

TED UNIVERSITY

CMPE 491 Senior Project 2022-2023 Fall

Analysis Report

RESERVE IT

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1. Introduction

With the beginning of the millennium, the world started to turn faster with a face paced work environment and technological development. People started to need more time to be able to meet working requirements. This business brings a need for good time management. According to most managers in big companies, time management is the most important part of the work because it helps you reduce stress and prioritize your time. Therefore, the need for a business focused time planning management application for meeting reservations increases day by day. The old meeting reservation software cannot meet the demands of the modern business. The purpose of this project is to create a contemporary product that enhances the meeting reservation ways. While finding out a new solution to the problems of finding an appointment at a suitable time in the comfort of our home, protection of private user information from malicious users is also vital for professionality and ethicality of the software. In this document we are going to analyze the required specifications for functional- requirements, non-functional requirements, pseudo requirements, and system models.

2. Current system (if any)

- There is no predefined system. Everything will be created from stratch.

3. Proposed system

3.1 Overview

The meeting reservation applications used in the past cannot satisfy the new business requirements. The aim of this project is to develop a software that can extend the facilities of meeting reservation applications beyond the current bare situation. We believe that this project will meet strategic, operational, and administrative requirements of business. Also finding out a new solution to the problems of finding an appointment at a suitable time in the comfort of our home by using mobile solutions which are popular and convenient nowadays for users.

Turkey has a marginal socio-economic structure. Football pitches are used by Turkish men of every age. Most of these pitches are used to play football regularly. Every time they want to play football on pitch, they need to research nearby pitches first, then they look for availability of these pitches if they are not available and don't fit with the customer's schedule, this cycle must return to the beginning and people look for new pitches. Also, all these stages are made by phone call without any visual process. Every time in this cycle people need to contact another person to make arrangements. Our system is going to exist to prevent this time loss and dealing with the human relationship as a social constraint.

Turkey has hairdressers for women and men of every age. Especially in the big cities in Turkey, with the effect of the pandemic most of the hairdressers work with a reservation. They do that with a notebook and phone calls. They store the reservation hours and customer info in a notebook. This situation decreases efficiency and causes time loss. And interactivity between customer and hairdresser reduces to the minimum level. Customers must call hairdressers in every unexpected

situation. This is the same process as at the beginning of 2000. There has been no progress since that time. Lastly, the individual reservation system will act like an agenda for people who need time management such as businessmen or teachers. The system will provide them to give appointments to the students or other partners for a real job meeting.

Nowadays, the world is changing, mobile apps reduce the interaction between people and most of the people like it. Even in some of the apps giving tip operation is handled online and it makes people comfortable. The ecosystem which will be developed by us is going to create great communication between buyer and seller. It is going to decrease one-to-one communication. In this way, social stress, talking to another person and asking for something, is going to be reduced.

When we look at the project from a bird's eye view, users can discover the nearby suppliers' providers, their available times, price ranges and the services they offer. They can make reservations by pre-paying some amount on the e-payment system. Also, users are able to comment and evaluate their past deals. We are planning to develop this project for hairdressers, football pitch industry and individuals which will benefit both service seller and buyer.

3.2 System Features

- 3.2.1 Login

• 3.2.1.1 **Description**

Authentication and Login are essential features which allow users to enter the RESERVE IT System. There are main types of users in our application which are "Providers' and "Users". The Tenants (Businesses) should register the System with their regulative tax number (which like "1233214567"), also, they should select a unique password that must be at least eight digits including at least one number and

one capital letter. On the other hand, there is a "Sign in with Google" option with OAuth to help customers to save time. To conclude, Authentication and Authorization are high priority features which help the Reservation system to provide a secure and more accurate authentication system. In addition, without this feature, the system will be open to viruses and hackings which is a major risk.

• 3.2.1.2 Functional Requirements:

- REQ-1: The system shall interact with the user in order to login the RESERVE-IT system with his/her email and password.
 - REQ-1.1: If the password is less than six digits and does not have at least one capital letter the system gives an error that asks the customer to correct it.
- REQ-2: The system database shall consist of a username and a password combination to match the user input on the login page.
 - REQ-2.1: If the system cannot find any matching account information it gives an error. The login screen reopens, and it gives "Login" and sign-up options on the screen.
- REQ-3: The system shall preserve user passwords in a secure manner by using a hashing / signing algorithm supplier like "bcrypt".
- REQ-4: The system shall allow users to modify their login information if they submitted wrong before.
- REQ-5: The system shall allow customers to type a new password when they choose the "I forgot my password" option via sending them an email.
 - REQ-5.1: If the new password is less than six digit and does not have at least one capital letter, the system should give an error that asks the user to modify it.

REQ-6: The system shall send email to the customers who click the "I forgot my password" option which includes OTP code to change their password.

REQ-6. 1: The system gives a message that says, "There is no such email.", if the users write their email address incorrectly or forget to write it.

3.2.2: Register:

3.2.2.1 Description: Registration is an important feature which allows customers to register the application. The customers should register the website with their email, name, surname, date of birth and number. Also, they should determine a unique password that must be at least six digits and one of them must be a capital letter. After registering the application, the customers can login with their emails and passwords. For the registration service the application requires an email/phone verification to inform the user about the events and attendance process. The providers need a different process to register as admins. In this process the providers will ask for a partner and redirect to an internet page or in app solution which will ask about the name, surname of the owner of the provider, phone number, location, tax number, business name and valid account number.

3.2.2.2 Functional Requirements

REQ-1: The system shall save name, surname, email, date of birth, address, password, and number information to create an account.

REQ-1.1: Error condition: If the password is less than six digits and does not have at least one capital letter the system gives an error that asks the customer to correct it.

- REQ-1.2: Error condition: If one of the areas is not provided the system shall give an error with the name of unprovided that says Area cannot be empty.
- REQ-2: The registration system shall not allow any duplicate email address entrance.
 - REQ-2.1: Error condition: The system gives a message that says, "This email already has an account."
- REQ-3: The system shall be able to let users upload a profile picture in format PNG, JPG, JPEG.
 - REQ-3.1: If a photo tries to be uploaded in the wrong format, the system gives an error message "This format photo is not supported"
- REQ-4: the system shall check tax id, business information, and user personal information to make sure the partner is a real business.
 - REQ-4.1: the system shall give error if any of the information is missing which says, "please fill missing information's.
 - REQ-4.2: The system checks tax id and from the ministry of works and compares with the provided information. if the information is not the same, the system gives an error message "the provided information is not valid".

3.2.4 Delete Account

3.2.3.1 Description: Users and providers can delete their account by clicking the delete my account button.

3.2.3.2 Functional Requirements:

REQ-1: System shall show confirmation message about account deletion to user.

REQ-2: If deletion operation fails, the system shall show an error message to the user.

REQ-3: The system should show an information message about data loss after account deletion.

3.2.4 Change / Forgot Password

There is a "I forgot my password" and "Change password" options to help users to reset/change their passwords. When they use "forgot password" they, the system shall send OTP code to a given provider email, if user entered this code correctly system opens change password page to enable user to change his/her account password.

REQ-1: System shall send OTP code when user clicks "forgot password" and enters his email.

REQ-1.1: If the user entered a invalid email system should warn the user "There is no account with this email".

