EUROPEAN UNIVERSITY OF LEFKE
Faculty of Engineering
Department of Software Engineering

SENG312

HUMAN COMPUTER INTERACTION

ENTERPRISE RESOURCES PLANNING SYSTEM FOR SERVICE-CENTRIC COMPANIES

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INTRODUCTION

We should first look at the definition of ERP. ERP, or Enterprise Resource Planning, is software that organizes the flow of information between different departments within a business, enabling them to work together. This integration significantly facilitates communication between departments and prevents unnecessary digital or physical duplication.

User Requirements

When designing this interface, I created it for a software company serving its clients. Software companies typically work on a project basis and need to manage project management, resource planning, finance, and customer relations modules simultaneously, ensuring they communicate and establish cause-and-effect relationships with each other. Enterprise resource planning improves efficiency in these areas by facilitating seamless information sharing between these modules. In my project, I will develop a user-friendly interface design tailored to software companies.

When developing my design, I first determined the requirements and identified who the requirements were for. The user interface I designed will be used by people working in roles such as project managers, software developers, human resources managers, accountants, customer relationship management, and senior executives.

The user interface requirements for these target users are as follows:

For the Project Manager: Start new projects, create timelines with Gantt charts, assign and track tasks, and generate project performance reports.

For the Software Developer: View assigned tasks, track to-do lists and deadlines, and access project notes.

For the Accountant: Track income and expenses, view payment history.

For the Human Resources Manager: Manage employees' leave, salary, and shift information, create new employee records, and view performance data.

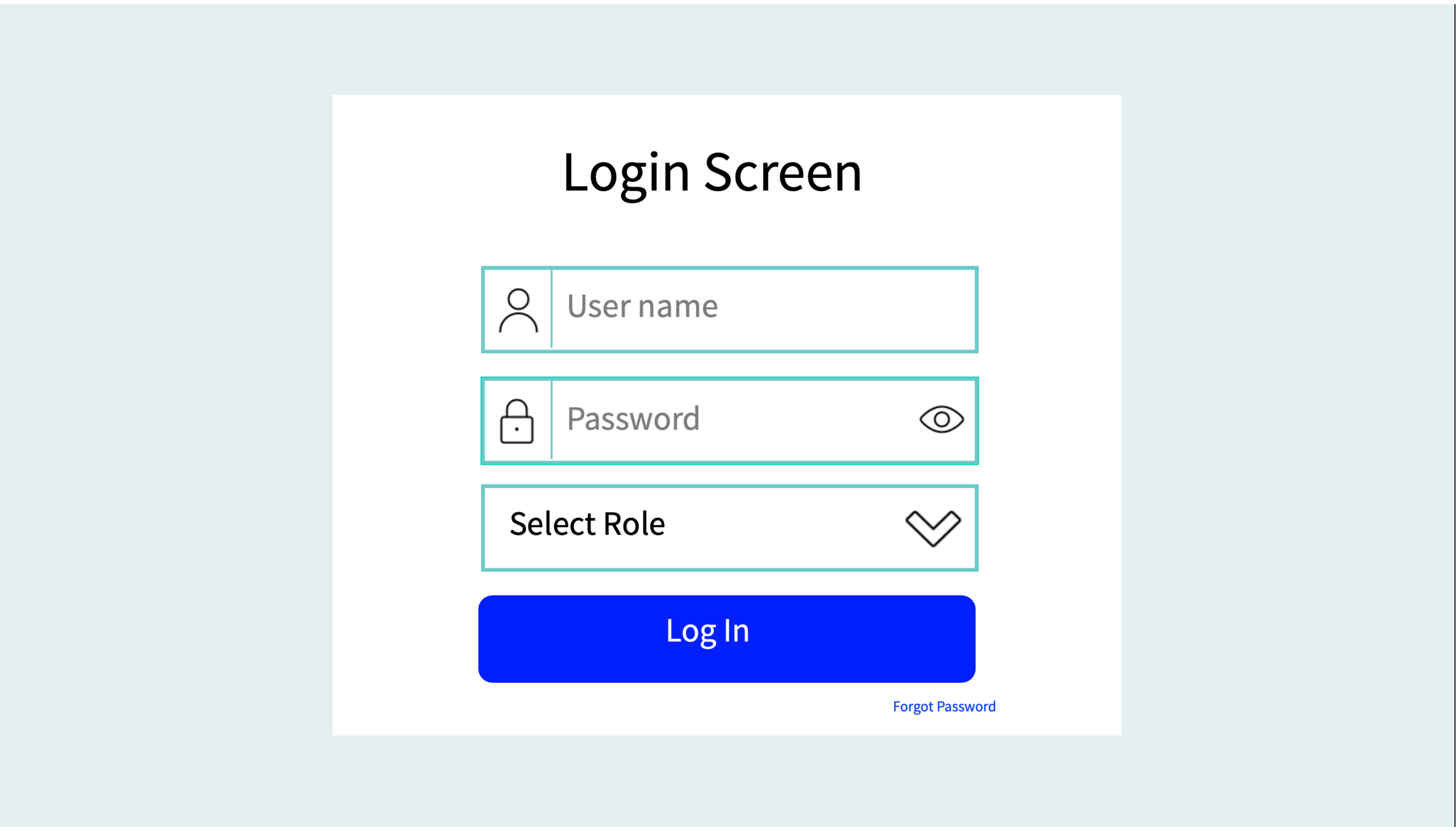
For the Customer Relationship Manager: View customer lists and requests, create new customer records, track meeting notes.

