



# Shopping List App

## The Innovation Squad

### Project Report

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# **1 INTRODUCTION**

## **1.1 Project Scope**

The purpose of this project is for users to create their own shopping lists and manage these lists as they wish. Thanks to this list, the user has the opportunity to observe whether the product in the list is in stock or whether it is a favourite product. This project, which securely stores the data entered by the users, allows users to create shopping lists and follow up on the products in a pleasant way with features that increase the user experience provided by the project to the users. For example, users can add a reminder message about which product to buy and when, thanks to the reminders that users put on the products on their lists. In addition, users can share their shopping lists with other users through this application. Thus, a shared shopping list is formed among users. Shared users can edit this list as they wish.

## **1.2 Target Audience**

The application has been created for users who want to create a list of their shopping, edit and share this list. In addition, users can add reminders to their purchases through this application and notify the user of the current discounts. With these features, the application can be used by almost everyone.

## **1.3 Technical Details**

.NET Core will be used for the web application side of the project and .NET MAUI will be used for the mobile application side. Also, MSSQL will be used as a database.

## 2 User Definitions

### 2.1 General User

- General users register to the application with their information such as username, password, email, phone number. They can also exit from the relevant place whenever they want.
- Users can log in and out of the application entering their information.
- Users can delete their accounts whenever they want.
- Users can add new products to the application.
- They can make shopping lists in the app and share these lists with others.For sharing, there are options to share the code, copy the link, and use WhatsApp.
- Discounts and campaigns made in the application are notified to general users.
- Sellers can offer discounts on their products.
- Users can add reminders to remember their shopping times.Reminders send emails when the time comes.
- Users can create shopping lists.
- Users can delete their shopping lists whenever they want.
- Unless others share their shopping lists, they cannot access them.
- They cannot access the personal information of others in any way.
- They cannot make changes to the interface or code of the application.

## **3 REQUIREMENTS**

### **3.1 Functional Requirements:**

- Users should be able to login with usernames and passwords.
- New users should be able to register with creating new usernames and passwords. New user must enter verify code.
- Users can edit their profile.
- Users should be able to create shopping lists.
- Users should be able to share created basket with link or share code.
- Users should be able save shared carts to their own account.
- Users should be able to reset their forgotten password. Thus users can enter new password and users must enter verify code.
- Users can send contact mail to the developers.
- Users should be able to sell product.
- Users should be able to search items with keywords, product name and category name.
- Users can categorize the items.
- Users can add reminders to their shopping lists. The application should check if the reminder date is current, and if so, send a reminder to the user via email.
- Users should be able to mark items as favourites.
- Users should be able to add and edit addresses.
- The application should provide sales details to users.
- Users should be able to share product from url and whatsapp.

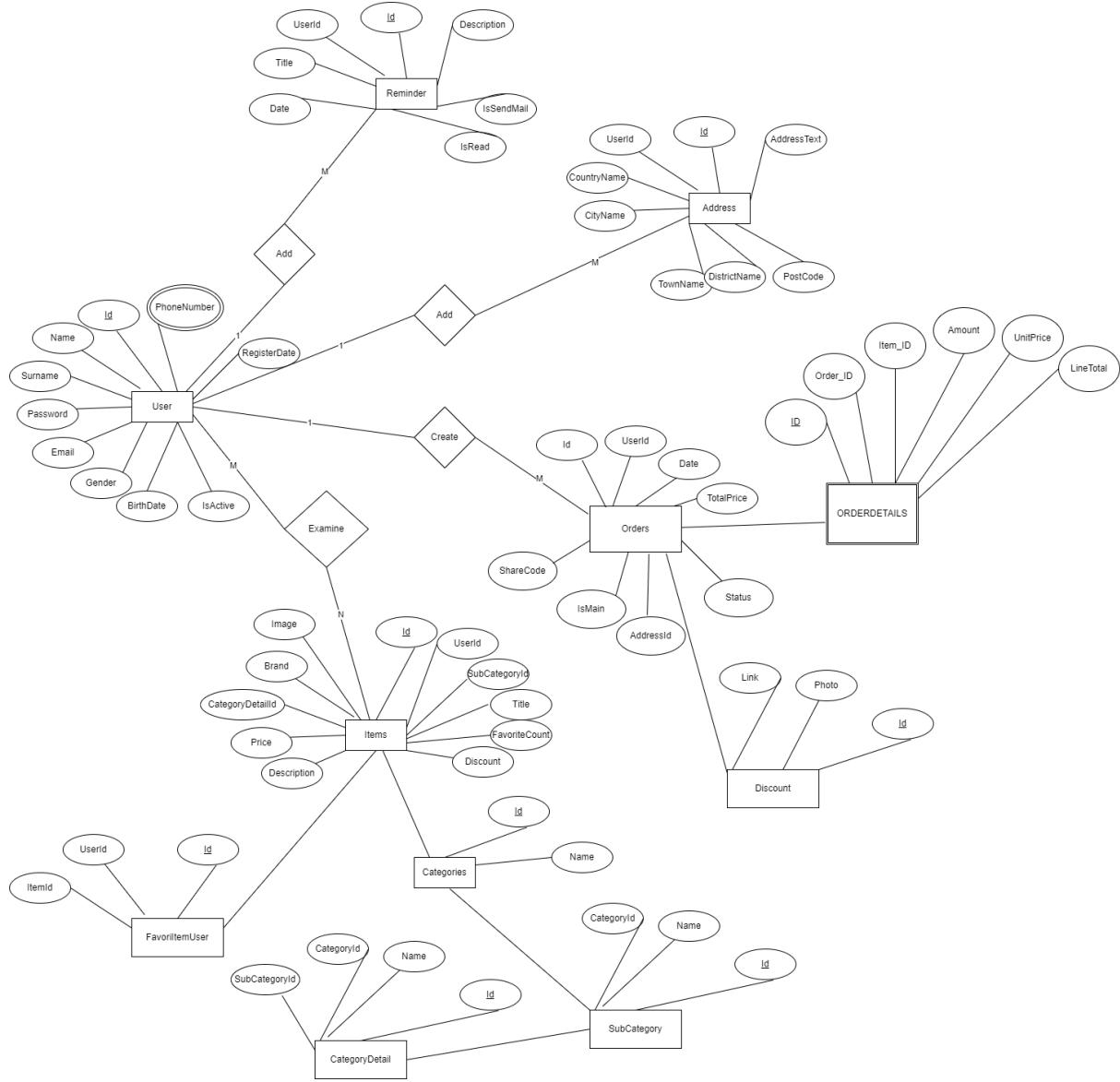
- The user can define discounts on their own products.