- REQ-2: System shows an OTP Code field screen in order to user can enter sended code to go "change password" screen
 - REQ-2.1: If the user entered OTP Code wrong, the system shall show a warning message.
- REQ-3 The system should navigate the "change password" screen to change account password when the user clicks the "Change Password" button.
 - REQ-3.1: When user enters valid format of password, the system shall change user's password in app otherwise give error.

3.2.5 Log out Account

3.2.5.1 Description: Users and providers can log out their account by clicking the logout button.

• 3.2.5.2 Functional Requirements:

- REQ-1: System shall log out from account page with current information to user.
- REQ-2: The system shall successfully log out from the user account when the user clicks the Logout button.
 - REQ-2.1: The system should warn the user, "An Error Occurred in Logging Out" if the system could not exit from the system successfully.

3.2.6 Update Account

3.2.6.1 Description: Update Account feature provides users to change their personal credentials and information. Users and Providers should be able to use this feature. They can adjust their profile information whenever they want.

3.2.6.2 Functional Requirements:

- REQ-1: System shall show "Update My Profile" page with current information to user.
- REQ-2: System shall send confirmation message to user when user information is successfully updated.
- REQ-3: The database shall perform necessary modifications in the user-provider tables permanently.
- REQ-4: System shall abort the operation and take back users to the main page if confirmation is not accepted.

3.2.7 Make Reservation

• **3.2.7.1 Description:** Users can create a reservation in the Reserve It system. First step of creating a reservation is filtering or viewing nearby among possible providers. After filtering, the user will select the available reservation on the chart and create a new reservation. While creating reservations special attributes will be gathered from users for their reservation type.

• 3.2.7.2 Functional Requirements:

REQ-1: System shall filter selection options and return list of filtered providers to user.

REQ-2: The user shall select a provider to use services of this provider. And the user shall be able to see providers with all features about the services, price, and location.

REQ-3: The user shall select an available date and a provider to reserve alongside with special attributes selection. Request of the reservation is sent to the provider to approve or deny it.

REQ-3.1: The system shall show a confirmation message as "Do you confirm this reservation?".

REQ-3.2: If the user confirms the selection, the system should apply the creating request and create the reservation. If the user will not confirm, the procedure should be canceled.

REQ-3.3: If reservation is successfully made the system shall show a success message.

REQ-3.4: If reservation is nor successfully made the system shall show an error message.

REQ-4: When a user makes a reservation system should be able to send notification to the service provider. And this provider should see this reservation on his/her chart.

REQ-5: After the user selects necessary information about the reservation system, the payment pop-up should be shown.

REQ-6: When pop up is open, user enter his payment information, then system checks his/her payment

REQ-6.1 If payment is successful the system shows a successful payment message.

REQ-6.2 If payment is not successful the system shows an error occurred during the payment message.

3.2.8 Cancel Reservation

3.2.8.1 Description: If the customer wants to cancel the reservation after making it, he/she can facilitate this decision by sending a request. Before a dedicated amount of time user can directly cancel his/her reservation. But after this time refund operation will not be provided Also, providers shall be able to cancel the reservation by giving their cancellation reasons. Additionally, excessive amounts of denial can have burdens for the providers. They lose priority in nearby providers list.

• 3.2.8.2 Functional Requirements:

REQ-1: The system shall send the customer's cancel reservation request to the API.

REQ-2: The system shall show a confirmation message as "Do you agree to cancel reservation?".

REQ-3: If the customer confirms the cancellation, the system shall apply the reservation cancellation.

REQ-4: System shall inform the user that their reservation is canceled.

REQ-5: When providers try to cancel reservations, the system shall show a confirmation message as "Do you agree to cancel reservation?".

REQ-6: The system shall ask the provider "what is the excuse of canceling" to notify the customer.

REQ-7: If the provider writes reason and confirms the cancellation, the system should apply the reservation cancellation.

REQ-8: System shall inform the user that their reservation is canceled with reason by sending notifications.

3.2.9 View Reservations

• **3.2.9.1 Description:** If a user wants to see all reservation history and upcoming reservations, the user can view them by clicking "My reservations".

• 3.2.9.2 Functional Requirements:

REQ-1: The user shall be able to see past, active(reserved) and canceled reservations.

REQ-1.2: The system shall respond to the message "There are no reservations", if there is no reservation.

REQ-2: If there is no reservation there is a button to navigate users to the reservation-nearby providers page to make new reservations.

REQ-3: There are 3 sections in viewing reservations which are "active" "success/completed" and "rejected/canceled".

REQ-3.1: Active is denoted the reservations that sends to provider approval. They can be both sent to success or canceled according to the provider's response.

REQ-3.2: Success is denoted reservation booked successfully. In other words, the user makes a reservation and pays %25 of the service cost and the provider accepts the booked reservation.

REQ-3.3: Canceled is denoted the rejected reservation by providers. If a provider cancels a reservation request. System

shall send notification to the user about it and this reservation status changed to "canceled".

REQ-4: Users can also cancel the reservations If they cancel less than 48 hours before reservation, they may be charged a cancellation fee up to the full amount of the services booked. Otherwise refund option cannot be used.

REQ-5: Users can perform cancel and sign in operations on the "active" section.

REQ-6: If the user clicks the "sign in" button they can pay the rest of the money which is paid just before the get service.

REQ-7: Sign in button redirects user to payment pop up to pay rest of the money.

REQ-8: Users and providers shall be able to see details about reservation which consist of cost, supplied services and date.

3.2.10 View Nearby Providers

• 3.2.10.1 Description

Users can see nearby providers according to their current location. They can also specify different locations to see other providers. After the user selects his/her location, the system should list all businesses with respect to their distance, popularity, top rates etc.

3.2.10.2 Functional Requirements:

REQ-1: The system shall fetch the nearby suppliers according to the user's currency location.

REQ-2: The user shall monitor the provider's profile.

- REQ-3: The user shall comment and rate the provider's profile.
- REQ-4: Users shall be able to see providers comments and ratings.
 - REQ-4.1: If there are no comments/ratings show "No data provided for this business."
- REQ-5: High Rating data should increase the visibility and priority of providers in the "Top Rated" list.
- REQ-6: Providers should be sorted with respect to their distance from user location.

3.2.11 Favorite Providers

• **3.2.11.1 Description:** Users can add some providers as a favorite and they will be visible under the "Favorite" section.

• 3.2.11.2 Functional Requirements:

- REQ-1: The user shall be able to see past and upcoming reservations.
 - REQ-1.2: The system shall respond to the message "There are no reservations", if there is no reservation.
- REQ-2: User should be able to add favorite providers to his/her "My favorites" list.
- REQ-3: User should be able to remove providers from his/her "My favorites" list.
- REQ-4: Users can be able to see the provider detail screen and see current calendar / available time for that provider.

3.2.12 Provider Admin Panel

3.2.12.1 Description and Priority

"Providers" are the main component in our Reservation System. It is responsible for "Adding", "Removing" and "Editing" their possible services they offer to users. These features have high priority because our system uses them to specify available services that business have.

3.2.12.2 Functional Requirements:

REQ-1: The system shall "Provider Service Creation" window when the user clicks the "Specify Business Services" button.

REQ-1.1: <Error condition>: The system gives a message that says, "An Error Occurred in determining services", if the provider will enter inaccurate or insufficient information.

REQ-2: The system shall create services for this business with given information on the database when the user clicks the "Specify Services" button into the "Service Creation UI".

REQ-2.1: <Error condition>: The system should warn the user, "An Error Occurred in Specifying Services on Database" if the system could not perform the data addition on database successfully.