For the Senior Executive: View summary reports of the entire system, assess staff and project performance, and quickly analyze the financial status.

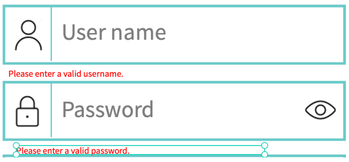
Interface Goal

My goal is to design a user-friendly interface that meets these requirements and serves the needs of the target users, while also being accessible to new users. Of course, I used several design principles to ensure that the interface is user-friendly. Some of these principles include quick access, a clean interface, and easy navigation. In the following sections of my assignment, we will explore this interface and the user-friendly design principles.

Login Screen



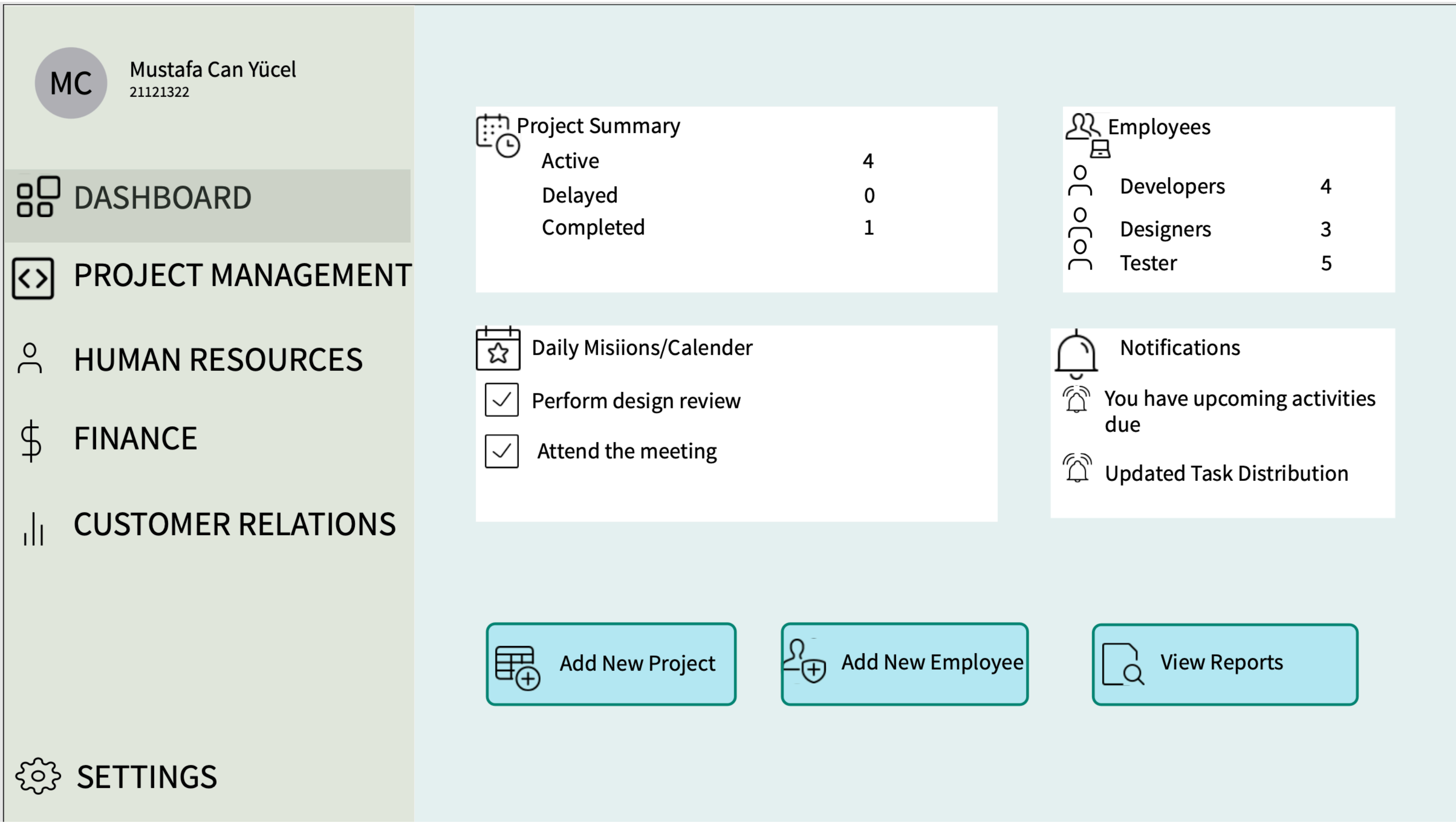
In this design, I focused on fundamental principles to enhance accessibility and improve the user experience. Here are some of the key aspects:
I ensured the interface remains clean and intuitive by focusing only on the essential input components.
I used transparent and non-distracting placeholders within the input fields to guide users clearly on what they need to enter.
The Log In button was designed to be visually prominent, easily clickable, and placed in a noticeable position, with clear color contrast to comply with accessibility standards.For the password field, I added a Show/Hide toggle button to give users control while also enhancing their sense of security.



Additionally, clear and direct error messages were planned to inform users about incorrect inputs. Red was chosen for these messages to indicate warnings effectively.

To support accessibility, I included a “Forgot Password” button to help users regain access if they forget their credentials. I used a noticeable color to indicate that it is clickable.
Since the main goal of the project is the integration of different units, I assigned distinct roles for different user authorizations. I also added a dropdown arrow to indicate that the “Select Role” field is a dropdown list.

Dashboard



The Dashboard screen acts as the control center of the system, offering users a quick overview of ongoing activities, employee distribution, project statuses, and direct access to key actions. It is designed to facilitate quick decision-making and efficient workflow monitoring.

After the user logs in, the Username and ID are shown at the top left of the screen. In a possible security case, this ID is determined by looking at who made the transaction.

The "Add New Project" button opens a new form that prompts the user to enter the Project Name, Start Date, Responsible Person, and Estimated End Date, enabling them to create a new project.

Similarly, clicking the "Add New Employee" button opens a registration form where employee details can be entered, allowing the user to create a new employee profile.

