User Requirements Specifications

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Contents

Agreements of the client

Our team agreed with the client that keeping track of the employee data (employee management) is one of the top priorities for the project. Besides that, the other priority is managing the stock, but this is not mandatory for the first deadline. To continue, managing the employees is going to be done via the desktop application. We also agreed that the website is not a priority and would not be needed at the end of the first deadline (at the end of week 6). We decided that our team is going to design a logo and come up with a slogan for the company. Regarding the company's color scheme, we agreed that this decision is left to our team.

Furthermore, after our second client meeting, we got new agreements. To begin with, we have agreed to make a website that is going to be used by every employee to view their schedule and personal information. Also for the desktop application, we have to make a function to view the schedule on a weekly and monthly basis. Finally, we also concluded to freeze our complaints system at this moment (second client meeting).

To continue, the third meeting is also done and we got some new agreements. To begin with the website. The employee needs more information to view and update. To continue the employee should be able to call in if he is sick or absent. Also, for the website schedule, the employee can specify their preferred shifts. Additionally for the desktop application first of all we have to implement restock for the products. Also, the HR manager can approve or disapprove a call of the absence of an employee that requested it.

Functional requirements

What should the system be able to do?

Fr-01: Users can log into the app and the right pages based on their job function, with their username and their password.

FR-02: Human Recourses should be able to add employees.

FR-03: Human Recourses should be able to remove employees.

FR-04 Human Recourses should be able to change employees.

FR-05: Human Resource workers and managers should be able to view all employee data. FR-06: Human Resource workers and managers should be able to search by a username and employee-id.

FR-07: Human Recourses should be able to assign work shifts.

FR-08: Human Recourses should be able to reassign work shifts.

FR-09: Human Recourses should be able to change work shifts.

FR-10: Employees can view their work shifts per week/month.

FR-11: Employees can request a leave of absence.

FR-12: Employees can change their data.

FR-13: Employees can view rules and regulations.

FR-14: Employees can file a complaint.

FR-15: Employee data should be permanently stored in a database.

FR-16: Product data should be permanently stored in a database.

FR-17: Depot workers should be able to view all product data and search for them by name and product-id.

FR-18: Depot workers should be able to view product statistics like the amount sold, and the amount in stock.

FR-19: Depot workers can add products and product data.

FR-20: Depot workers can remove products and product data.

FR-21: Depot workers can change products and product data.

FR-22: Work shifts for store employees get assigned automatically.

FR-23: The login system will use two-step authentication.

FR-24: Store employees can send restock requests to depot workers.

FR-25: HR can make presets of schedules, so they can be reused for other weeks.

FR-26: Depot workers can approve and reject restock requests.

FR-27: Employee can login into their account on the website.

FR-28: Employee can view his personal information on the website.

FR-29: Employee can view his work schedule on the website.

FR-30: Employee can change his own information on the website.

FR-31: Employees can call in sick using the web application

FR-32: Employees can request vacation using the web application

FR-33: HR employee can approve/disapprove vacation requests on the desktop application
FR-34: Employees can specify their preferred work shifts using the website
FR-35: Managers can view Employee statistics on the desktop application.
FR-36: Cashiers can use a separate desktop app to assist them in checking out items.

Musts

FR-01: Login system based on username & password.
FR-02: Human Recourses should be able to add employees.
FR-03: Human Recourses should be able to remove employees.
FR-04 Human Recourses should be able to change employees.
FR-05: Human Resource workers and managers should be able to view all employee data.
FR-06: Human Resource workers and managers should be able to search by a username and employee-id.
FR-07: Human Recourses should be able to assign work shifts.
FR-08: Human Recourses should be able to reassign work shifts.
FR-09: Human Recourses should be able to change work shifts.
FR-10: Employees can view their work shifts per week/month.
FR-12: Employees can change their data.
FR-15: Database for employees.
FR-24: Store employees can send restock requests to depot workers.
FR-25: HR can make presets of schedules
FR-26: Depot workers can approve and reject restock requests.
FR-27: Employee can log in into their account on the website.
FR-28: Employee can view his personal information on the website.
FR-29: Employee can view his work schedule.
FR-30: Employee can change his own information.

Should

FR-11: Employees can request a leave of absence.
FR-14: Employees can file a complaint.
FR-16: Product data should be permanently stored in a database.
FR-17: Depot workers should be able to view all product data and search for them by name and product-id.
FR-31: Employees can call in sick using the web application.
FR-32: Employees can request vacation using the web application.
FR-33: HR employee can approve/disapprove vacation requests on the desktop application.
FR-34: Employees can specify their preferred work shifts using the website.

Could

FR-13: Employees can view rules and regulations.
FR-18: Depot workers should be able to view product statistics like the amount sold, and the amount in stock.
FR-19: Depot workers can add products and product data.
FR-20: Depot workers can remove products and product data.
FR-21: Depot workers can change products and product data. FR-22:
Automated work shift assignment.

FR-35: Managers can view Employee statistics on the desktop application.
FR-36: Cashiers can use a separate desktop app to assist them in checking out items.

Won’t

FR-23: 2 step authentication.