REQ-3: The system should monitor the new "List of Reservation" when the provider clicks the "Show Reservation/Dashboard" section.

REQ-4: The user shall be able to select a reservation from the "List of Reservation" in order to cancel it by its reason. After the selection ("when the user clicks the "Cancel/Deny Reservation" button") the system should delete the reservation of corresponding customers on the database.

REQ-4.1: <Error condition>: The system should warn the user, "An Error Occurred in Deleting a Reservation from the Database" if the system could not perform the deletion on the database successfully.

REQ-5: Providers should be able to see his proposed earnings as graphical notation.

REQ-6: Providers can be able to adjust their profile information.

3.3 Nonfunctional Requirements

3.3.1 Performance Requirements:

- The system shall be able to service at least 1000 users simultaneously.
- The system shall respond to the event-triggered stimulus in at most 5 seconds latency.
- The system performance may vary for different operations in different modules, but it should not exceed 10 seconds.
- The Reserve-it System shall be available to all actors during all times (7/24). Also, Downtime within normal working hours shall not exceed 10 minutes in any one day.
- The system shall be designed according to minimizing the event that could cause the failure. The system shall respond to at least 95 "get" and "post" requests without any error among 100 requests.
- The system shall restart in at most 5 minutes after the failure of the system in order to increase robustness of the system.

3.3.2 Safety Requirements

• Any loss of data can cause chaos in the Company because the system can create a break-out in the company. To prevent data loss, maintenance should be done every 7200-hour running.

- The system should not give permission to any operations that should not emerge. For example, allowing someone to give a special gadget to an actor who is not allowed to have it. The system must not allow every user to reach hardware's which holds the program; only a trusted user will have the ability to reach those hardware's.
- The System shall not operate if hardware temperature exceeds 120 Celsius.
- The system Mean Time to Failure shall be stored to examine the system and hardware risks.
- The System shall not operate under fire and back-up database directly to the cloud. This action will minimize data losses in case of fire.
- If a natural disaster causes System failure the System should back-up the database directly to the cloud.

3.3.3 Security Requirements:

- System shall provide authentication to users to prevent malicious user activities.
 - System should allow 1 gigabyte data insertion to the database per day to prevent bad data and attacks from users because a malicious user can be working in the company and try to penetrate the database. In order to fulfill the strict Protection of Personal Information Act (POPI Act), "Sensitive Data" should be hashed while inserting into databases such as national ID numbers, Tax Number, phone number and home address.
 - A security token should be provided to make authentication and prevent two-factor authentication (2FA) for a user to prove their identity in a login process.

3.4 Pseudo requirements

- Adaptability: The software is designed to add new features (components) and make changes when needed.
- Availability: Availability of the system is 7 days / 24 hours.
- Maintainability: The System should be written in such a way so that it can evolve to meet the changing needs of companies such as construct the system modules with high cohesion loose coupling.
- Testability: Every feature can be tested. Also, every feature must be tested several times before giving the software to the client.
- Reliability: The system shall be designed according to minimizing the event that could cause the failure.
- Reusability: The System should be designed in a way that could be easily adapted to another Company's Human Resources Management System with some component adaptations.
- Usability: The system shall be understandable and User-friendly interfaces to make the program usable.

3.5 System models

3.5.1 Scenarios

3.5.1.1 Login Scenario:

- User opens the Reserve Its application, Login and Sign up (Register) buttons are displayed on the screen.
- When the user presses the Sign Up (Register) button, a registration page is displayed on the screen that wants an input from the user for email, name, surname, date of birth and phone number.

- Application informs the user that an email verification is sent to specified e-mail that is given by the user. After this user would be eligible to login to the system.
- User presses Login button to login on system, application displays login page and gives section to user input. Users write their email and password and press login.
- If the user writes wrong information the system asks user to modify the password.
 - If user forgot password, user presses forgot password button, forgot password page is displayed in on the screen for user input, user specifies its email and submitted, a password change email will be sent to user.
 - The user will put the code that has been sent as an email into the opened box. if the code is true then another screen will be displayed to the user, The user will write a new password to the boxes and send to it. After the user created the new password, the user will be redirected to the login page.

3.5.1.2 Make Reservation:

- User opens the application and login to the system.
- The user chooses the service provider type to make a reservation then filter the providers according to given filter options.
- The user chooses a provider to make a reservation and redirect to the providers landing page.
- In the landing page the user chooses available options to make a reservation and chooses accordingly after choosing required options to make a reservation, the user sends a reservation request to the provider.

- The user gets redirected to the payment page and pays the required amount of money.
- Provider gets a notification about the reservation request then accepts or rejects the request.
- If the provider accepts the request the reservation will be executed. If the provider rejects the request, the provider has to provide extra information that indicates the reason for the rejection.
- The provider's dashboard will be updated accordingly.
- The user will be informed with notification about the reservation process.
- If the reservation accepted by the provider user's reservation will be updated and shown in the user dashboard.

3.5.1.2 View Reservation:

- User opens the application and login to the system.
- chooses one of the tabs that indicates the reservation status, active, success and canceled.
- The active button indicates the reservation process such as reservation requests, accepted requests, waiting requests to pay the rest of the money.
- The success button indicates the finished and all service paid reservations.
- The cancel button indicates the canceled reservations.
- If there is any reservation that the user has the information about reservation and their status displayed to the user else there is no reservation message will be displayed.

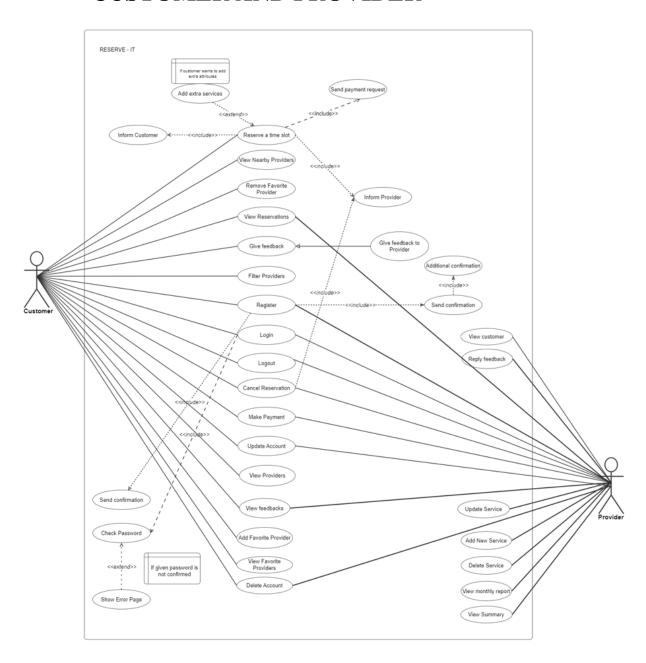
- If the user clicks the reservation the reservation information will be displayed, the displayed information will include required information about the provider.
- The user can reach the provider profile by clicking the provider profile or name and get redirected to the provider profile.
- The provider profile will have a star shaped button, if the user clicks to the button the provider will be added to the favorite provider list of the user.