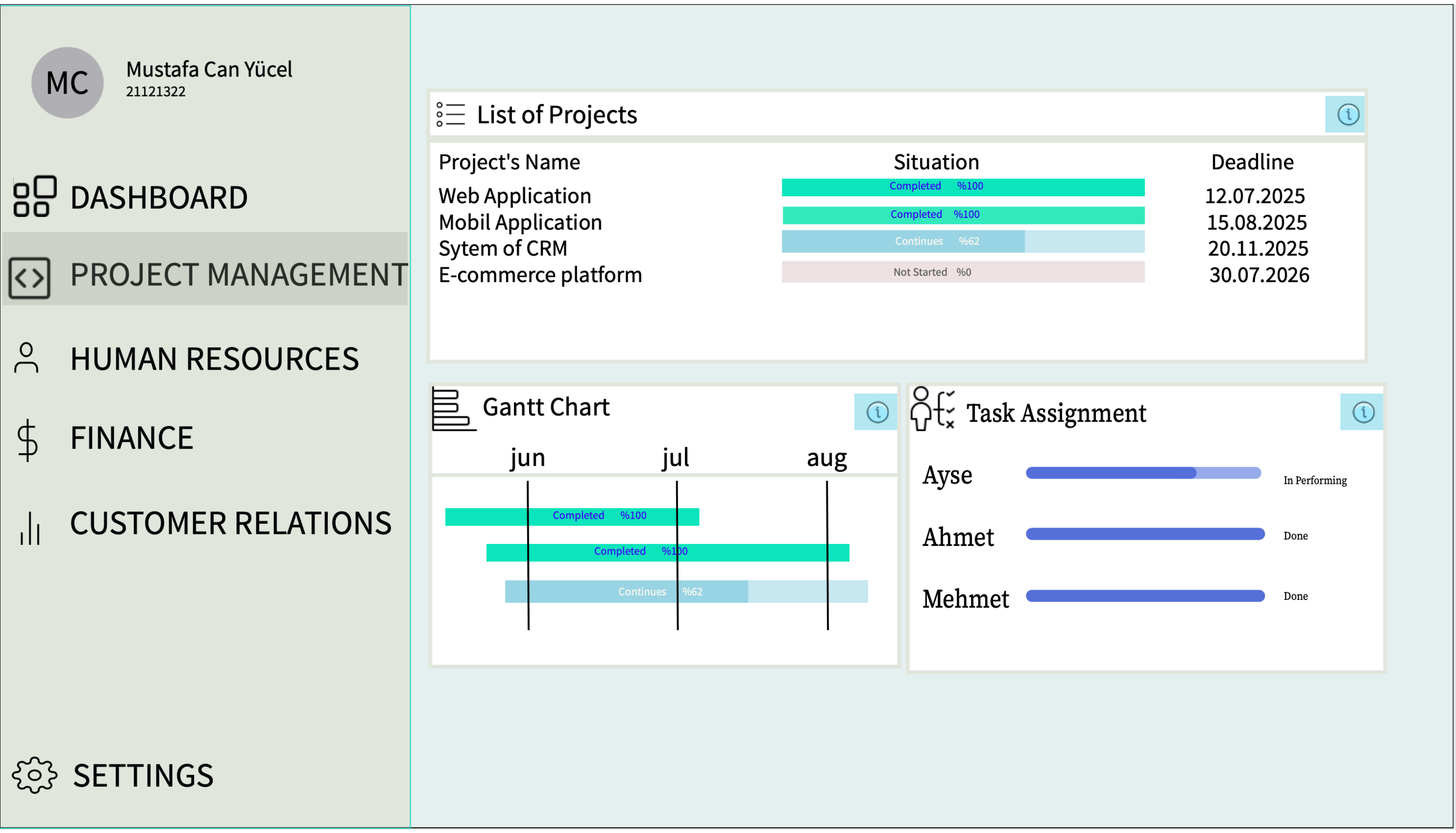
The "View Reports" button opens a report screen that displays summary information such as project statuses, task distributions, and performance analyses.

-On the left side, there is a navigation panel where each module is clearly labeled and supported by icons. This helps users easily understand the function of each module.

-White space, grouping, text size, and layout were arranged consistently across the screen, reducing cognitive load and improving readability.

-Buttons are prominently displayed, using color, size, and spacing to emphasize accessibility and ease of interaction

Project Management



The Project Management screen is designed to show the current status of all ongoing, completed, or pending projects at a glance. It helps users track project progress, monitor deadlines, and assign tasks to team members. This is especially useful for managers and team leaders who need to stay in control and keep things organized.

