - FR-02-D: Animal administrator should be able to Search for an animal.
- FR-03: Employee management
  - FR-03-A: HR should be able to add an employee to the system.
  - FR-03-B: HR should be able to update information of existing employee.
  - FR-03-C: HR should be able to search employee.
  - FR-03-D: HR should be able to remove existing employee.
- FR-04: Security
  - FR-04: Storing data in SQL provides increased privacy and security, as not everyone has unfettered access to the data.

- FR-05: Animal system
    - FR-05-A: System should be easy to navigate.
    - FR-05-B: System should provide a list of all the species.
    - FR-05-C: System should have a detailed page for each animal.
- FR-06: Employee system
    - FR-06-A: System should be easy to navigate.
    - FR-06-B: System should be only accessible for human resources.
    - FR-06-C: System should provide a list of all the employees.
    - FR-06-D: System should have a detailed page of each Employee.
- FR-07: Employee Schedule
    - FR-07-A: System should have an Schedule for employees.
    - FR-07-B: Schedule page should be editable by the HR.
    - FR-07-C: Schedule should make it possible to see multiple details.
- FR-08: animals schedule
    - FR-08-A: System should have an schedule for animals.
    - FR-08-B: Schedule should provide information of the animals of that day.
- FR-09: Notes
    - FR-09-A: User should be able to view notes of specific animal.
    - FR-09-C: User should be able to modify notes.
- FR-10: Ticketing and admission management
    - FR-10-A: The system should be able to manage ticket sales and admissions for the zoo, including online and in-person purchases.
    - FR-10-B: The system should be able to track visitor numbers and generate reports on attendance and revenue.
- FR-11: Education and outreach Management
    - FR-11-A: The system should be able to manage and schedule educational programs and outreach events for the zoo, including school visits, public talks, and community outreach activities.
    - FR-11-B: The system should be able to track attendance and generate reports on program effectiveness and community engagement.
    - FR-11-C: The system should be able to manage and track the distribution of educational materials, such as brochures and flyers, to visitors and community partners.

Must	Should	Could	Won't
FR-01, FR-02, FR-03, FR-04, FR-05, FR-06,	FR-07, FR-08, FR-09,	FR-10	FR-11

2. Use Cases

UC-01– FR-01-A: User Management
Actor: User
Description: Login to the system
Pre-condition: User starts up program.
Main Success Scenario:

1. Actor inserts account credentials and logs in.
2. System notifies the actor that the login is successful

Extensions:

2a. Actor inputs the wrong credentials

1. System notifies the customer that the credentials are incorrect
2. Return to MSS step 1

UC-02 – FR-01-B: User Management
Actor: User
Description: Logout of the system.
Pre-condition: User is logged in.
Main Success Scenario:

1. Actor navigates and selects the logout logo.
2. System notifies the actor that they are logged out successfully

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UC-03 – FR-02-A: Animal management
Actor: Animal resources
Description: Add an animal to the system
Pre-condition: Logged in as an animal resource,
Animal administrator is in the Add Animal tab.
Main Success Scenario:

1. Actor adds new animal.
2. System displays the animal creation tab.
3. Actor fills in the required information about the animal and saves.
4. System validates the form data and the system updates the list of animals.
5. Actor gets notifies that the animal has been added to the list successfully.

Extensions:

3a. Actor has not filled out all required fields

1. System displays an error message indicating the required fields that have not been filled.
2. Actor fills in the missing information.
3. Return to MSS step 2.

3b. Actor enters invalid data in one or more fields

1. System displays an error message indicating the invalid data entered.
2. Actor corrects the invalid data.
3. Return to MSS step 2.

UC-04 – FR-02-B : Animal management
Actor: Animal resources
Description: Update an existing animal
Pre-condition: logged in as an animal resources,
Actor is in the overview and has selected an animal.
Main Success Scenario:

1. Actor selects an animal from the list of animals.
2. System displays option for detail page.
3. Actor provides new data and saves.
4. System notifies the actor that the animal has been updated.