Use Case: Log in (FR-01)

Actor: User

Main Success Scenario:

1. The user opens the application
2. User fills in Username and Password
3. The user proceeds to log in
4. The system shows a page based on the user's role in the company

Extensions:

1a: the application was already opened by another User
   1. User Logs out
   2. Proceeds to step 2

3a: Username doesn't exist 1. The system displays a message that the username doesn't exist
   2. Back to step 1

3b: Invalid password
   1. System displays message that password is invalid
   2. Back to step 2

Use Case: Human Resources adding an employee to the database (FR-02)

Actor: HR user

Main Success Scenario:

1. HR User logs in and accesses the "Edit Employees" page.
2. The system shows a tab to edit employees
3. HR User fills in fields concerning personal information about the employee, like first & last name, username, password, e-mail, and job.
4. HR User adds the employee
5. The system clears all information fields and adds the employee to the database.

Extensions:

4a: Not all fields are filled in.

1. The system shows a message that not all fields are filled in
2. The user returns to step 3.

4b: Username is already in use.

1. System shows a message that username is already in use 2.

The user returns to step 3.

Use Case: Human Resources should be able to remove employees (FR-03)

Actor: HR user

Main Success Scenario:

1. HR User logs in and accesses the "Edit Employees" page
2. The system shows a tab to edit employees
3. HR User selects an employee to remove
4. HR User removes employee
5. The system removes the employee from the database

Human resources employees should be able to change employee data (FR-04)

Actor: HR User

Main Success Scenario:

1. User accesses the “Employees” page
2. The system shows all employee’s full names right away
3. HR user selects desired employee
4. The system shows all available information about selected employee
5. HR user changes desired information about employee

Extensions:

4a: Not all personal information is available about employee

1. Fields concerning the missing information get filled with an X
2. User can choose to fill in these fields if he or she has the available information, otherwise, the use case ends

Human Recourses employees should be able to view all employee data (FR-05)

Actor: HR

Main Success Scenario:

1. User accesses the “Employees” page
2. The system shows all employee’s full names right away
3. When the user selects an employee, the fields concerning personal information get filled in by the system, making it easy for the user to oversee
4. The system fills in the personal information fields with the information about the filtered employee.

Extensions:

3a/6a: Not all personal information is available about employee

3. Fields concerning the missing information get filled with an X
4. User can choose to fill in these fields if he or she has the available information, otherwise, the use case ends

Human Recourses employees should be able to search by username and employee-id (FR-06)

Actor: HR User

Main Success Scenario:

1. User accesses the “Employees” page
2. The user also has the option to search by username or ID.
3. The user fills in either the username or the ID of the desired employee
4. User searches for the employee
5. The system shows all available information about employee

5a: There is no employee with the corresponding username or ID

1. The system shows a message that there is no employee with a corresponding username or ID
2. End-use case

Use Case: HR should be able to assign work shifts (FR-07)

Actor: HR user

Main Success Scenario:

1. The manager selects a certain date and a username.
2. The system will add the username to the specific date.
3. The manager fills in the beginning and end times.
4. The system will assign the time to the employee's working day.
5. The manager adds the work shift
6. The system will update the database of the work shifts. Extension:

5a. The employee is already assigned to a work shift at that time.

1. error message pops up saying the employee already has a work shift at that time.

Use Case: HR should be able to re-assign work shifts (FR-08)

Actor: HR user

Main Success Scenario:

1. User accesses the "Employees" page
2. User selects desired employee
3. The system shows the work shifts of the selected employee
4. User makes desired changes to work shift
5. The system notifies the employee

Extensions:

4a: employee already works on the selected date

1. The system shows a message that the employee is already working on the selected date
2. End-use case

4b: employee did not work on the selected date in the first place

1. The system shows a message that the employee does not work on this day
2. End-use case

Use case: Employees can view their work shifts per week/month (FR-10)

Actor: Employee

Main success scenario:

1. User logs in
2. User accesses the "planning" tab
3. The system shows the work shift for the whole month

Extensions:

3a: User is not assigned for the whole month

1. The system shows a message that you are free for this month
2. End-use case

Use Case: view/request adjustments to work schedule (FR-11)

Actor: Employee

Main Success Scenario:

1. A page will be opened viewing the schedule of the week you are currently in.
2. The user selects a week
3. The system will show the schedule for that specific week.
4. Users can request an adjustment when he/she cannot work on a specific day.
5. The system will send a message to a manager that the user wants to adjust a specific working day.
6. The user gets a message from the manager if his adjustment request got approved.

Extensions:

2a: Select a week where the user does not have to work.

1. Systems show a message that you're free for that week 2.

End of use case.

4a: Select a day of the week when he does not have to work on it.

1. The system shows a message that you're free for that day
2. End of use case.

Use case: employees can change their data. (FR-12)

Actor: Employee Main

Success Scenario:

1. The user logs in and goes to the "personal information tab"
2. The system displays all personal information
3. User changes information where needed
4. The user confirms the edit

Extensions: Not all personal information is available

1. Fields concerning the missing information get filled with an X.
2. User can choose to fill in these fields if he or she has the available information, otherwise, the use case ends.

Use case: Employees can view rules and regulations (FR-13)

Actor: employee

Main Success Scenario:

1. The employee opens the "Rules and Regulations" page.
2. The System shows a list of the rules and regulations.
3. The employee can change what kind of rules and regulations they want to see (security, general, safety).
4. Systems change the list to the employee's settings.