3.5.1.3 Cancel Reservation:

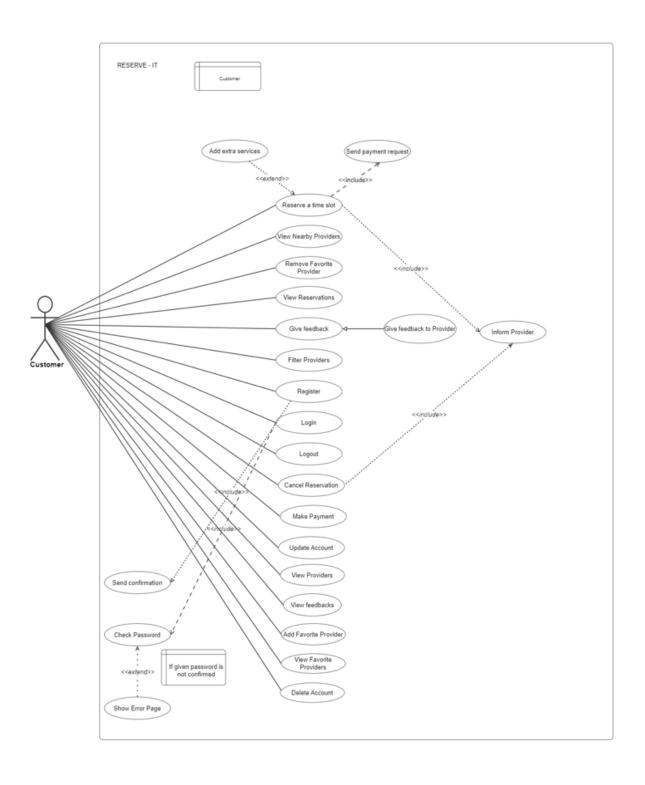
- User opens the application and login to the system.
- The active button indicates the reservation process such as reservation requests, accepted requests, waiting requests to pay the rest of the money.
- If the user clicks on one of the active reservations, the user will be redirected to the reservation information page.
- After the user is redirected to the reservation information page, the page may include or not include a cancel reservation button according to reservation policy.
- If the user clicks the cancel reservation button, the reservation will be canceled according to the cancellation policy.

3.5.2 Use Case Models

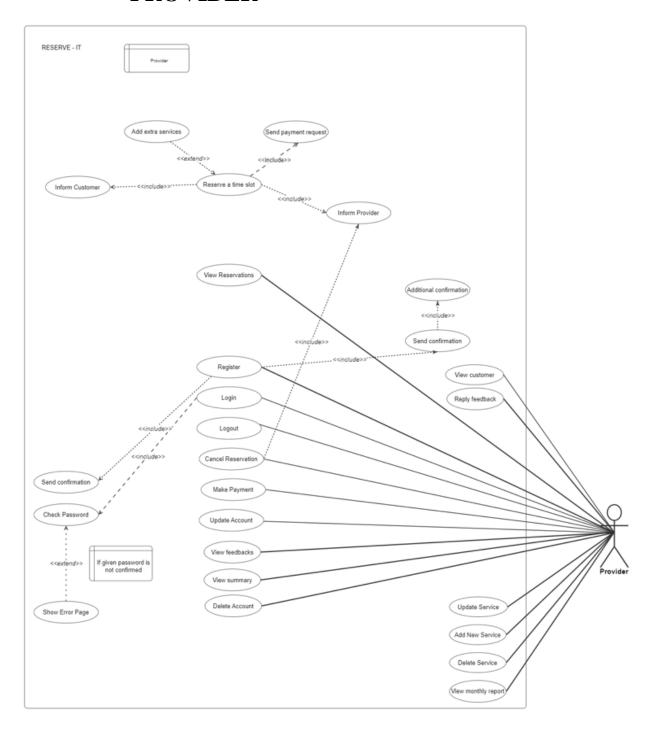
- CUSTOMER AND PROVIDER



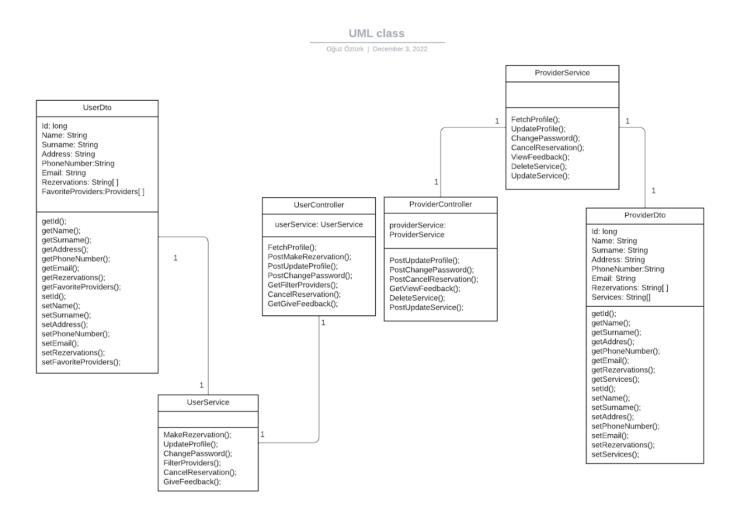
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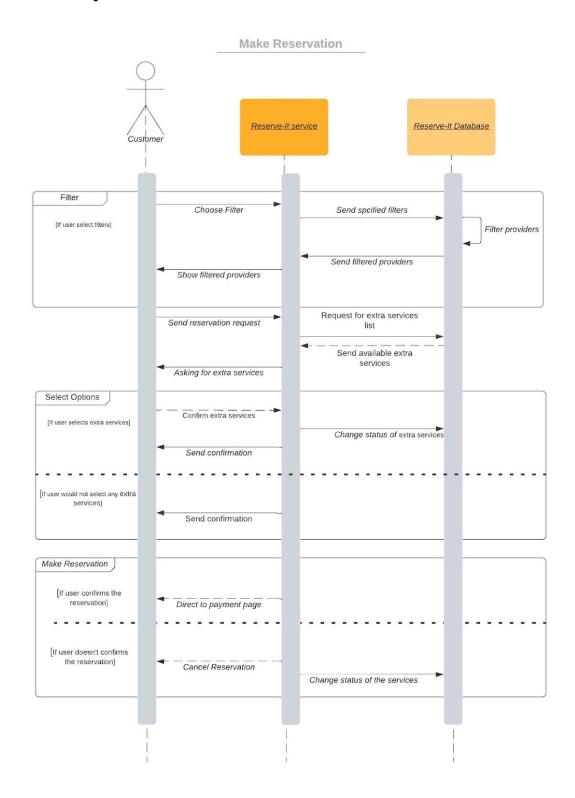
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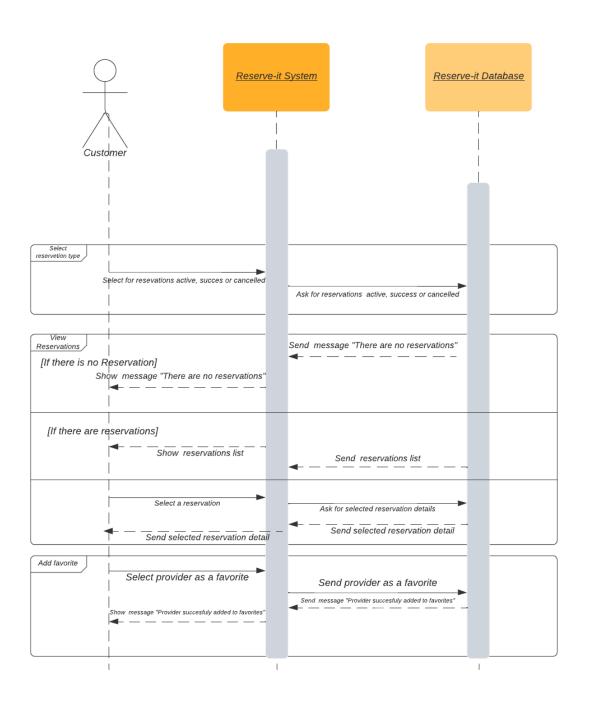