Extensions:

5a. Actor has not filled out all fields

1. System notifies the actor to fill in all fields
2. Return to MSS step 5

UC-05 – FR-02-C: Animal management
Actor: Animal resources
Description: Remove an animal
Pre-condition: Logged in as animal resources,
Animal administrator is in the overview tab and has selected an animal.
Main Success Scenario:

1. Actor removes animal.
2. Systems prompt actor with message "Confirm removal?"
3. Actor confirms removal.
4. System notifies that the animal status has been updated and the animal received a new status.

UC-06 – FR-02-D: Animal management
Actor: Animal resources
Description: Search for an animal
Pre-condition: Logged in as an animal resources.
Administrator is in the animal management section of the system.
Main Success Scenario:

1. Actor selects the search box and inserts search data.
2. System displays the search results.

Extensions:

2a. search data is not found.

1. Actor fills in search data.
2. No items match the searched query.
3. System notifies the actor that there are no results.
4. Return to MSS step 1.

UC-07 – FR-02-E: Animal management
Actor: Animal resources
Description: View animal details
Pre-condition: Logged in as an animal resources,
Actor is in the overview tab.

Main Success Scenario:

1. Actor selects an animal from the list of animals.

2. System displays option for detail page.
3. Actor clicks the detail page option.
4. System redirects actor to animal information page.

UC-08 – FR-03-A: Employee management
Actor: Human resources
Description: Add an employee to the system
Pre-condition: Logged in as a human resources,
Administrator navigates to the Add Employee tab.
Main Success Scenario:

1. Actor selects add new employee.
2. Actor provides data of the employee and saves.
3. System notifies the actor that a new employee has been created

Extensions:

3a. Actor has not filled out all fields

1. System notifies the actor to fill in all fields
2. Return to MSS step 3

UC-09 – FR-03-B: Employee management
Actor: Human resources
Description: Update existing employee
Pre-condition: Logged in as a Human resources,
Administrator is in the employee management section of the system.
Main Success Scenario:

1. Actor selects an employee.
2. System displays option for detail page.
3. System redirects actor to employee information page.
4. Actor provides new data and saves.
5. System notifies the actor that the employee has been updated.

Extensions:

4a. Actor provides invalid information

1. System notifies the acter to fill in valid information.
2. Return to MSS step 4.

UC-10 – FR-03-C: Employee management
Actor: Human resources
Description: Search for an employee
Pre-condition: Logged in as a Human resources,
Actor is in the employee management section of the system.
Main Success Scenario:

1. Actor selects the search box
2. Actor inserts search data and selects search button
3. System displays the search results

Extensions:

2a. search data is not found.

1. Actor fills in search query.

2. No items match the searched query.
3. System notifies the actor that there are no results.
4. Return to MSS step 1.

UC-11 – FR-05: Animal management system
Actor: Animal resources
Description: View details of animal.
Pre-condition: Logged in as an animal resources,
Actor is in the overview.
Main Success Scenario:

1. Actor selects specific animal.
2. System displays details of the specific animal.

UC-12 – FR-06: Employee management system
Actor: human resources
Description: View details of employee
Pre-condition: Logged in as human resources,
Actor is in the overview.
Main Success Scenario:

1. Actor selects specific employee.
2. System displays all information of that employee.

UC-13 – : Care Taker
Actor: care taker
Description: View details of animal
Pre-condition: Logged in as care taker,
Actor is in the overview.
Main Success Scenario:

1. Actor selects specific animal.
2. System displays all information of that animal.

UC-14 – FR-09-A: Notes
Actor: Animal resources/CareTaker
Description: View Notes of animal
Pre-condition: Logged in as an care taker,
Actor is on the overview.
Main Success Scenario:

1. Select an animal.
2. System displays all detail information of animal including notes.

UC-15– FR-09-B: Notes

Actor: Animal resources/Care Taker
Description: Modifying note.
Pre-condition: Logged in as a care taker,
Actor is on the overview.
Main Success Scenario:

1. System displays all detail information of animal including notes.
2. Actor fills in new note information and saves changes.
3. System notifies user that the changes are successfully saved.