Use case: employee files a complaint (FR-14)

Actor: employee

Main Success Scenario:

1. The employee opens the “File complain” page.
2. The system shows different fields that the employee has to fill in to file a complaint.
3. The employee fills in the required fields and sends the complaint
4. The system clears the fields and it will send the complaint to the human resource management.

Extensions:

3a. A required field has not been filled or is not correct.

1. The system shows a message that one or more required fields are empty or not in the correct format and you should change it
2. The user returns to step 3.

Use Case: Storing employee data in the database (FR-15)

Actor: manager

Main Success Scenario:

1. The manager fills in new employee data.
2. The manager adds the user.
3. The system adds the user to the database automatically and stores permanently.

Use Case: Storing product data in the database(FR-16)

Actor: Depot worker

Main Success Scenario:

1. User fills in new product data
2. The user adds a product to the database
3. The system adds a product to the database

Use Case: search for product information (FR-17)

Actor: HR user and Manager Main

Success Scenario:

1. The user accesses the “Product” page.
2. The system shows all Products.
3. When the user clicks a product, product data will be shown in the correct field, making it easy for the user to oversee.
4. User searches for a product by name or ID
5. The system fills in the product information fields with the information about the filtered product.

Extensions:

3a/5a: Product information is missing

1. Fields concerning the missing information get filled with an X.
2. User can choose to fill in these fields if he or she has the available information, otherwise, the use case ends.

Use Case: Viewing product statistics (FR-18)

Actor: HR user and Manager Main
Success Scenario:

1. The user starts at step 6 of the main success scenario of "Use case search for product information".
2. The user views statistics underneath the product information field.
3. The system shows a form with all statistics about the selected product.
4. Users can click the close button to close the pop-up form.

Extensions:

1. Fields concerning the missing information get filled with an X.

Use Case: add products and product data (FR-19)

Actor: manager

Main Success Scenario:

1. User accesses the "product" page
2. User fills in fields with needed information about the product
3. The user adds the product and its data
4. The system adds products and their data to the database

Use Case: removing products and product data(FR-20)

Actor: manager

Main Success Scenario:

1. User accesses the "product" page
2. The system shows all product names
3. The user selects a needed product
4. The user removes the product from the list
5. The system removes the product from the database

Use Case: change product data (FR-21)

Actor: manager
Main Success Scenario:

1. The user accesses the "Product" page.
2. The system shows all Products.
3. User selects a product
4. data will be shown in the correct field, making it easy for the user to oversee.
5. The user clicks on the change data button underneath the data fields.
6. A form pops up with all data in textboxes.
7. User changes data in the textbox to new data.
8. User clicks on the save button, data will be saved to the system.

Extension:

7a. User fills in invalid data

1. Systems show a message telling the manager to change it.

Use Case: automatic work shifts (FR-22)

Actor: system, manager, and HR user Main
Success Scenario:

2. The manager adds an automatic work shift assignment on the work shift page.
3. The system shows a form where you can fill in needed data.
4. The manager fills in weekdays, employees, and how long the work shifts should assign in the corresponding fields.
5. The manager confirms.
6. The system now automatically adds work shifts for the right employee.

Extension:

1. the employee is already working at the date of work shifts. 1a.
   user clicks the override button or the cancel button.

Use case: the system will use 2-step authentication (FR-23)

Actor: employee

Main Success Scenario:

1. User logs in using e-mail and password.
2. The system shows the message to check mail for verification
3. The system sends the link to the e-mail to authenticate the e-mail 4. User authenticates e-mail by clicking the link

Extensions:

1a. User tries to log in with invalid credentials.

1. A message pops up with “Invalid e-mail or password”
2. The system will clear the password if something was put in.
3. The user returns to step one.

2a. System fails to send a mail to the user that wants to log in.

1. A message will come with “sorry for the inconvenience, but you cannot log in at the moment. Try again later”
2. The system will clear the password input.
3. The user returns to step one.

3a. Link is not valid (link expired).

1. The system will redirect you to a page where it says “This link is not valid anymore.”
2. The user returns to step one.

Use case: Store employees can send restock requests to depot workers (FR-24)

Actor: store employees, depot workers

Success Scenario:

1. Store employee enters the “Stock Requests” page
2. User fills in the name of the product they want to restock
3. User fills in how many they want to order of this product.
4. The user confirms the validations and places the order.
5. The request is sent to depot workers.

Extensions:

1. User fills in they want more products than the maximum, the system changes it to the maximum value.
2. The product name doesn’t match any products in the system, an error message pops up.

Use case: HR can make presets of schedules (FR-25)

Actor: HR employee

Success Scenario:

1. HR employee has assigned work shifts for the week.
2. The user enters the “make preset” page.
3. The system will redirect the user to the “make preset” page.
4. The user has to name the preset.
5. The user confirms and a preset is made.

Extensions.

1. Users can access presets, this will import the data of the preset into the week that’s currently viewable.
2. User gives a name that’s already used, in this case, an error pops up telling them to rename.

Use case: Depot workers can approve or reject restock requests (FR-26)

Actor: depot workers, store employees

Success scenario:

1. Depot worker goes to the “products” page.
2. The system will display everything to view restock requests.
3. Depot workers select a restock request.
4. Depot workers either choose to approve or reject.
5. Restock request is approved or rejected.
6. Store employee gets a message saying the restock request was approved or rejected

Use case: Employees can log in to their account on the website (FR-27)

Actor: every employee

Success scenario:

1. The employee opens the website.
2. The system will redirect you to the “login” page.
3. The employee fills in his email and password and press login.
4. The system will check credentials and a message pops up “You successfully logged in”. The system redirects the user to the “schedule” page.