### **3.2 Non-Functional Requirements:**

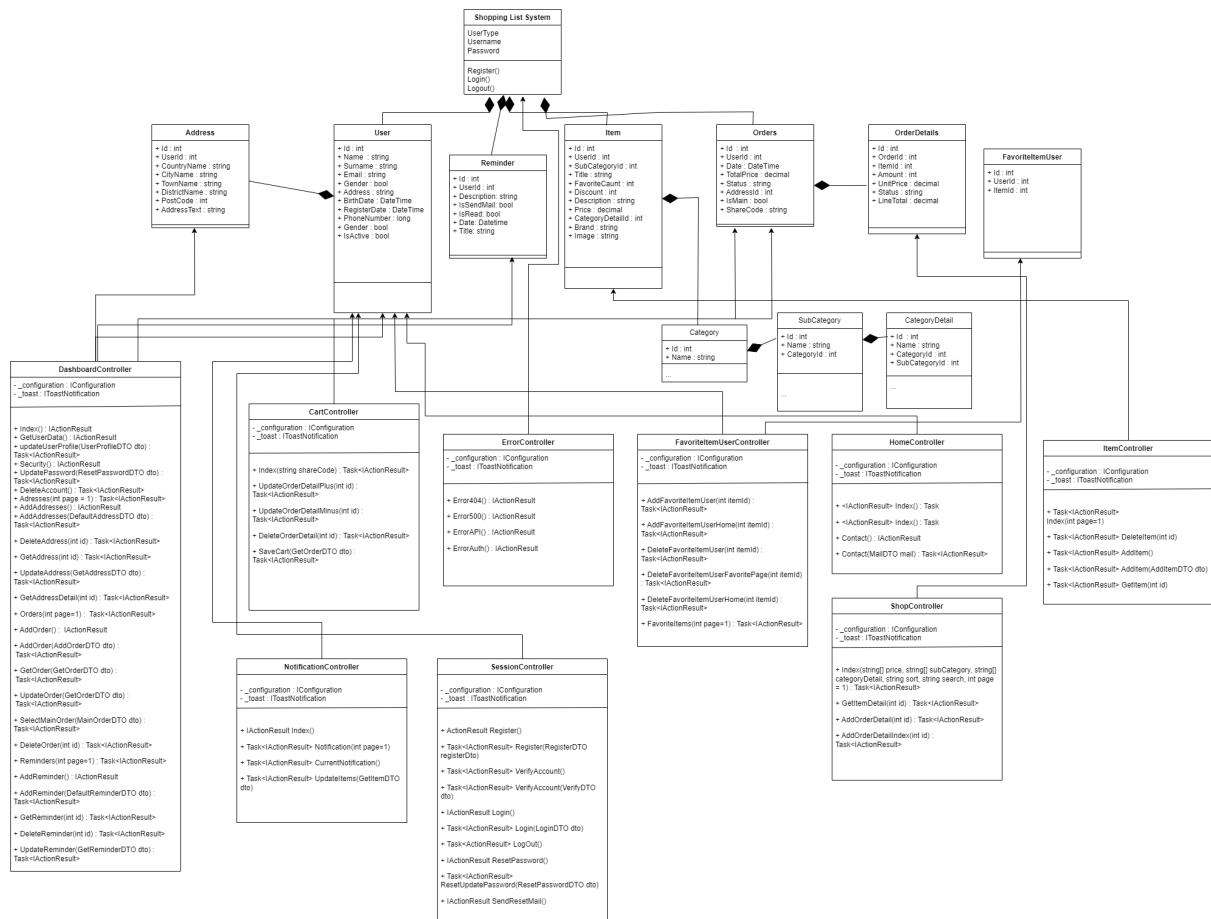
- The application should be compatible with a database to provide a faster searching action to users.
- The application should backup user data securely.
- The application should be synchronized with multiple devices.
- The application should be accessible from all platforms. (Windows, Android, IOS)