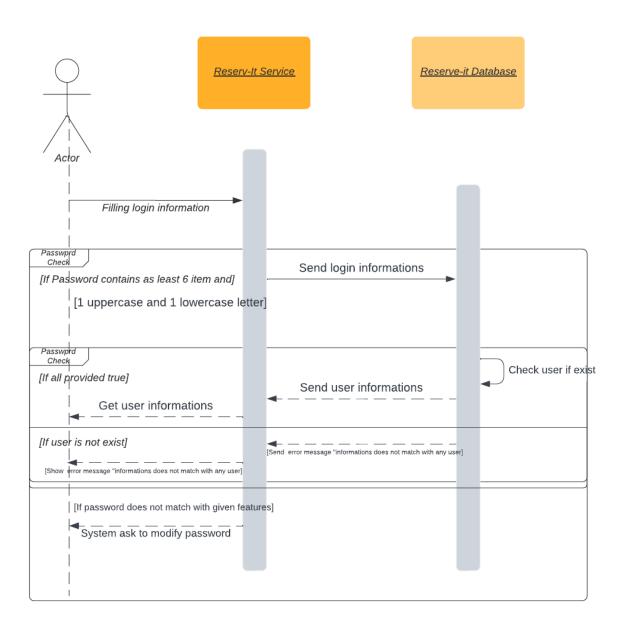
3.5.3 Object and class model



3.5.4 Dynamic models

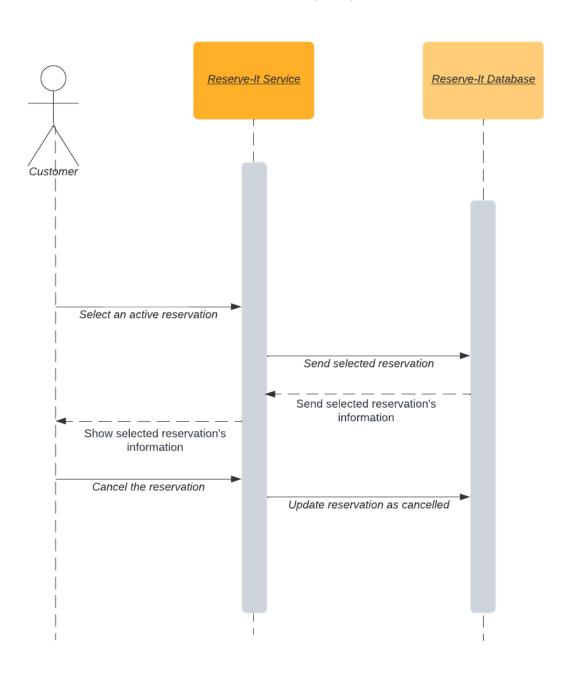






Cancel Reservation

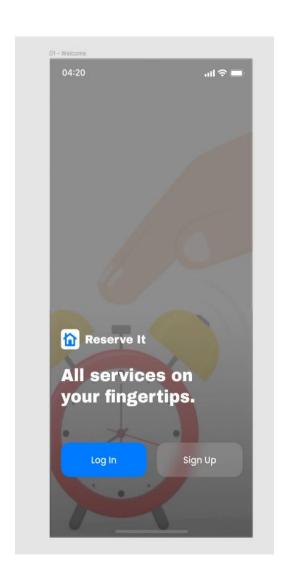
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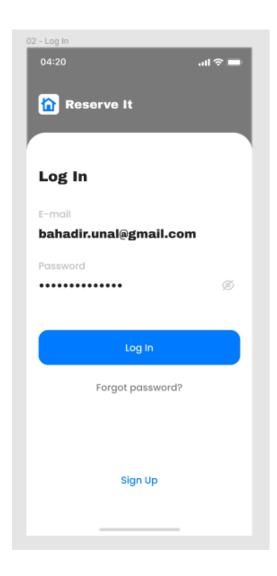


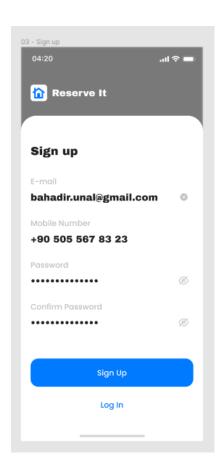
3.5.5 User Interface - Navigational Paths and Screen Mock-ups -USER PANEL-

-Please make sure to check out for more detailed view--Under the "figma" section-

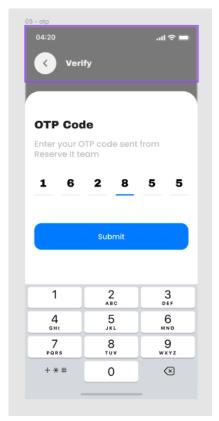
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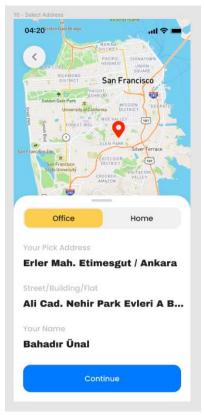