Extensions.

3a: Username doesn’t exist

1. The system displays a message that the username doesn’t exist.
2. Back to step 1.

3b: Invalid password

1. System displays message that password is invalid
2. Back to step 2

Use case: Employee can view his personal information on the website (FR-28)

Actor: Employee

Success scenario:

1. The employee is logged in.
2. Employees have access to the “personal information” page.
3. The system will show the personal information of the logged-in user.

Use case: Employee can view his work schedule on the website (FR-29)

Actor: Employee

Main Success scenario:

1. User logs in to the web application
2. User navigates to the schedule page
3. System shows the user his/her schedule

Extensions:

3a: User is not scheduled for this week/month:

1. System shows user empty agenda
2. End-use case

Use case: Employee can change his own information on the website (FR-30)

Actor: Employee

Main Success scenario:

1. User logs in to the web application
2. User navigates to the personal information page
3. System shows all personal information to the user
4. User changes desired information and confirm

Extensions:

2a: not all information is known about the user:

1. Fields concerning the missing information will be blank, indicating that the user should fill them in.
2. End-use case.

Use Case: Employees can call in sick using the web application(FR-31)

Actor: Employee

Main Success Scenario:

1. Employee logs in to website
2. Employee wants to register their absence
3. Employee fills in absence day/period.
4. System sends a notification to the HR employees of the employees absence

Use Case: Employees can request vacation using the web application(FR-32)

Actor: Employee

Main Success Scenario:

1. Employee logs in to website
2. Employee wants to register their absence
3. Employee fills in period of absence
4. The system sends a request to the HR employees.

Use Case: HR employee can approve/disapprove vacation requests on the desktop application(FR-33)

Actor: HR Employee

Main Success Scenario:

1. User logs in to desktop application
2. User navigates to “Absence” tab
3. User selects desired absence request
4. User chooses to Approve or Reject the request

Use Case: Employees can specify their preferred work shifts using the website (FR-34)

Actor: Employee

Main Success Scenario:

1. Employee logs in to website
2. Employee wants to choose their preferred work shifts
3. Employee indicates his preferred shifts

Use Case: Managers can view Employee statistics on the desktop application. (FR-35)

Actor: Manager

Main Success Scenario:

1. Manager logs in to desktop application
2. Manager gets redirected to dashboard
3. System shows all employee data

Use Case: Cashiers can use a separate desktop app to assist them in checking out items.(FR-36)

Actor: Store Employee

Main Success Scenario:

1. Employee logs in to application
2. Employee scans barcode of item to sell
3. System shows all the names of items to sell
4. Employee confirms
5. System lowers the amount in stock for all items scanned.

Extensions:

2a. Barcode isn’t recognized by system:

1. System shows message: “Product not recognized, please try another product”
2. End use case

GUI

With this page, you can enter your username and password with the login page and then press the button to log in. You can either view your password by clicking the eye-icon in the textbox of the password or just leave it hidden. What also is a function is the cross that is in the textbox of the username, this will clear the textbox.

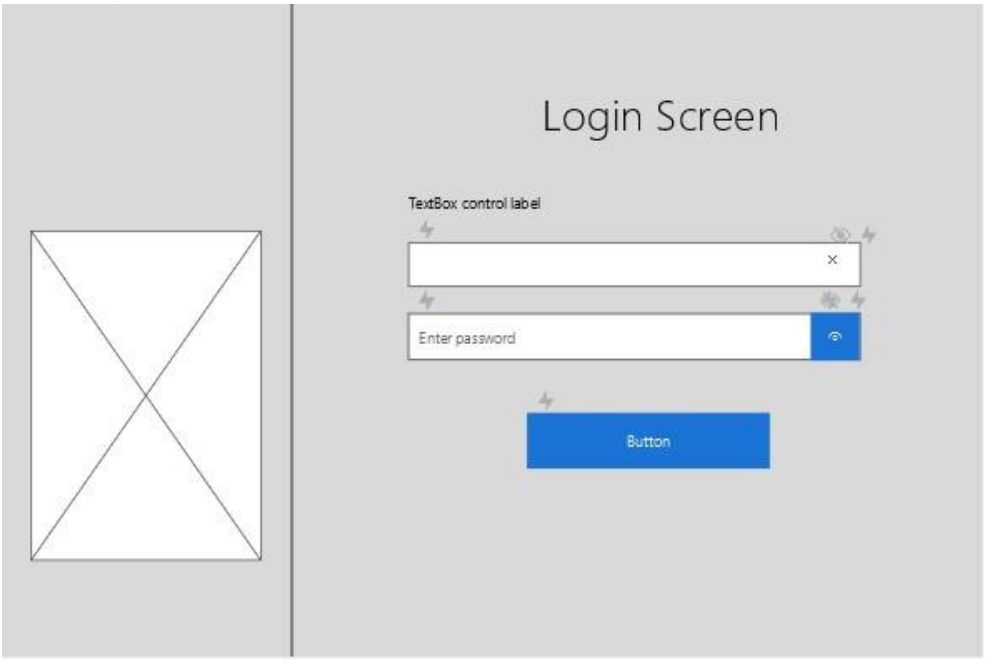

Figure 1: Login page

This is our dashboard page where you can select different pages to view for example statistics, employee information, schedule, etc. This dashboard is for both the manager and the human resource management.