## 4 Database Design

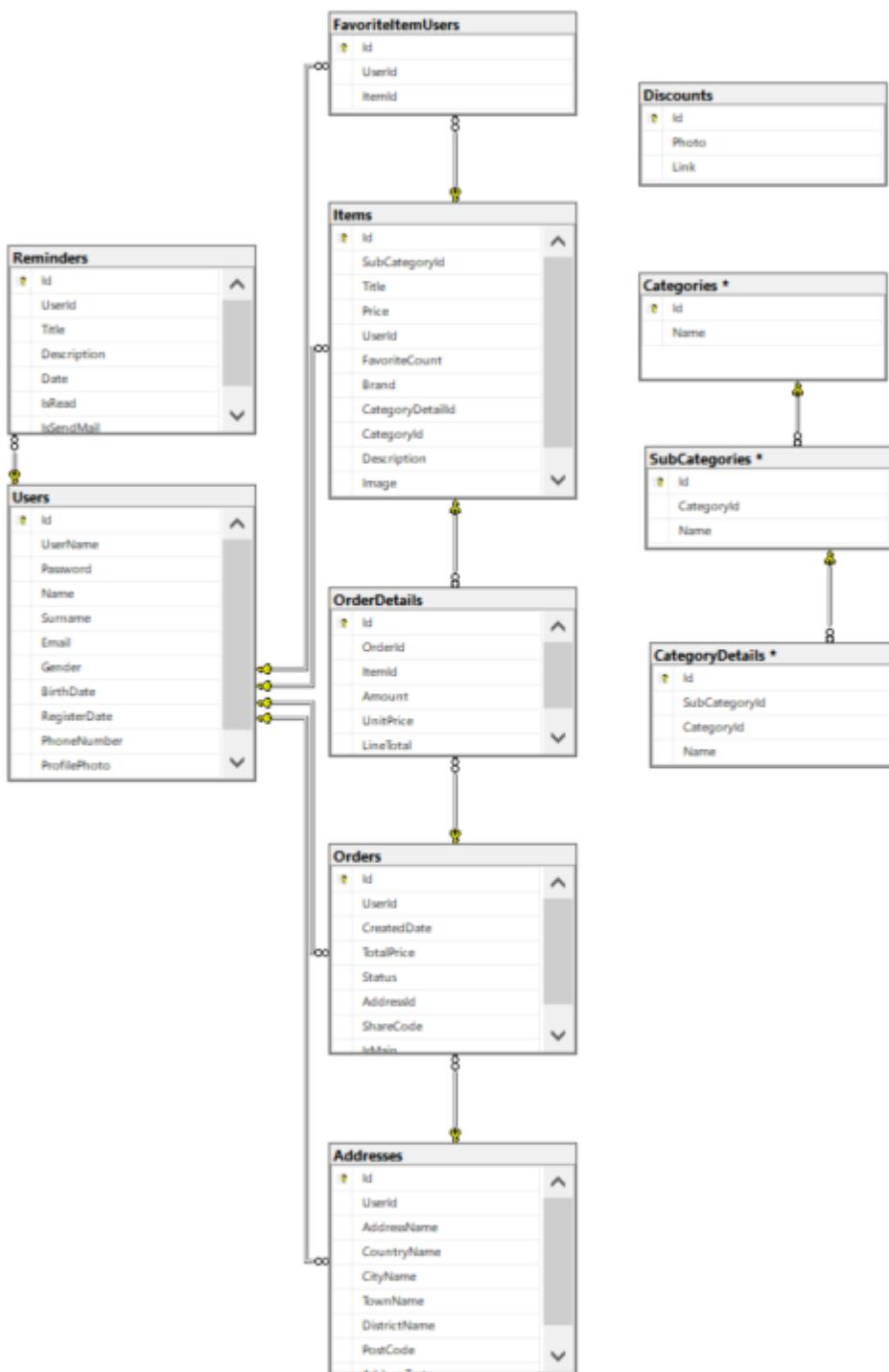
1- ER Diagram:



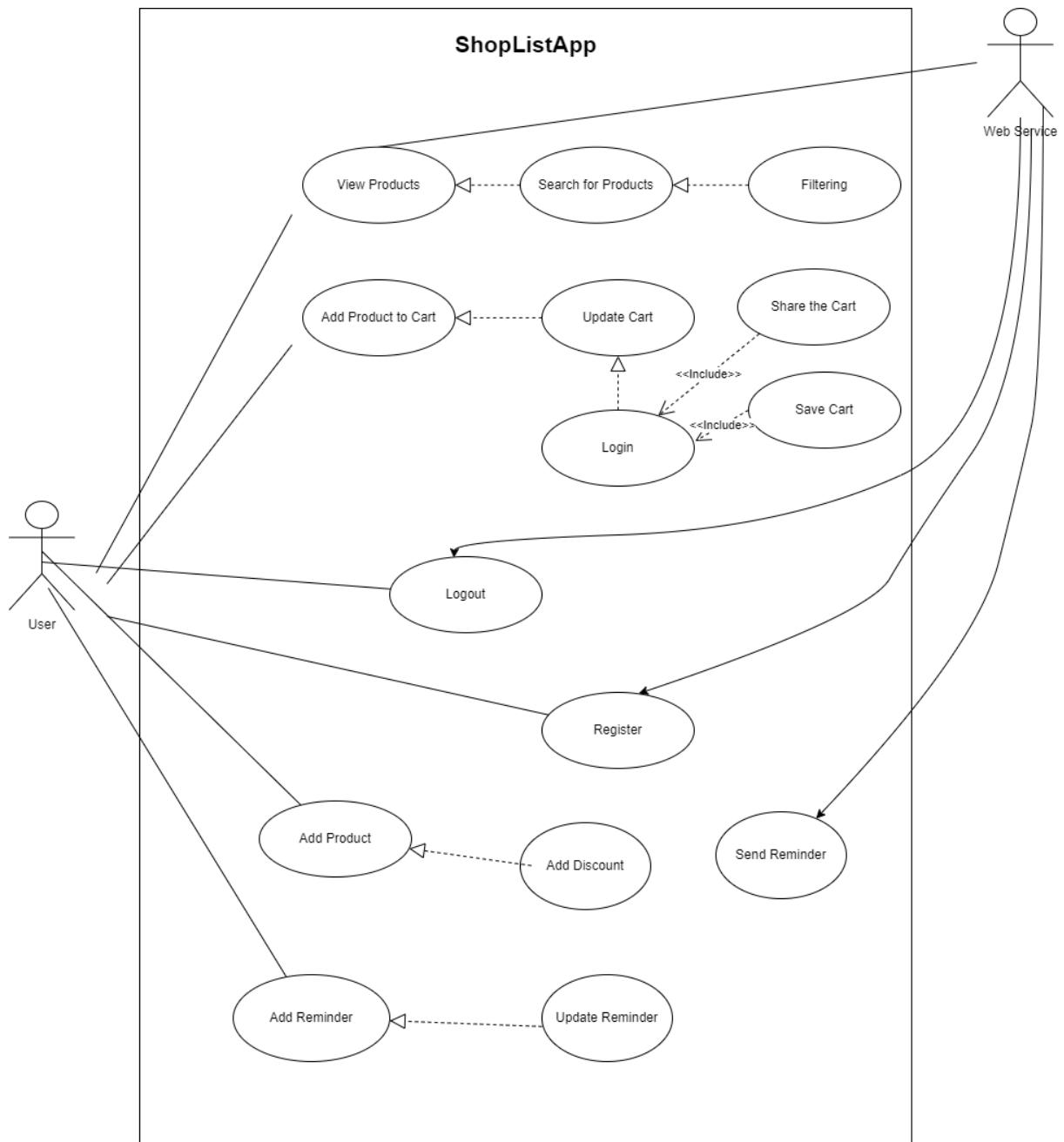
## 2-Class Diagram:



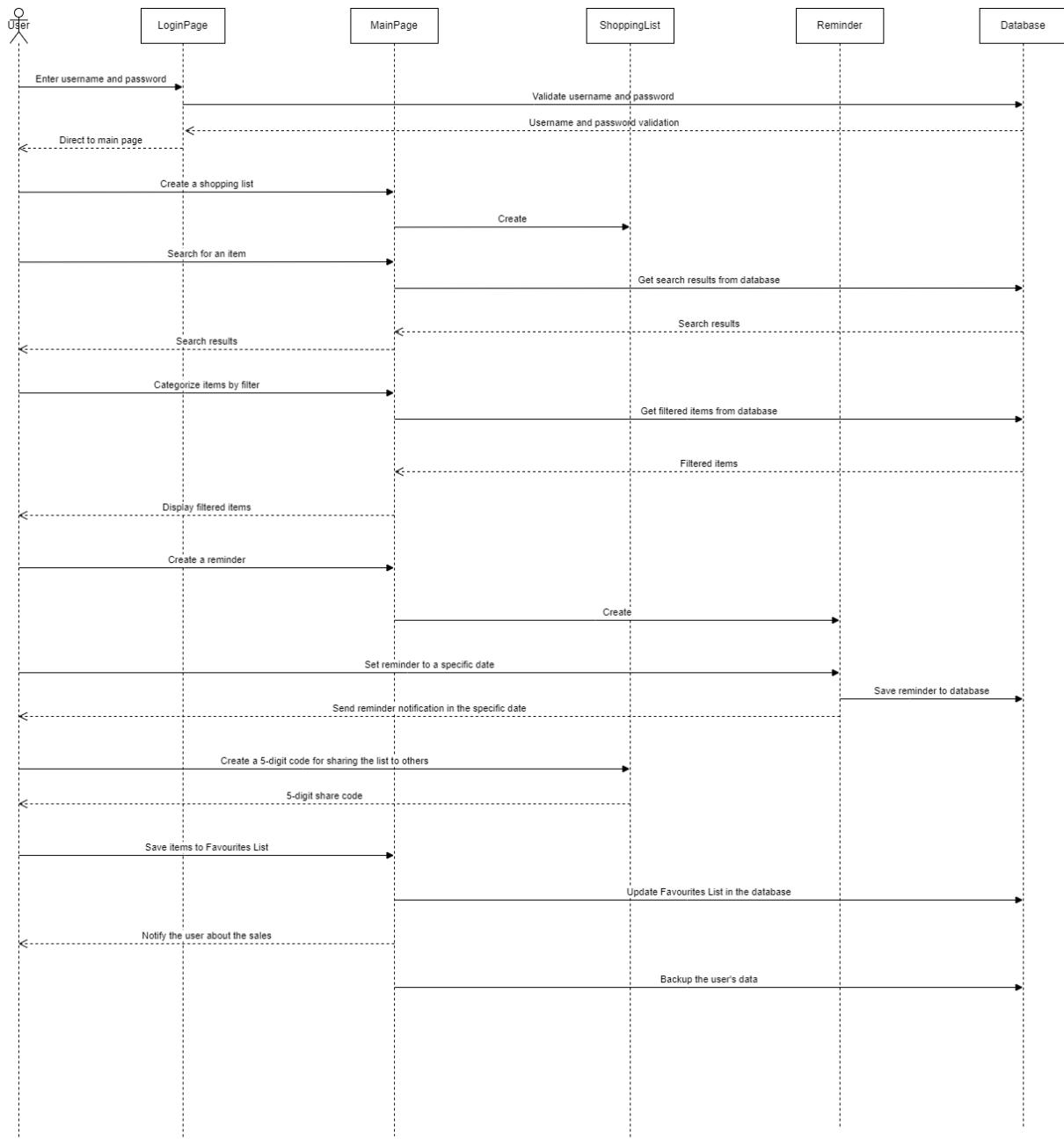
### 3-Schema



#### 4- Use Case



## 5- Sequence Diagram



## **5 Project Architecture**

### **5.1.Business Layer**

The Business Layer, Entity Layer, and Data Access Layer reference each other. Within the Business Layer, we have created service interfaces under the Abstract folder and entity managers under the Concrete folder. In the Abstract folder, a general service interface named IGenericService was defined with abstract functions for database operations (Data Definition Language - DDL). Entity service interfaces are derived from the IGenericService interface. In the Concrete folder, manager classes for entities were created. Entity classes utilize their respective entity service by extending it. The manager classes created in this layer are designed to be used on the API side.

### **5.2.Data Access Layer**

The data access layer references the entity layer. In the Data Access Layer, we have created project-specific AppDbContext classes, abstract interfaces, entity framework classes, a generic repository, and security classes. Using the AppDbContext class, we constructed our database using a code-based approach. We can access the database through the generic repository. We derived abstract interfaces from the IGeneric Interface to create interfaces for entities. We defined the functions that our project will use with the generic repository. In our entity framework classes, we implemented the generic repository and utilized its functions. We generated the token that we will use in the security class.

### **5.3.Entity Layer**

In the project, the entities used in the Entity Layer and the Data Transfer Objects (DTOs) have been created. Through the developed DTOs, we can easily generate the necessary objects for the database in the API and web project layers.

### **5.4.Web Project Layer**

The web project layer references the Entity Layer. In the web project layer, controllers are created under the Controller folder to manage views. Controllers make requests to the API based on information from user views. As a result of these requests, feedback is provided to us. The communication endpoint with the API is typically specified in the 'appsettings.json' file, allowing for easy modification and management of this address.

Controllers handle user interactions and requests, directing them to the API. Data returned by the API is passed to the user interface through controllers, and views process this data to display it to the user.

Furthermore, the 'appsettings.json' file is a configuration file that contains configuration information for the project. This file usually includes details such as database connections, API addresses, and various configuration settings that meet the project's requirements. This way, settings used throughout the project can be easily managed and updated.

## **5.5.API Layer**

The API layer references the business layer and the entity layer. In this layer, controllers are created for entities. These controllers collaborate with the entity managers in the business layer. In the API layer, the connection string required for database access is defined in the 'appsettings.json' file. This approach allows for easier integration of the project by updating only this file when changes are needed.

Controllers within the API layer relay incoming requests to the business layer to execute the business logic. During this process, entity managers in the business layer are used to separate database operations and business logic into distinct layers. Controllers in the API layer communicate with services in the business layer, returning data in response to incoming requests.

The web project layer is responsible for hosting the API layer. This allows requests from users' web browsers to be directed to the API layer, which responds to these requests. Such a structure enhances the modularity and scalability of the project by clearly defining the responsibilities of different layers.

## 6 User Interface Design

**6.1. HomePage:** Here, welcome to the warm and inviting homepage of ShoppingListApp!

A shopping experience full of unique product collections, quality service and customer satisfaction awaits you. You can find our highlights in the first section of our homepage. You will enjoy discovering products that suit your style while browsing our various categories. Each category includes carefully selected products and a wide variety. We offer our special offers to make your shopping experience even more special. You can breathe new life into your style by examining our collections full of trendy products. Update your style with our latest incoming products. In the last section of our homepage, you can find our new arrivals.

The screenshot displays the homepage of ShoppingListApp. At the top, there is a navigation bar with developer credits for Doğa Ünal, Ali Şıyar Arslan, Emir Morali, Hüseyin Karadana, Başar Çelebi, Batuhan Yavuz, and Oğuz Kaan Şanlı, each with their respective LinkedIn icons. Below the navigation bar is the main header "M Shopping List" with a search bar placeholder "Search for products". A "Categories" dropdown menu is open, showing options like Home, Shop, and Contact. To the right of the search bar are user count indicators (0 users, 0 hearts, 0 messages) and a shopping cart icon. Further right are "Login" and "Register" buttons. The central feature is a promotional banner for "LIVE JAM PHOTOGRAPHYON CAMERAS" offering a "50% DISCOUNT", with a small image of a person taking a photo with a camera. Below the banner is a link to "TERMS AND CONDITIONS APPLY". The bottom section contains a grid of product categories: SmartPhone, Laptop, Monitor, Sweatshirt, Trousers, T-shirt, Shirt, Skirts, and Cabrio. Each category has a small representative image and a descriptive label.

|            |           |               |
|------------|-----------|---------------|
| Sedan      | SUV       | Station Wagon |
| Electric   | Hatchback | Pickup        |
| Chopper    | Racing    | Sailboat      |
| Motoryacht | Coupé     | Lawn          |

|           |      |
|-----------|------|
| Furniture | Milk |
|-----------|------|



20% OFF THE ALL ORDER

### Spring Collection

[Shop Now](#)