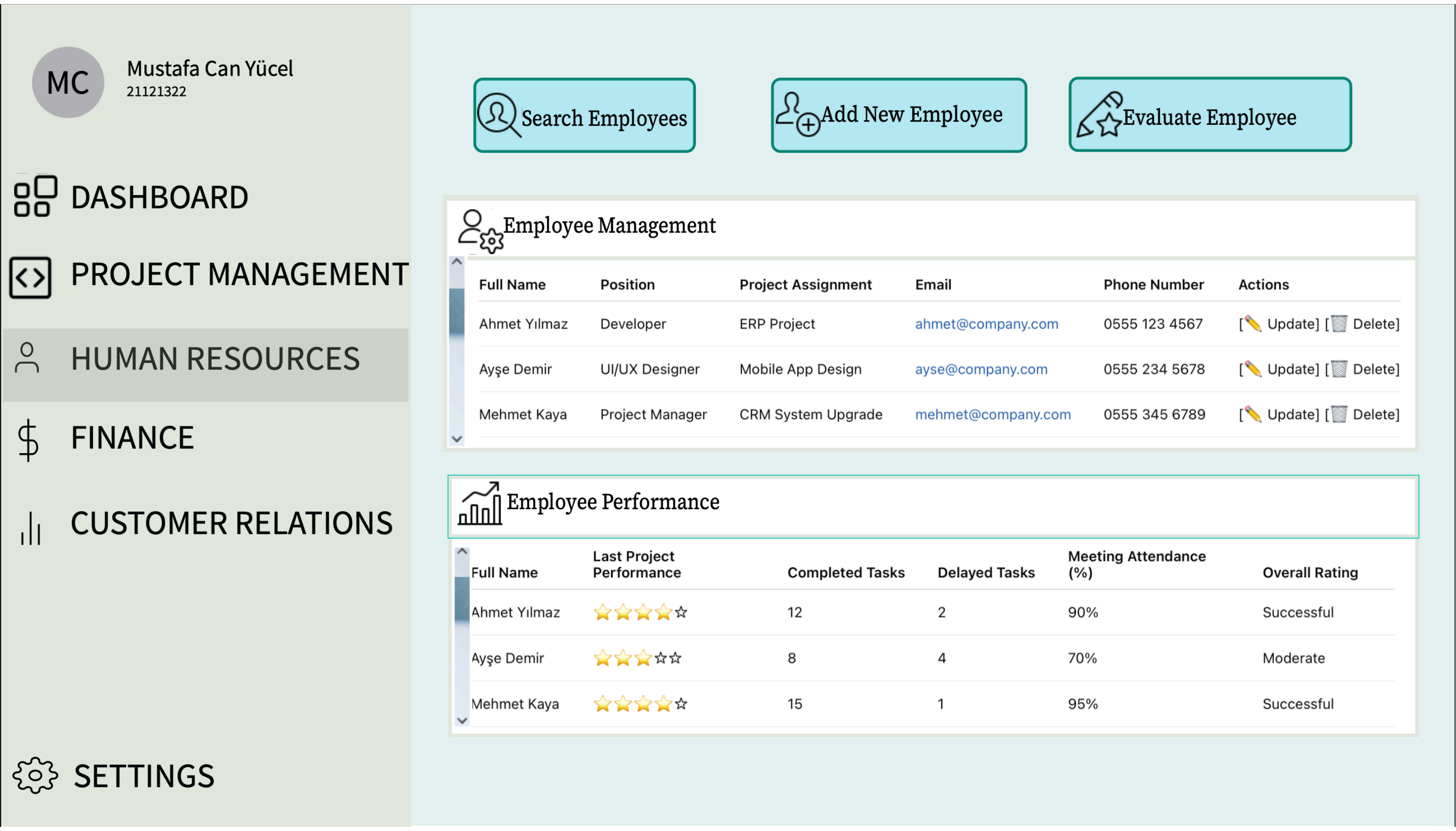
When users enter the Project Management module from the sidebar, they first see the overall status of all projects. After that, they can check the Gantt Chart to see if there are any overlapping deadlines and to follow the progress of each project. The Task Assignment panel shows which employees are currently working on tasks or have completed them. It also helps to understand how the workload is distributed.