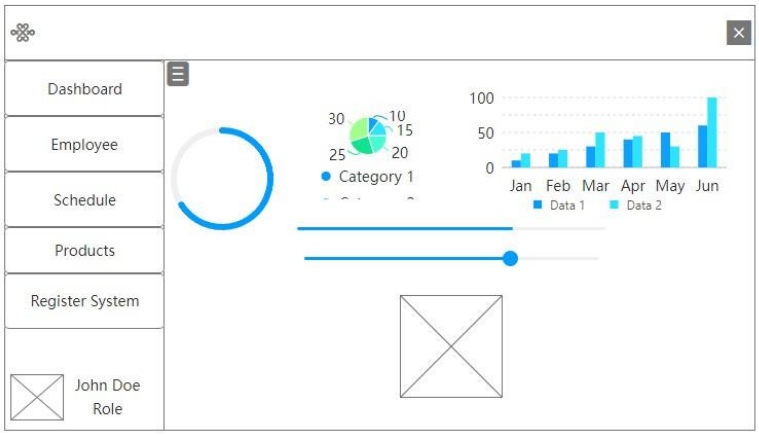

Figure 2: Dashboard

This page is called the employee planning page. Here the administration can view and moderate the schedule for each employee. The administration also has the option to search for an employee by their name and employee id.

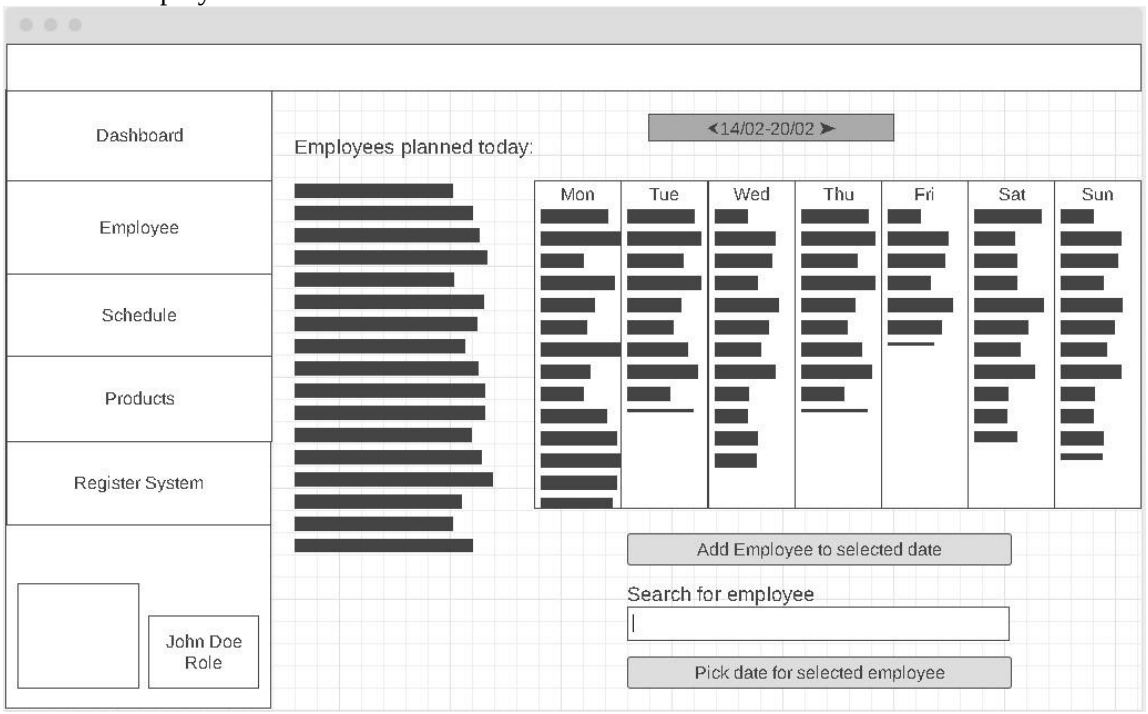

Figure 3: Employee planning page

Next up: Personal employee information. This is what every employee can see about him-/herself. a lot of information can be changed by the employee, but not all information like salary, these things are visible though. The list next to the personal information is made for notifications, like promotions, notifying basic changes, etc.