20% OFF THE ALL ORDER

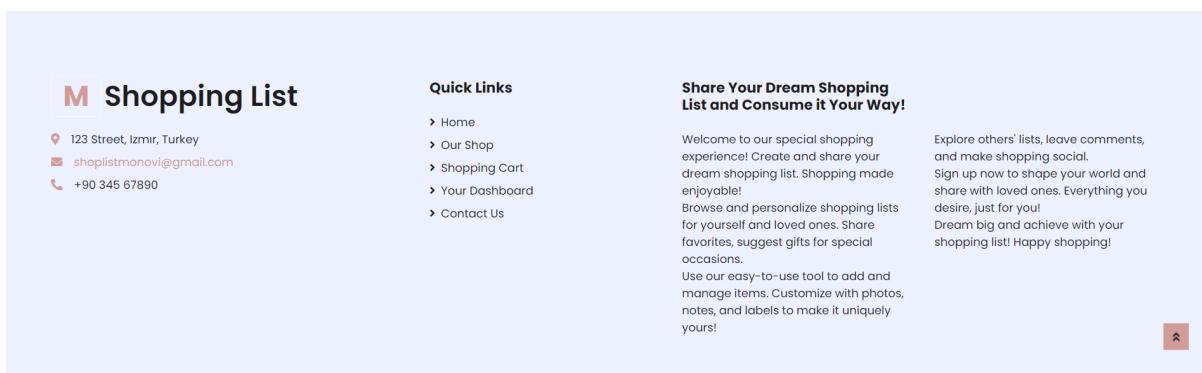
### Winter Collection

[Shop Now](#)

#### — Trendy Products —

|   |  |   |  |
|---|--|---|--|
|          |   |         |                           |
| Tesla Model 3<br>1.500.000,00 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> | Asus TUF Gaming FX506HE-HN011 Intel Core i5 ...<br>21,000,00 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> | deneme ürünü<br>34.342,442,00 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> | CASPER EXCALIBUR G770 Gaming Laptop<br>21,500,00 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> |

|   |  |   |  |
|---|--|---|--|
|              |     |                                     |                                     |
| 1969 Ford Mustang<br>7.000.000,00 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> | Migros Milk 1 L<br>21,50 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> | Weed Wacker,Electric Weed Eater,Wheeled La...<br>7.000,00 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> | Story Of Basics V-Neck, Short Sleeve Men's T-...<br>349,00 TL<br><a href="#">View Detail</a> <a href="#">Add To Cart</a> |



**6.2.RegisterPage :** Welcome to the registration page of ShoppingListApp! Here you can further personalize your shopping experience by creating a new account. Below is this simple and user-friendly registration form where you can enter the requested information:

Name and Surname: Specify your identity by entering your first and last name.

Email Address: Let us contact you by entering your email address.

Mobile Number: Enter your ten-digit phone number.

Username: Set a username for your shopping account. Only English characters can be used.

Password: Set a secure password to use when logging into your account. Your password must be between 8 and 16 characters long.

Date of Birth: Specify your age by selecting your date of birth.

Gender: Choose your gender. You can choose as male or female.

After entering this information, you can complete the registration process by clicking the "Create Account" button.

|              |           |                    |                  |                    |             |                    |                  |                    |              |                    |               |                    |                 |                    |
|--------------|-----------|--------------------|------------------|--------------------|-------------|--------------------|------------------|--------------------|--------------|--------------------|---------------|--------------------|-----------------|--------------------|
| Developers : | Doğa Ünal | <a href="#">in</a> | Ali Şıyar Arslan | <a href="#">in</a> | Emir Morali | <a href="#">in</a> | Hüseyin Karadana | <a href="#">in</a> | Başar Çelebi | <a href="#">in</a> | Batuhan Yavuz | <a href="#">in</a> | Oğuz Kaan Şanlı | <a href="#">in</a> |
|--------------|-----------|--------------------|------------------|--------------------|-------------|--------------------|------------------|--------------------|--------------|--------------------|---------------|--------------------|-----------------|--------------------|

**M Shopping List**

Search for products

 0
 0
 0

Categories
Home
Shop
Contact

[Login](#) [Register](#)

**Register**

|   |   |
|---|---|
| First Name<br><input type="text" value="Name"/>                             | Last Name<br><input type="text" value="Surname"/>                               |
| E-mail<br><input type="text" value="example@email.com"/>                    | Mobile No<br><input type="text" value="Phone No (10 digits)"/>                  |
| Username<br><input type="text" value="Username (Only English Characters)"/> | Password<br><input type="text" value="Password (8-16 characters)"/>             |
| Birth date<br><input type="text" value="gg.aa.yyyy"/>                       | Gender<br><input checked="" type="radio"/> Male<br><input type="radio"/> Female |
| <input type="button" value="Create account"/>                               |   |

**6.3.LoginPage:**Welcome to the login page of the ShoppingList app! Here you can start managing your shopping list by logging into an account registered to the app. Below is this simple and user-friendly login form where you can enter the information you need to log in: Login to your account by entering your registered e-mail address in the application. Enter the password you will use when logging into your account. After entering this information, you can access your account by clicking the "Sign In" button. If you have forgotten your password, you can reset your password using the "Forgot Password" link.