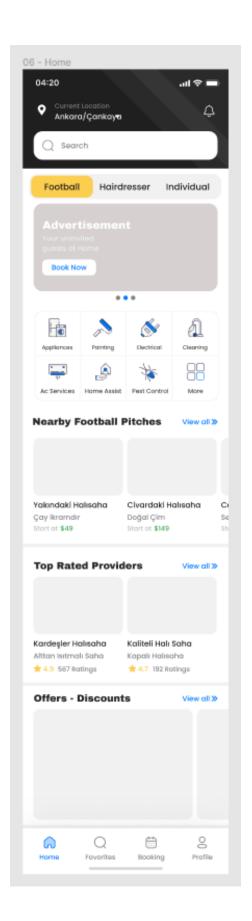


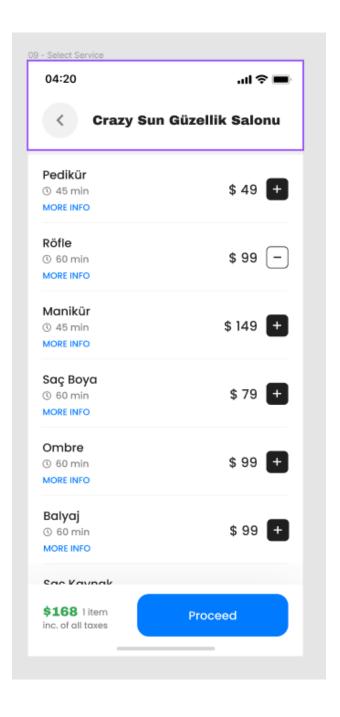


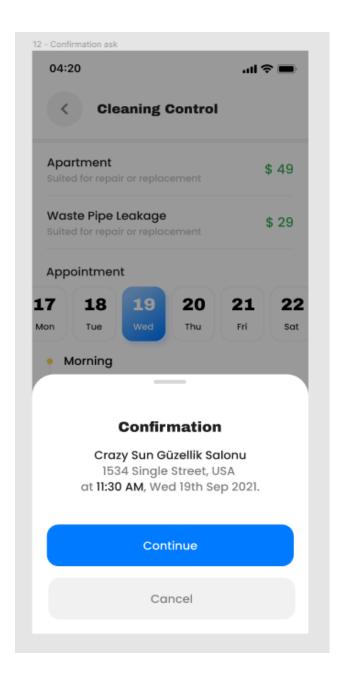


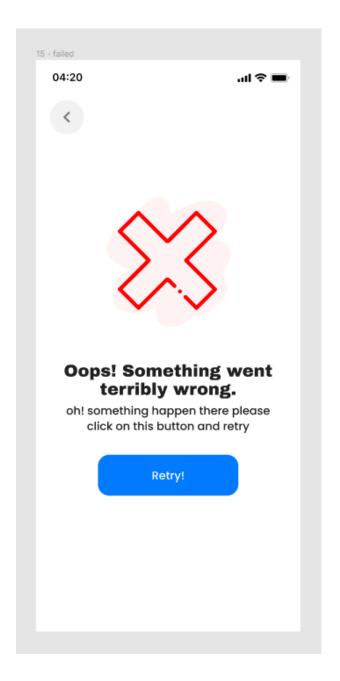


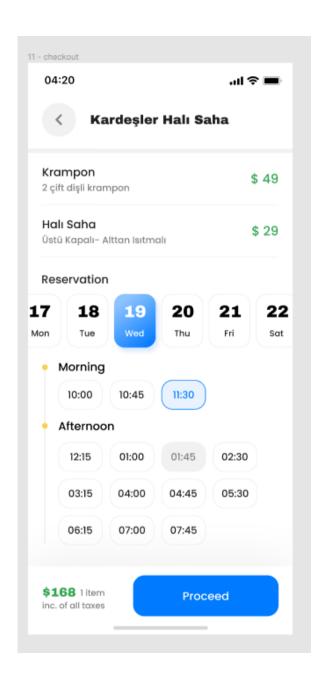


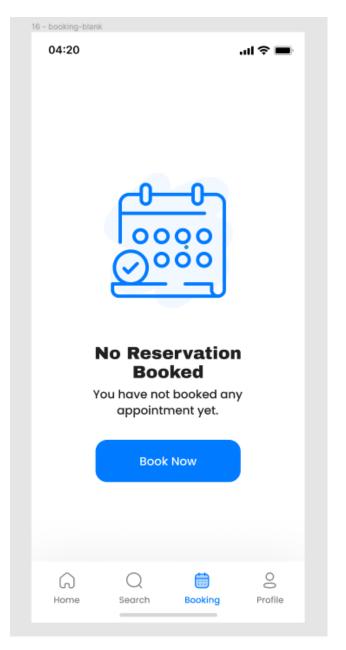


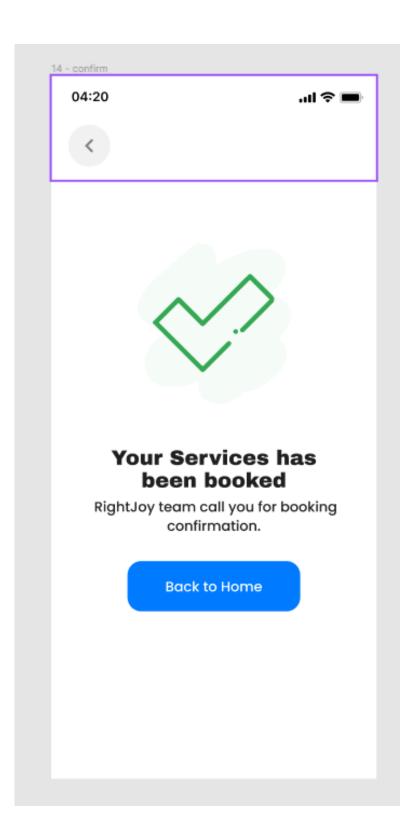


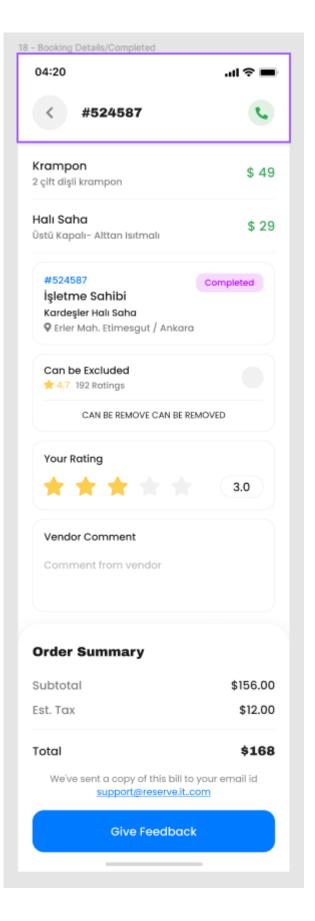


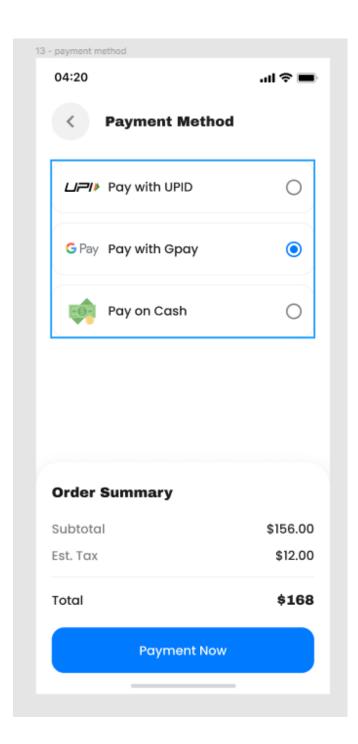


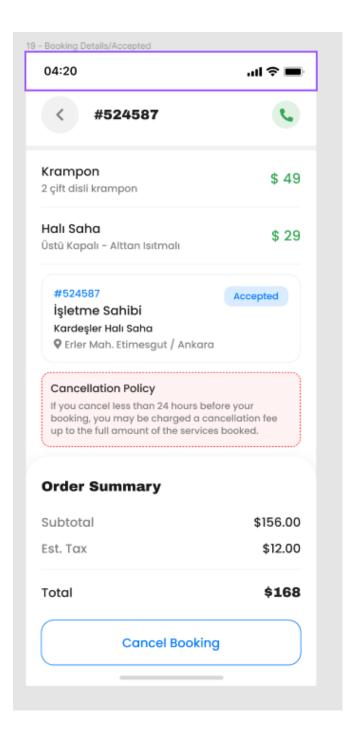


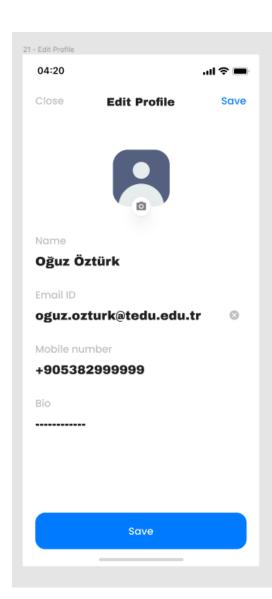


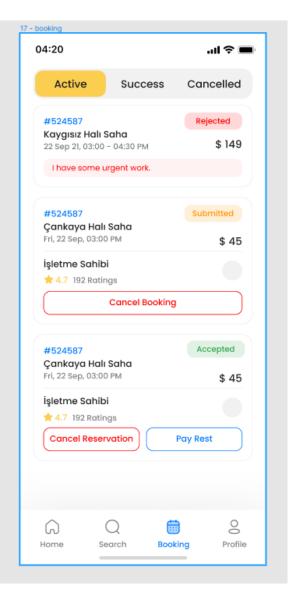


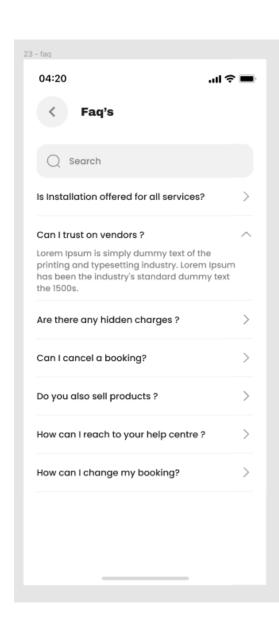