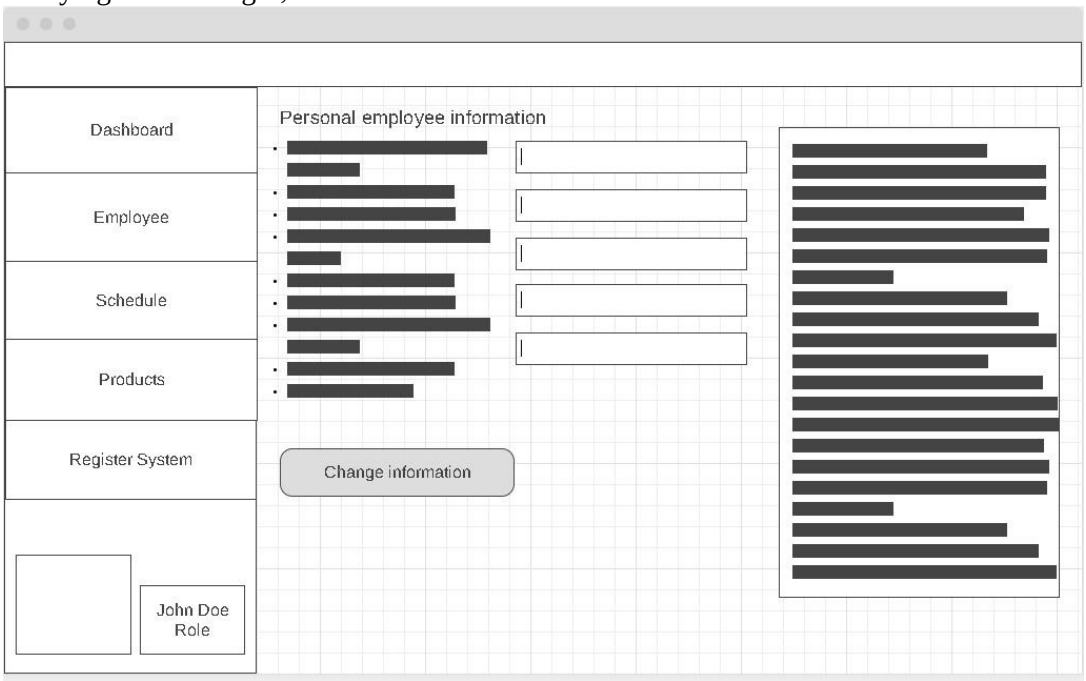

Figure 4: Personal employee information page

Product management: This is what the depot workers will get to see when they use the application. first, they select the concerning product in the comb box. after that they can see the product information below, or request to re-shelve it. all re-shelving requests are shown in the list box below.

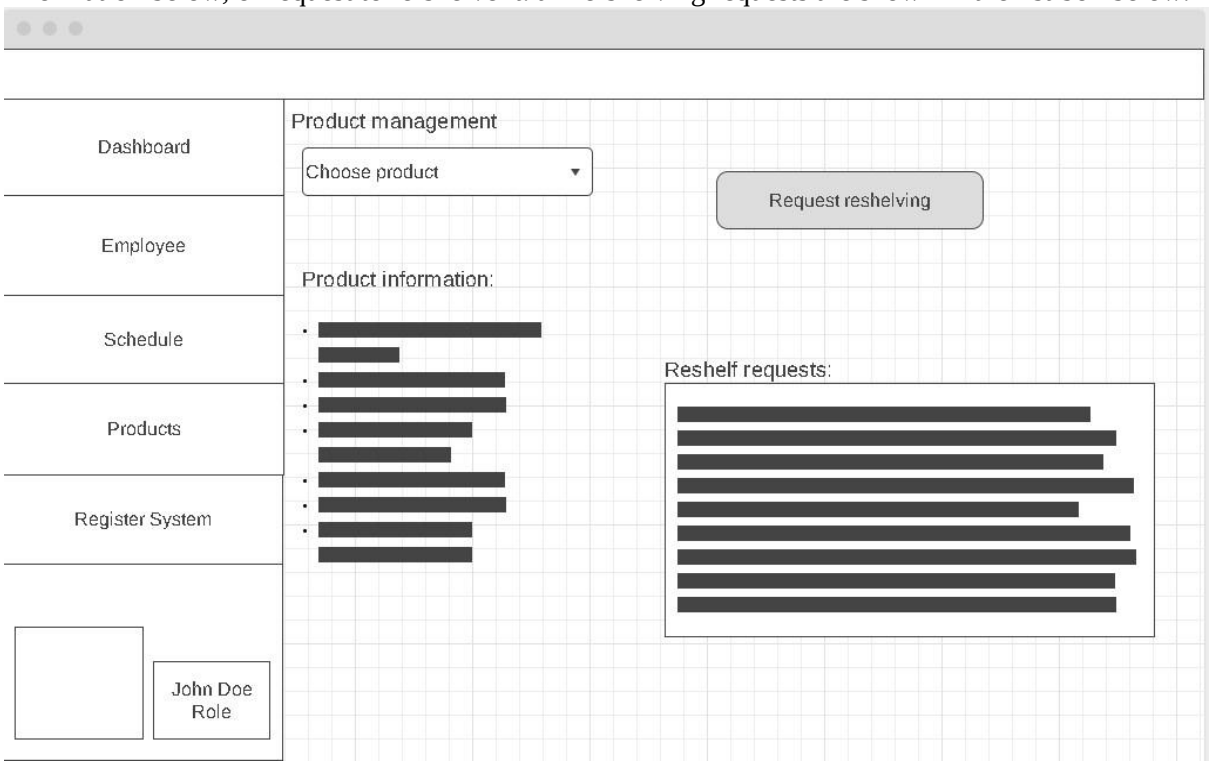

Figure 5: Product management pages

Website wireframe

With this page, you can enter your email address and password to login into your account. You can press the pictures at the right of the password to view the password or to hide it. The picture at the right of the email will delete the input when it was pressed. If the email and password are valid and you pressed the button ‘login’ you will be redirected to the website where you can view your schedule and personal information.