Developers : Doğa Ünal [in](#) | Ali Şıyar Arslan [in](#) | Emir Morali [in](#) | Hüseyin Karadana [in](#) | Başar Çelebi [in](#) | Batuhan Yavuz [in](#) | Oğuz Kaan Şanlı [in](#)

**M Shopping List** Search for products

Categories Home Shop Contact Login Register

— Enter Login —

Your Email

Password

Login Forgot my password

## 6.4. DashboardPage:

Developers : Doğa Ünal [in](#) | Ali Şıyar Arslan [in](#) | Emir Morali [in](#) | Hüseyin Karadana [in](#) | Başar Çelebi [in](#) |

**M Shopping List** Search for products

Categories Home Shop Contact

**Settings**

- Profile
- Adresses
- Reminders
- My Products
- Baskets
- Security
- Log Out

Burak Türker

**Email**  
karadanakutuphane@gmail.com

**Username**  
denemedenemedeneme

**Phone Number**  
1234324123

**Gender**  
Male

[Edit Profile](#)

This page contains a dashboard page where the user can view and edit profile information. The page displays the user's profile photo, first name, last name, email address, username,

phone number, and gender. It also provides the ability to redirect profile information to the edit page by clicking the "Edit" button. On the left side of the page it contains links that one can use to access various features in the user panel. Here are the descriptions highlighting these features:

**Profile :** It redirects to the page where the user can view and edit their personal profile information.

**Addresses** Redirects to the page where the user can view and manage their saved addresses. This allows for quick address selection during purchases.

**Reminders :** Redirects to the page where the user can add and manage reminders at specific dates and times. It helps to organize shopping and other events.

**My Products :** It leads to the page where the user can view and manage the products that he has added or added to his favourites. Users can follow their own products

**Baskets :** Redirects to the page where the user can view previous order baskets and order history. Users can review their past purchases.

**Security :** Redirects to the page where the user can manage the account security settings. Provides access to password change and account security settings.

**Log Out:** Allows the user to log out and exit the application. Secure logout process.

These links allow users to access different features quickly and easily, making the application more intuitive and user-friendly to use.

**6.5. Addresses Page:** This page provides address management by listing, editing or deleting the user's saved addresses. It also improves the user experience by providing options for pagination and adding new addresses.

| #  | Address Name | Country | City  | Town      | Options  |
|----|--------------|---------|-------|-----------|--|
| 10 | Home         | Turkey  | İzmir | Buca      | <a href="#">Detail</a> - <a href="#">Update</a> - <a href="#">Delete</a> |
| 12 | Summery      | Turkey  | İzmir | Karaburun | <a href="#">Detail</a> - <a href="#">Update</a> - <a href="#">Delete</a> |

New Addresses

**6.6. Add Address Page:** The add address page is a web form designed for the user to add a new address to their account. This page allows the user to add a new delivery address by entering their personal information.

Add Address Form: The main part of the page contains a form designed to enter new address information. This form contains the following fields: Address Name, Country Name, City Name, Town Name, District Name, Postcode, AddressText.

At the bottom of the form is a button called "Add Address". Users can add their address information to the system by clicking this button. This button starts the registration of the new address in the system.

### New Address

|  |                    |
|--|--------------------|
| AddressName  | CountryName        |
| Home Newyork   | ABD                |
| CityName   | TownName           |
| New York   | Rockaway Park      |
| DistrictName   | PostCode           |
| 1-0 Beach 149th St   | 11694              |
| AddressText  | <b>Add Address</b> |
| 1-0 Beach 149th St, Rockaway Park, NY 11694, Amerika Birleşik Devletleri |                    |

**6.7.Update Address:** This page is a web form designed for the user to update an existing address. The user can edit the existing address information using the form. Here are the components on the page and their use:

Address Update Form: The main part of the page contains a form used to update existing address information. The form has the following fields: Address Name, Country Name, City Name, Town Name, District Name

Then when they click the "Update Address" button, the changes are saved in the system and the address is updated.

#### Update Address

|   |                           |
|---|---------------------------|
| AddressName<br>Home Newyork   | CountryName<br>ABD        |
| CityName<br>New York  | TownName<br>Rockaway Park |
| DistrictName<br>1-0 Beach 149th St  | PostCode<br>11694         |
| AddressText<br>1-0 Beach 149th St, Rockaway Park, NY 11694, Amerika Birleşik Devletleri | <b>Update Address</b>     |

**6.8.Address Detail Page:** The page allows users to view the details of a particular address. Users can see the name of the address under the page title and review the basic information of the address such as country, city, town, county, zip code and description. Also, with the "Addresses Back" link, they can easily return to the address list page from the address details page.

|                                  |  |
|----------------------------------|--|
| HOME                             |  |
| Addresses - Adres Details        |  |
| <a href="#">◀ Addresses Back</a> |  |
| <b>Country Name:</b><br>Turkey   | <b>District Name:</b><br>Adatepe       |
| <b>City Name:</b><br>Izmir       | <b>Address Postcode:</b><br>35210      |
| <b>Town Name:</b><br>Buca        | <b>Address Description:</b><br>no 6 g2 |

**6.9.Add Reminder Page:** This page is a web form designed for the user to add a new reminder. Using the form, the user can create a reminder that must occur at a specific date and time. Here are the components on the page and their use:

Add Reminder Form: The main part of the page contains a form used to create a new reminder. The form has the following fields:

Title: Text box to specify the title of the reminder. Here the user gives a title to the reminder.

Date: Date and time selection field to specify the date and time of the reminder. Here the user sets when the reminder should occur.

Description: Text field to add more description about the reminder. Here the user can add detailed explanations about the reminder.

"Create Reminder" Button: At the bottom of the form, there is a button named "Create Reminder". Users can create a new reminder by clicking this button. This button starts the reminder creation process.