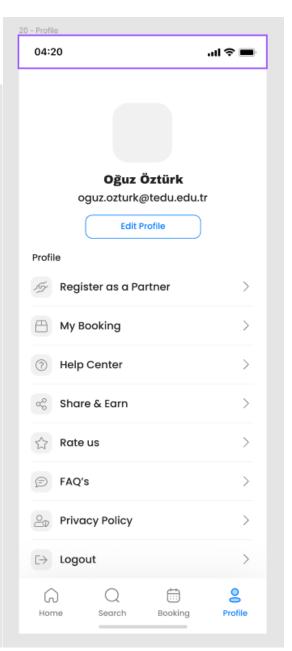


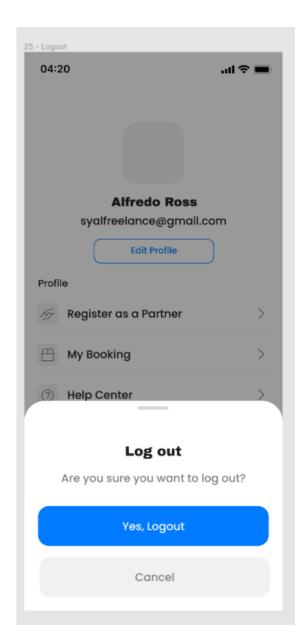


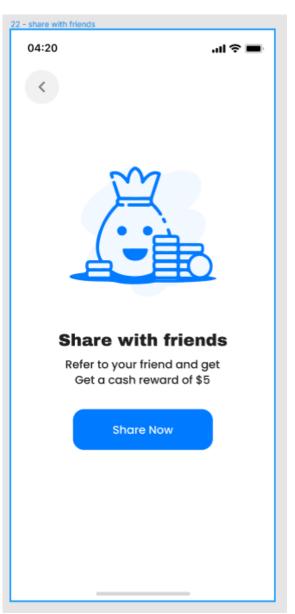












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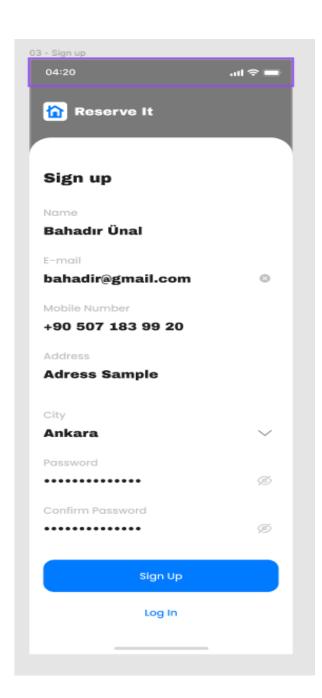


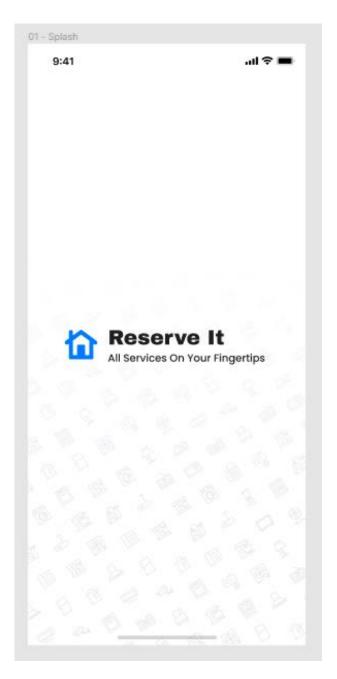
Privacy Policy

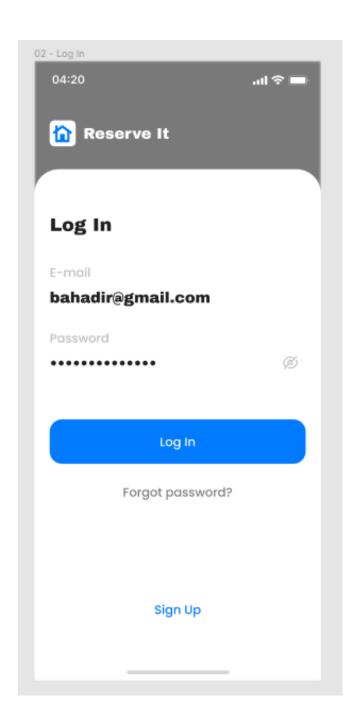
Acceptance of the Privacy policy

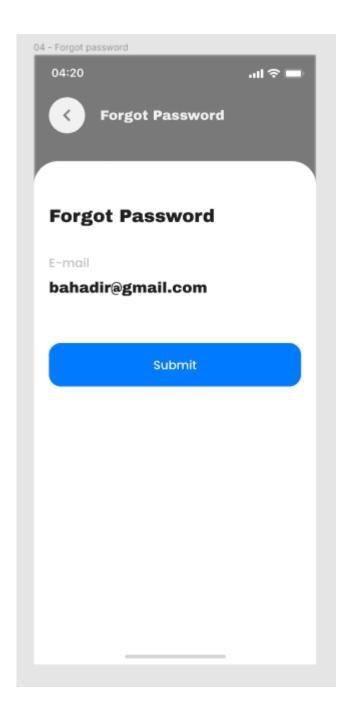
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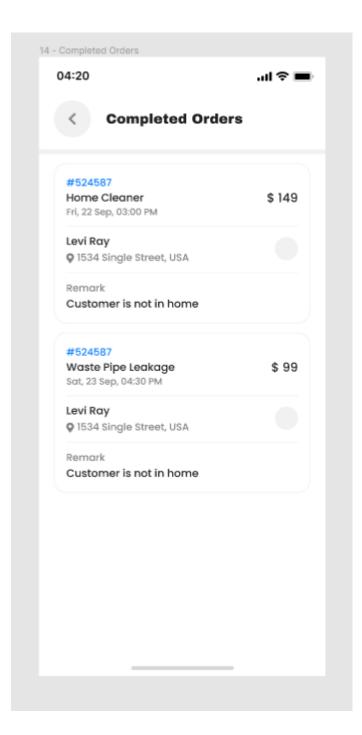
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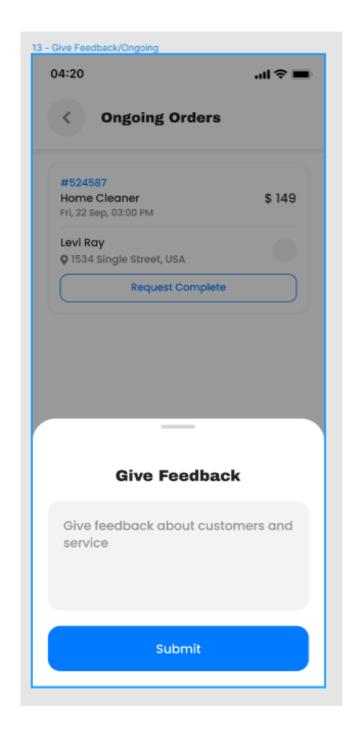