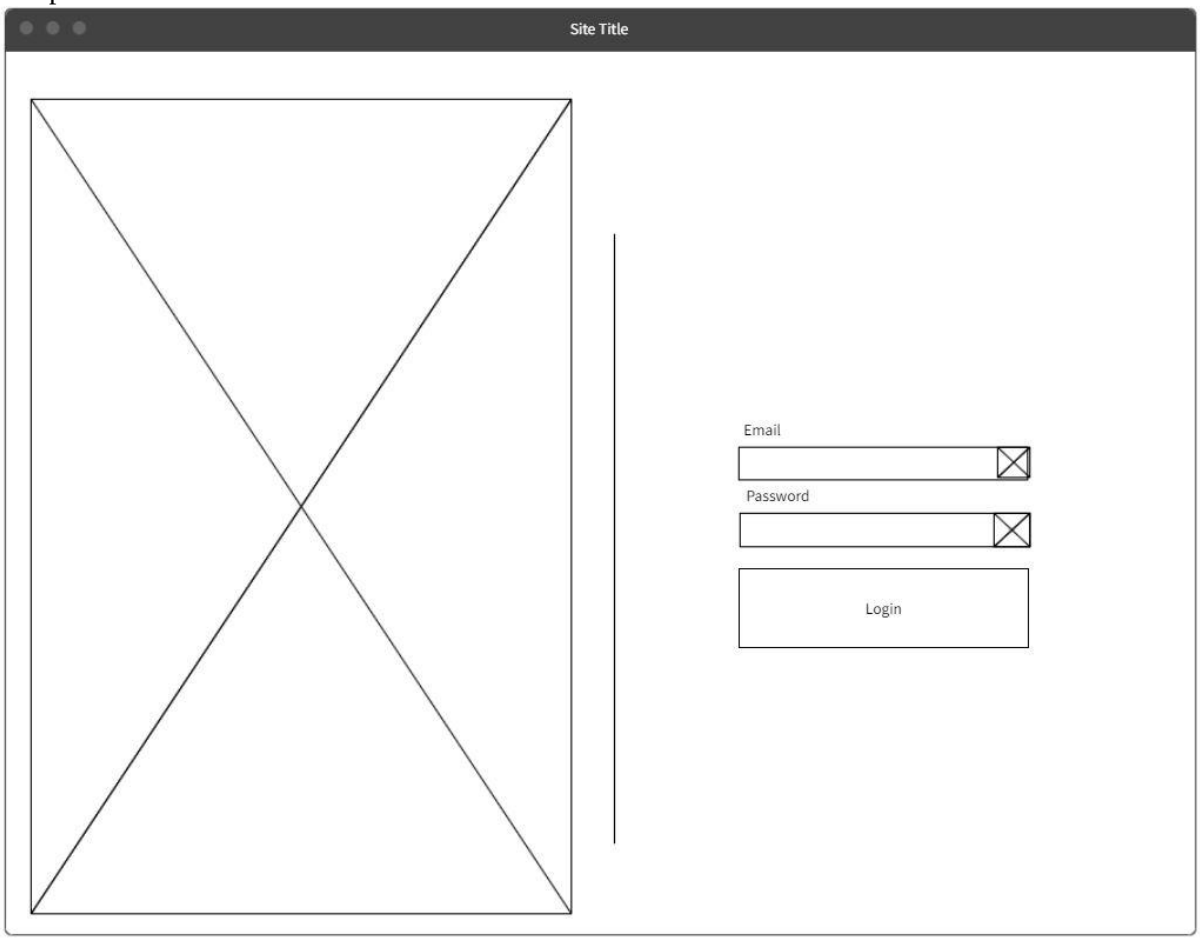

Figure 6: Login page website

This page is the ‘personal information’ page. With this page, you can view your information and the information of the contact person you assigned. Furthermore, you can change your password by putting in a password you used and putting in the password that you want. Also, you can change the data of yourself and your contact information, but only the information that is personal and has a fixed value.

