‘t Sloepke B.V.

User Requirements Specifications

Ismail Chbiki

Synthesis Assignment

SUPERVISED BY: Pr. Marielle fransen

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## Non-Functional Requirements

NFR-01: Maintainable and extendable

* The application will be open to new functionalities to be added, or to easily update the existing functionalities without influencing the application’s behavior or flow and without time consumption.

NFR-02: Bug free system

* The application will handle potential users’ errors and unexpected behaviors.
* Unit testing will be implemented and kept up to date to the application’s development through time, to track and handle errors.

NFR-03: Secure Application

* Application’s users (whether admins or clients) won’t be able to access saved passwords (hashing and salting will be implemented for passwords), and also different access levels will be implemented to keep application’s users’ sensitive data safe.

NFR-04: Environment and availability

* The application (web/desktop apps) will be available to users online 24/7

NFR-05: Usability

* The application is going to be user-friendly and easy to use without extra time for users to get acquainted with the system.

## Functional Requirements (Desktop App)

ID: FR A-01

Title: Add new boat

Description:

Employee should be able to add new boats to the company’s inventory

Constraint: Employee must be admin

ID: FR A-02

Title: Add new item

Description:

Employee should be able to add new items to the company’s inventory

Constraint: Employee must be admin

ID: FR A-03

Title: update boats

Description:

Employee should be able to update the company’s inventory

Constraint: Employee must be admin

ID: FR A-04

Title: update Items

Description:

Employee should be able to update the company’s inventory

Constraint: Employee must be admin

ID: FR A-05

Title: Delete boats

Description:

Employee should be able to delete boats from the company’s inventory

Constraint: Employee must be admin

ID: FR A-06

Title: Delete Items

Description:

Employee should be able to delete items from the company’s inventory

Constraint: Employee must be admin

ID: FR A-07

Title: View Boats

Description:

Employee should be able to View the company’s inventory for boats

Constraint: Employee must be admin

ID: FR A-08

Title: View items

Description:

Employee should be able to View the company’s inventory for items

Constraint: Employee must be admin

## Use Cases (Desktop App)

ID: FR A-01 – Add new boat

Pre-condition:

* The employee is an admin
* The employee is logged in

Actor: Employee

Main Success Scenario:

1. Employee is in the Dashboard form and clicks on Inventory
2. System displays inventory form
3. Employee selects to add new
4. System invites the employee to select between two options (boat/item)
5. Employee selects boat and confirms
6. System displays a form that requests the employee to fill in boat data
7. Employee fills in the new valid data for the new boat and confirms
8. System displays a message of successful new boat addition

Extensions:

2. In case of invalid data

1. System displays a guiding message of the reason of failure and invites employee for correction
2. Employee provides valid data
3. Go back to use case 1

ID: FR A-02 – Add new item

Pre-condition:

* The employee is an admin
* The employee is logged in

Actor: Employee

Main Success Scenario:

1. Employee selects to add new
2. System invites the employee to select between two options (boat/item)
3. Employee selects item and confirms
4. System displays a form that requests the employee to fill in item data
5. Employee fills in the new valid data for the new item and confirms
6. System displays a message of successful new item addition

Extensions:

2. In case of invalid data

1. System displays a guiding message of the reason of failure and invites employee for correction
2. Employee provides valid data
3. Go back to use case 1

ID: FR A-03 – update boat

Pre-condition:

* The employee is logged in
* The employee is an admin

Actor: Employee

Main Success Scenario:

1. Employee presses to manage inventory
2. System displays inventory
3. Employees selects between two options (boats/ items) of what needed to be updated
4. System displays a list of boats for the selected option
5. Employee selects a boat and presses “Update item”
6. System displays the boat’s information
7. Employee provides new data for the selected boat and confirms
8. System displays a message of successful boat update
9. Employee goes back

Extensions:

8. In case of invalid data

1. System displays a guiding message of the reason of failure and invites employee for correction
2. Employee provides valid data and confirms
3. Go back to use case 8

ID: FR A-04 – update Item

Pre-condition:

* The employee is logged in
* The employee is an admin

Actor: Employee

Main Success Scenario:

1. Employee presses to manage inventory
2. System displays items inventory
3. Employees selects between two options (boats/ items) of what needed to be updated
4. System displays a list of items for the selected option
5. Employee selects an item and presses “Update item”
6. System displays the item’s information
7. Employee provides new data for the selected item and confirms
8. System displays a message of successful items update
9. Employee goes back

Extensions:

8. In case of invalid data

1. System displays a guiding message of the reason of failure and invites employee for correction
2. Employee provides valid data and confirms
3. Go back to use case 8

ID: FR A-05 – delete boat

Pre-condition:

* The employee is logged in
* The employee is an admin

Actor: Employee

Main Success Scenario:

1. Employee presses to manage inventory
2. System displays inventory
3. Employees selects between two options (boats/ items) of what needed to be updated
4. System displays a list of boats for the selected option
5. Employee selects a boat and presses “Delete boat”
6. System displays a new form requesting the employee to confirm action
7. Employee confirms
8. System displays a message of successful boat deletion

ID: FR A-06 – delete Item

Pre-condition:

* The employee is logged in
* The employee is an admin

Actor: Employee

Main Success Scenario:

1. Employee presses to manage inventory
2. System displays inventory
3. Employees selects between two options (boats/ items) of what needed to be updated
4. System displays a list of items for the selected option
5. Employee selects an item and presses “Delete item”
6. System displays a new form requesting the employee to confirm action
7. Employee confirms
8. System displays a message of successful item deletion

## Functional Requirements (Web App)

ID: FR B-01

Title: Placing a Reservation

Description:

Clients should be able to place a reservation by selecting the preferred options and providing their contact detail

ID: FR B-02

Title: Quote Access

Description:

Clients should be able to access their created quote containing their chosen preferences and contact details (by providing the quote unique ID)

Constraint: Quote should exist

ID: FR B-03

Title: Quote update

Description:

Clients should be able to update the quote by providing their new preferences and\or contact details (by providing the quote unique ID)

Constraint: at least 7 days before rental day

ID: FR B-04

Title: Quote deletion

Description:

Clients should be able to delete/cancels the quote by providing the quote unique ID

Constraint: at least 7 days before rental day

ID: FR B-05

Title: deposit an amount for the boat rental options

Description:

On the renting day, client must deposit an amount of money for the boat rental options mentioned in the provided appendix

Constraint: reservation is made and quote is created

ID: FR B-06

Title: Final payment calculation

Description:

The final payment is calculated and terminated

## Use Cases (Web App)

ID: FR B-01 – Placing a Reservation

Pre-condition: None

Actor: Client

Main Success Scenario:

1. Client opens the application
2. Dashboard is shown
3. Client requests to view rental information
4. System displays boats and items’ rental information
5. Client presses make a reservation
6. A new form opens and client selects their preferred options and confirms
7. System requests for contact details
8. Client fills in their contact details
9. System displays full details (contact details and selected options) and requests for client’s signature
10. Client provides signature (via a checkbox) and confirms
11. System confirms the reservation was successful, stores it and display a summary copy

Extensions:

6.

1. Client cancels
2. End of use case

6.

1. Client provides invalid data
2. System shows guiding message to fill in the valid data
3. Client provides valid data and confirm
4. Go back to use case 6

8.

1. Client cancels
2. End of use case

10.

1. Client cancels
2. End of use case

ID: FR B-02 – Quote Access

Pre-condition: Quote should exist

Actor: Client

Main Success Scenario:

1. Client types in the quote ID and presses on “show quote”
2. System shows the quote with its information

Extensions:

1. Client provides invalid data

1. System shows a guiding message to provide valid data (number)
2. Client provides valid data
3. Go back to use case 1

2. Client provides a number of non-existing quote

1. System shows a guiding message that it cannot find the quote
2. Client provide an ID of existing quote
3. Go back to use case 1

ID: FR B-03 – Quote Update

Pre-condition: Quote should exist

Actor: Client

Main Success Scenario:

1. Client provides the quote (reservation) ID
2. System displays the quote with all the reservation and contact information
3. Client presses on update quote
4. System displays the quote with all the reservation and contact information
5. Client fills in the new details and confirms
6. System displays the quote with all the reservation and contact new information and requests for signature
7. Client provides signature (via a checkbox) and confirms
8. System confirms the reservation was successfully updated, stores it and displays a copy

Extensions:

1. Rental day is in less than 7 days
2. End of use case

5. Client cancels

1. End of use case

5. Client provides invalid data

1. System shows a guiding message for the client to provide valid data
2. Client provides valid data and confirms
3. Go back to use case 5

7.

1. Client cancels
2. End of use case

ID: FR B-04 – Quote Deletion/Cancelation

Pre-condition: Quote should exist

Actor: Client

Main Success Scenario:

1. Client provides the quote (reservation) ID
2. System displays the quote with all the reservation and contact information
3. Client presses on delete quote
4. System requests client’s confirmation
5. Client confirms
6. System displays the quote deletion confirmation

Extensions:

2.

1. Rental day is in less than 7 days
2. End of use case

5.

1. Client cancels
2. End of use case

ID: FR B-05 – Deposit an amount for the boat rental options

Pre-condition:

* Employee is logged in
* Employee is an admin

Actor: Employee

Main Success Scenario:

1. Employee provides the quote (reservation) ID
2. System displays the quote with all the reservation and contact information and expected deposit
3. Employee provides the expected deposit and confirms
4. System displays confirmation message of the made deposit

Extensions:

4. Deposit is lower than the expected amount

1. System displays a guiding message with the expected amount/deposit
2. Employee provides the expected amount
3. Go back to 3

ID: FR B-06 – Final payment calculation

Pre-condition:

* Employee is logged in
* Employee is an admin
* Deposit has been already made

Actor: Employee

Main Success Scenario:

1. Employee provides the quote (reservation) ID
2. System displays the quote with all the reservation, contact information, and the made deposit
3. Employee requests to Finalize the payment
4. System requests for the final payment
5. Employee provides the final payment and confirms
6. System displays confirmation message of successful payment finalization

Extensions:

5. Final payment incorrect

1. System displays a guiding message with the expected final payment
2. Employee provides the expected final payment and confirms
3. Go back to 5

5. Final payment is invalid input

* 1. System displays a guiding message that the input is invalid
  2. Employee provides valid input
  3. Go back to 5