In this module, a light background, clear borders, and the absence of complex visual effects provide a simple and balanced design. Clear titles and short, direct information make the interface easier to use. Status indicators and colored bars are used instead of numbers so users can quickly understand what's going on. These elements increase the level of interaction and usability.

The project list is designed to make it easy to read and compare projects quickly. Color-coded horizontal progress bars help users scan the screen and identify the status of each project without much effort.

In the Gantt Chart section, the same color codes are used as in the project list to maintain consistency and make the information easier to understand visually

Human Resources



The Human Resources screen is designed to streamline employee management processes, including searching, adding, evaluating, and updating employee information. It provides HR personnel and managers with a centralized view of staff data and performance insights. Upon accessing the Human Resources module from the sidebar, users first see core actions (search, add, evaluate). Below, they can manage current employees and view performance metrics in one unified layout. If needed, they can immediately update or remove an employee, keeping the process fast and integrated.

I will not repeat the usability, accessibility, and simplicity principles mentioned in previous sections, such as the use of simple colors, grouping, white background for readability, and button color contrast.

In this section, what I used newly for quick access includes alphabetical sorting, a search button, and also the use of icons.

I also supported quick data access with a rating system that enhances fast readability.

The update and delete options were added to support accessibility.

Finance

The Finance screen is designed to provide a visual and data-driven overview of budget health, employee accuracy in financial operations, and audit scores. It enables finance teams and upper management to monitor financial efficiency, detect potential risks caused by human error, and maintain fiscal discipline across projects.

Users enter the Finance module from the sidebar.

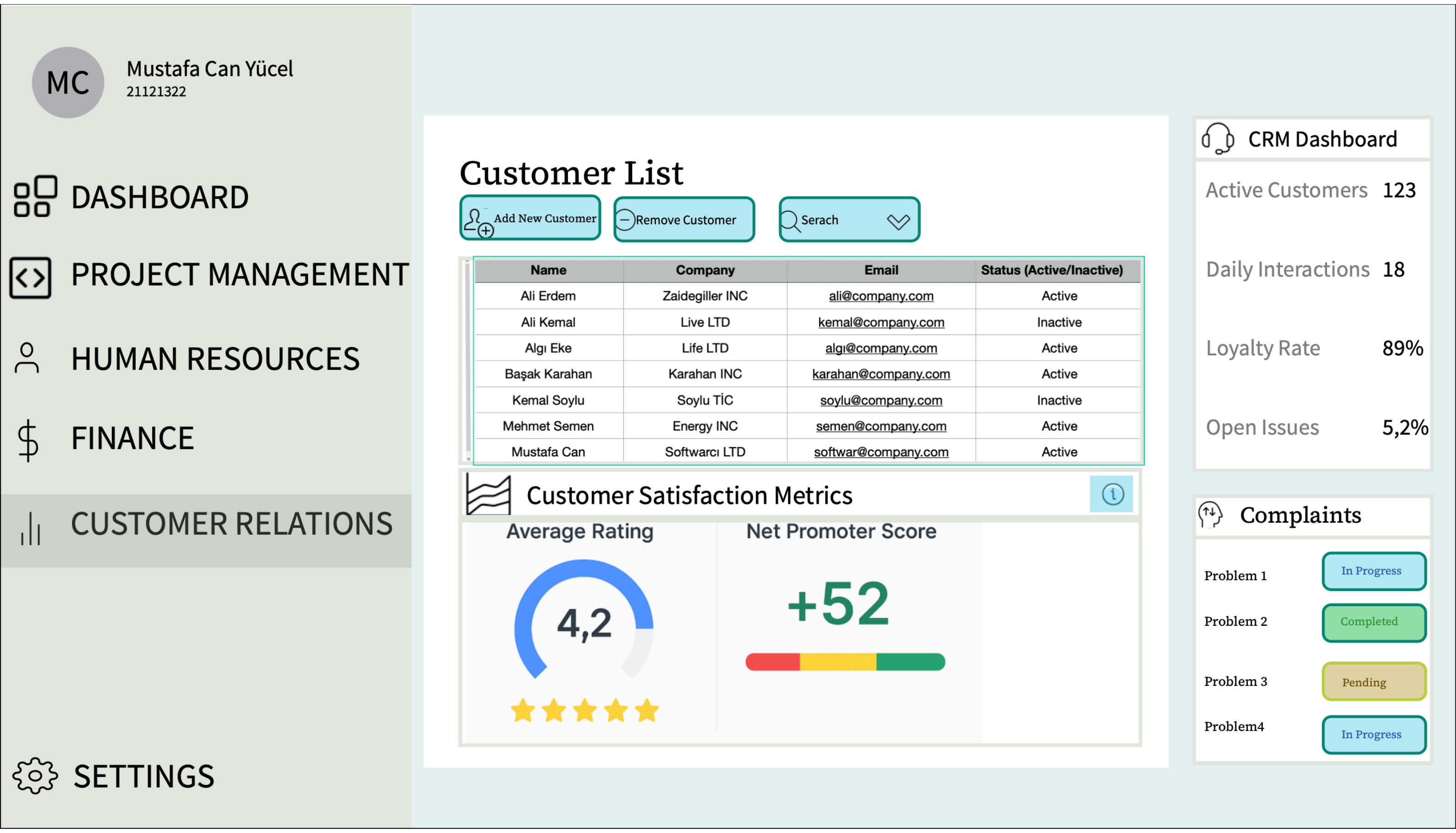
They first see audit scores, enabling quick benchmarking of employee reliability. They then move on to the employee error impact section, identifying potential training or system issues. The final section on budget accuracy allows for both review and action—such as editing, recalculating, or adjusting—in a single space, with no need for page transitions.