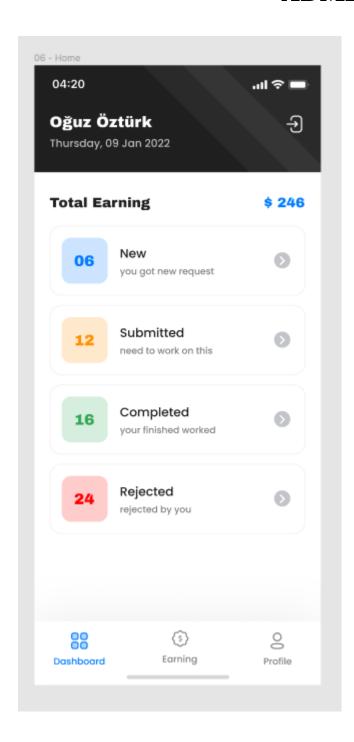




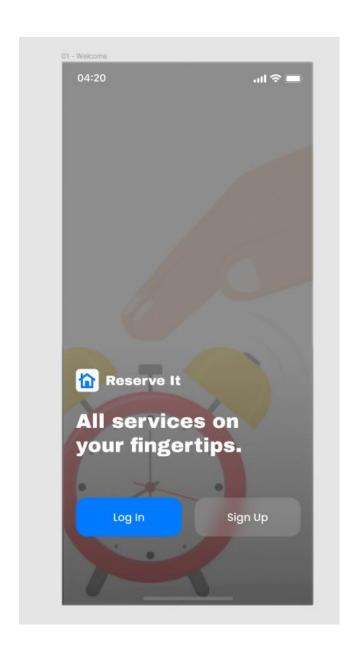


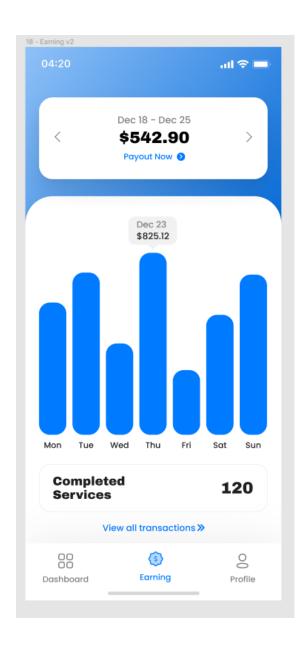


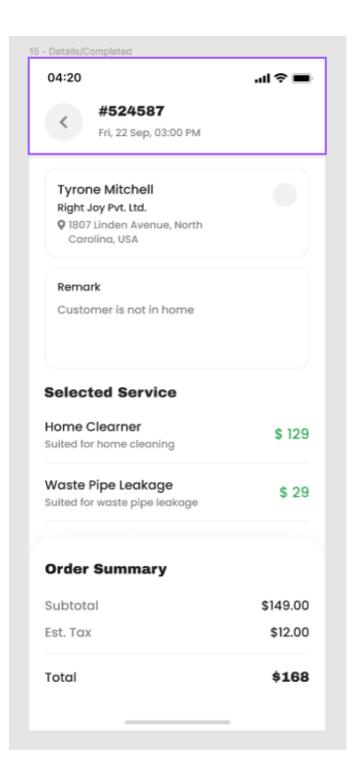
-ADMIN PANEL-

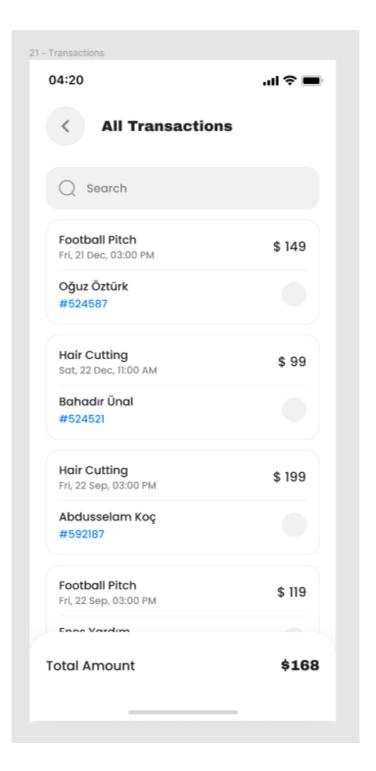












4. Glossary

The System should be integrable in terms of database variations. A company who demands to use HRMS in a different database, the system should rapidly accommodate the change of database requirements in order to ensure maintainability of our software.

Application Programming Interface (API): is an application programming interface (API or web API) that conforms to the constraints of REST architectural style and allows for interaction with RESTful web services. REST stands for representational state transfer and was created by computer scientist Roy Fielding.

Extensible Markup Language (XML): A markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable in accordance with the World Wide Web Consortium (W3C) specification.

React-JS: React is a declarative, efficient, and flexible JavaScript library for building user interfaces. It lets you compose complex UIs from small and isolated pieces of code called "components".

Flutter: Flutter is Google's open-source technology for creating mobile, desktop, and web apps with a single codebase. Unlike other popular solutions, Flutter is not a framework or library; it's a complete SDK – software development kit

Firebase Cloud Messaging: Firebase Cloud Messaging (FCM) provides a reliable and battery-efficient connection between your server and devices that allows you to deliver and receive messages and notifications on iOS, Android, and the web at no cost.

Hypertext Markup Language (HTML): The standard markup language for creating web pages and web applications in accordance with ISO/IEC 15445 and W3C HTML5.

CSS: CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language.

JavaScript: JavaScript is a scripting language that enables you to dynamically update content, control multimedia, animate images, and pretty much everything else.

Spring Boot: Spring Boot is one of the best backend frameworks that developers count on while performing backend web development tasks. It is a Spring-based framework that allows developers to write production-grade backend web applications in Java.

JAVA: Java is a widely used object-oriented programming language and software platform that runs on billions of devices, including notebook computers, mobile devices, gaming consoles, medical devices, and many others.

Hypertext Transfer Protocol Secure (HTTPS): A communications protocol for secure communication over a computer network using Hypertext Transfer Protocol (HTTP) within a connection encrypted by Transport Layer Security (TLS), or its predecessor, Secure Sockets Layer (SSL).

JavaScript Object Notation (JSON): An open-standard file format that uses human readable text to transmit data objects consisting of attribute-value pairs and array data types.

Mean Time to Failures (MTTF):

The predicted average operation time for a system replaced after a failure.

5. References

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- iii. Software Engineering by Ian Sommerville 10th Edition Retrieved from: https://mycourses.aalto.fi/pluginfile.php

java: https://www.ibm.com/cloud/learn/java-explained

• Flutter: https://flutter.dev/

• ReactJs: https://reactjs.org/

• JavaScript: https://www.javascript.com/

• Spring boot : https://spring.io/projects/spring-boot

• Firebase: https://firebase.google.com/

Software Requirement Specification (SRS) Format: https://www.geeksforgeeks.org/software-requirement-specification-srs-format/