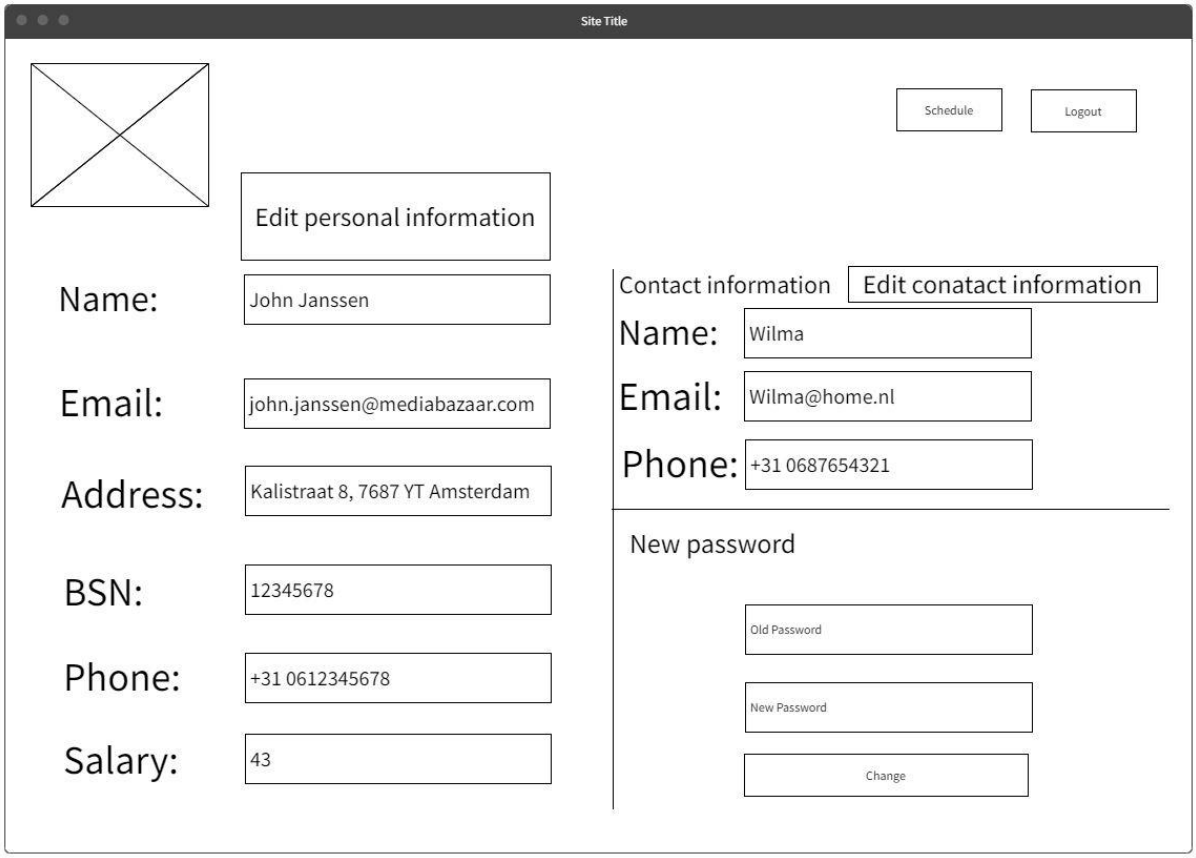

Figure 7: Personal information page

This page is to view your schedule. You can either select the current week, the previous week, or the next week. In this schedule you can only view when you have to work, so no other work schedule of another employee will be shown.

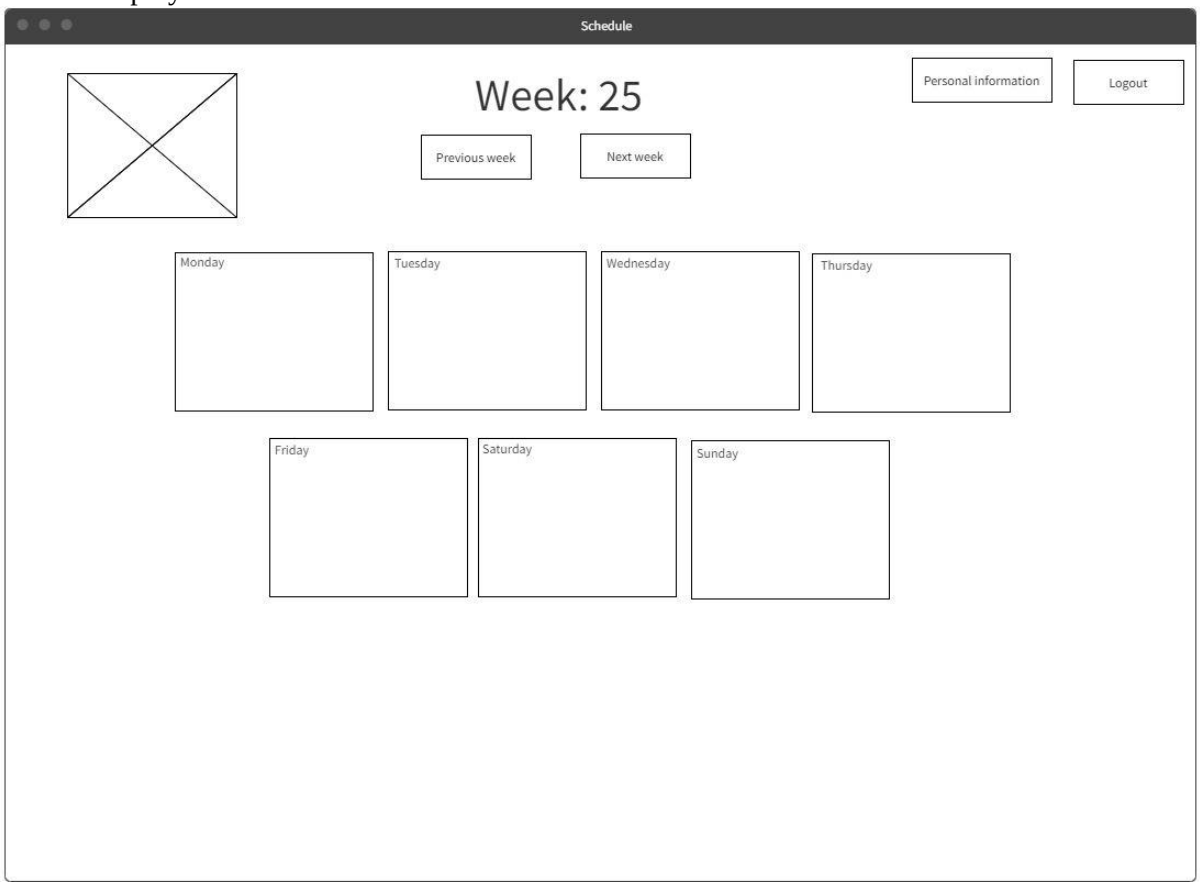

Figure 8: Schedule page