Layered visuals convey different types of data more efficiently than plain text tables.

The buttons below the pie chart representation allow users to instantly correct any inconsistencies they notice. This reduces cognitive load, increases error correction speed, and preserves action-context continuity.

Thanks to the modular panel design, each panel addresses a single topic. Focusing on one topic per panel shortens scanning time, accelerates information access, and supports better focus on a specific metric.

Customer Relations



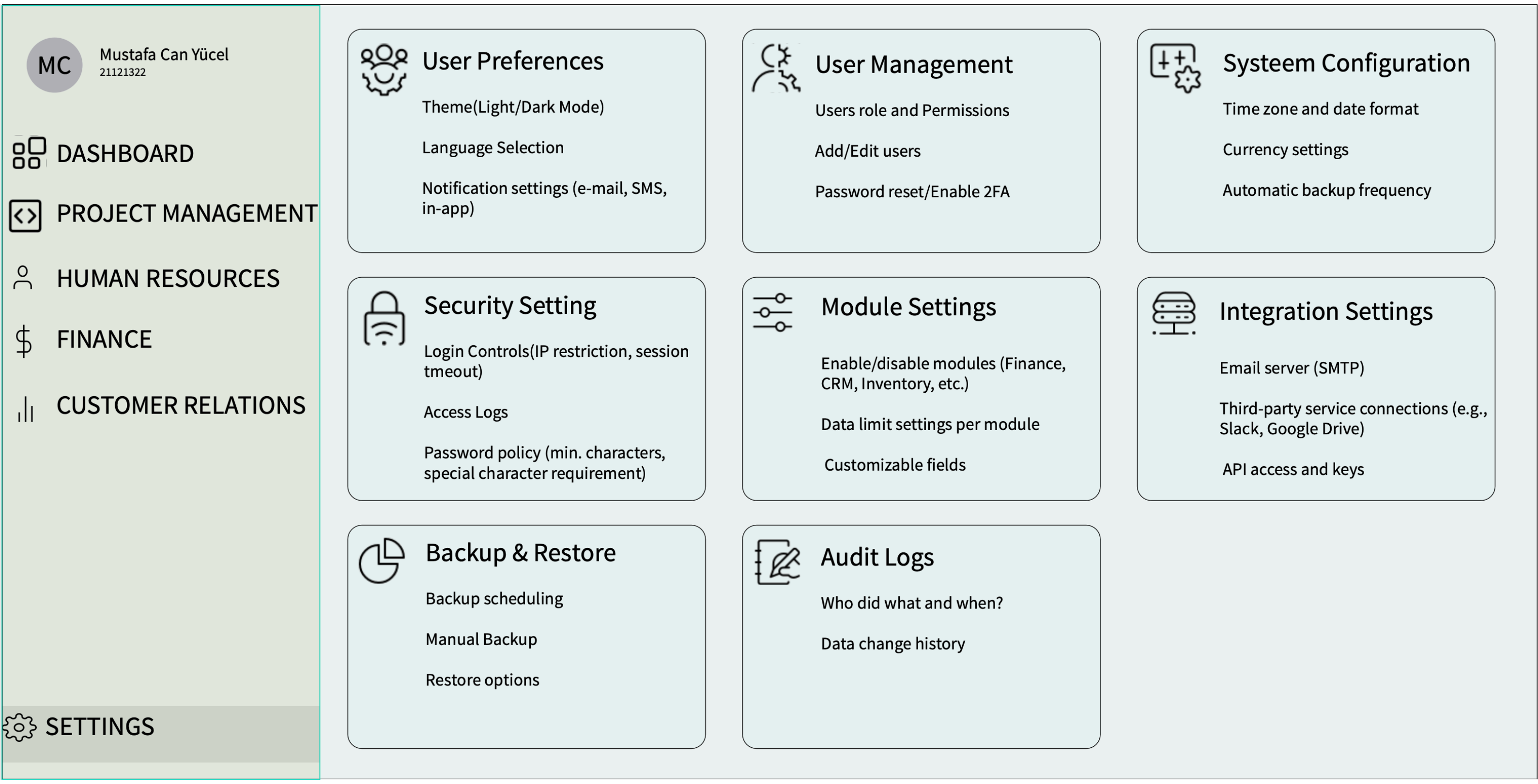
The Customer Relations screen is designed to streamline the management of customer data, monitor engagement statistics, and track customer satisfaction and complaints. It supports CRM teams in maintaining healthy relationships, promptly resolving issues, and continuously improving the customer experience through structured metrics and actionable insights. Users enter the Customer Relations module via the sidebar.
They start by viewing or managing customers using the action buttons. Next, satisfaction metrics provide feedback on overall service quality. Finally, the CRM dashboard and complaints section offer a quick overview of engagement stats and issues requiring attention.

White fonts, proper framing, and alphabetical ordering were carefully applied to enhance readability and promote faster learning.

Real-time feedback systems such as loyalty rate and Net Promoter Score (NPS) are presented in color-coded tables to enable quick reactions.

Typography is consistent: a distinct font is used for titles, and colored texts are used for buttons. Button color differentiation is also consistent, helping users quickly learn each button's function and reducing cognitive load in future use.

Settings



Customer Feedback and Improvements

Thanks to the feedback received from the user, it was noticed that there was not enough visual separation between the title and buttons. As a solution to this situation, the titles were enlarged, the color contrast of the buttons It was made noticeable.

A placeholder was hired for users who had difficulty interpreting which data to enter on the login screen. Again, on the login screen, users said that they did not know which part they entered incorrectly in invalid logins. It was stated which part was entered incorrectly, username or password.

Finally, customers had difficulty in establishing the visual context, they had difficulty understanding how much the given percentages represented when interpreting the employees' scores. Therefore, small explanations were written next to them.

Conclusion and Project Evaluation

At the end of the project, we designed a user-friendly interface thanks to interactive and design principles, which are the main goal of which users can easily interpret operational data. In this process, the first requirements were determined, the functionality of the project was investigated and learned. Each Module was created with dynamic graphics, role-based access and intuitive navigation according to real business needs.

Then, for the design process, it was aimed to design a visual presentation of the data through graphics, the information presented to be editable, and to design an understandably simple and intuitive interface. Finally, an upgradeable structure open to feedback was designed. Meaningful revisions and performance-oriented improvements were made thanks to the iterative design process supported by user feedback.

In general, I did not learn the processes of developing real life corporate applications in this project, as well as how to consider the design, user, interface and user experience.

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