The screenshot shows a web application interface for a shopping list. At the top, there is a navigation bar with developer credits for Doğa Ünal, Ali Şiyar Arslan, Emir Morali, Hüseyin Karadana, Başar Çelebi, Batuhan Yavuz, and Oğuz Kaan Şanlı, each with an LinkedIn link. Below the navigation bar is the main header 'Shopping List' with a search bar and notification icons for alerts (0), likes (0), and a cart with 2 items. The main content area is titled 'Register' and contains a form for creating a reminder. The form includes fields for 'Title' (set to 'Birthday'), 'Date' (set to '10.08.2023 12:31'), and 'Description' (containing the text 'Don't forget Mehmet's birthday.'). A large red 'Create Reminder' button is at the bottom right of the form. The bottom navigation bar includes links for 'Home', 'Shop', and 'Contact', along with a sign-out link.

**Update Reminder Page:** This page is a web form designed for the user to edit or update an existing reminder. The user can update the title, date and description of the reminder using the form.

The screenshot shows a web application header with developer names and links. Below the header is a navigation bar with a shopping cart icon showing 2 items. The main content area is titled "M Shopping List". A "Categories" dropdown is open. The "Address Data" section contains fields for "Title" (set to "Birthday"), "Date" (set to "10.08.2023 12:38"), and "Description" ("Don't forget Mehmet's birthday."). A red "Update Reminder" button is at the bottom right of this section.

**6.10.Reminders Page:** This page gives users flexibility to view, edit, and delete existing reminders. Users can list their reminders via the table and edit or delete each one individually. The design of the page has been optimized to improve the user experience and facilitate reminder management.

The screenshot shows a web application header with developer names and links. Below the header is a navigation bar with a shopping cart icon showing 2 items. The main content area is titled "M Shopping List". A "Categories" dropdown is open. The "Settings" section includes links for Profile, Adresses, Reminders, My Products, Baskets, Security, and Log Out. The "Reminders" section displays a table with two rows of data. The table columns are "#", "Title", "Description", "Date", and "Options". The first row (Reminder ID 4) has a Title of "Birthday" and Description of "Don't forget Mehmet's birthday.", with a Date of "10.08.2023 12:33:00" and Options buttons for "Update" and "Delete". The second row (Reminder ID 5) has a Title of "Mothers Day" and Description of "don't forget mother's day", with a Date of "10.07.2023 15:43:00" and Options buttons for "Update" and "Delete". A purple "New Reminder" button is located at the bottom left of the table area.

| # | Title       | Description                     | Date                | Options   |
|---|-------------|---------------------------------|---------------------|---|
| 4 | Birthday    | Don't forget Mehmet's birthday. | 10.08.2023 12:33:00 | <button>Update</button> <button>Delete</button> |
| 5 | Mothers Day | don't forget mother's day       | 10.07.2023 15:43:00 | <button>Update</button> <button>Delete</button> |

**6.11.Notification Page:** The Notifications page allows users to view and manage notifications. Also, pagination functionality and notification deletion option have been added.

The screenshot shows a table titled "NOTIFICATIONS" with two rows of data. The columns are labeled "#", "Title", "Description", "Date", and "Options".

| # | Title       | Description               | Date                | Options                 |
|---|-------------|---------------------------|---------------------|-------------------------|
| 7 | birthday    | do not forget birthday    | 11.08.2023 11:20:00 | <button>Delete</button> |
| 8 | mothers Day | do not forget mothers Day | 11.08.2023 11:20:00 | <button>Delete</button> |

**6.12.Add Item Page:** This page provides an interface that the user can use to add a new product. The page offers the possibility to choose the basic information, category and subcategory of the product. Here are the components on the page and their use:

Product Information Form: The main section of the page contains a form used to add a new product. The form contains the following fields: Title, Brand Price, Discount, Image, Category, SubCategory, Category Detail, Description.

Category, Subcategory and Category Detail Selections: Users can choose which category, subcategory and category detail they want to add the product to. First, category selection is made and when selected, subcategory options are loaded dynamically. Then, category detail options are loaded dynamically again when subcategory is selected.

**"Add Item" Button:** At the bottom of the page, there is an "Add Item" button used to add your new product. When users click this button, the product information they entered is sent to the server and the product is added.

The screenshot shows the "Shopping List" page with the "Add Item" form filled out. The form includes fields for Title, Brand, Price, Discount, Image, Category, SubCategory, Category Detail, and a detailed description section.

| Title   | Brand      | Price       | Discount        |
|---|------------|-------------|-----------------|
| iPhone 14 512 GB  | Apple      | 45000       | 10              |
| Image   | Category   | SubCategory | Category Detail |
| <a href="https://productimages.hepsiburada.net">https://productimages.hepsiburada.net</a> | Electronic | Phone       | SmartPhone      |

**Add Item**

**Description**

- Bluetooth Yes
- Screen Size 6.1 Inches
- Video Conversation Available
- Face Recognition Yes
- Screen Size Range 6 inches and Above
- Battery Power 3279 mAh
- Internal Memory 512GB
- Wireless Charging Yes

**Add Item**

**6.13.Item Detail Page:** This page allows the user to view the details of a particular product and review its options. The page design and functionality are streamlined to make it easier for users to learn more about the product and take related actions. Here are the components on the page and their use:

**Product Image:** The image of the product is displayed in a "carousel". This image represents the main image of the product.

**Product Title and Rating:** The product title and rating provide basic information about the product. The rating is indicated by asterisks.

**Product Price:** The discounted or undiscounted price of the product is displayed. If there is a discount, the discounted price is displayed.

**Copy Button:** Button used to copy the page link to the clipboard. When the user clicks the button, the page link is copied to the clipboard.

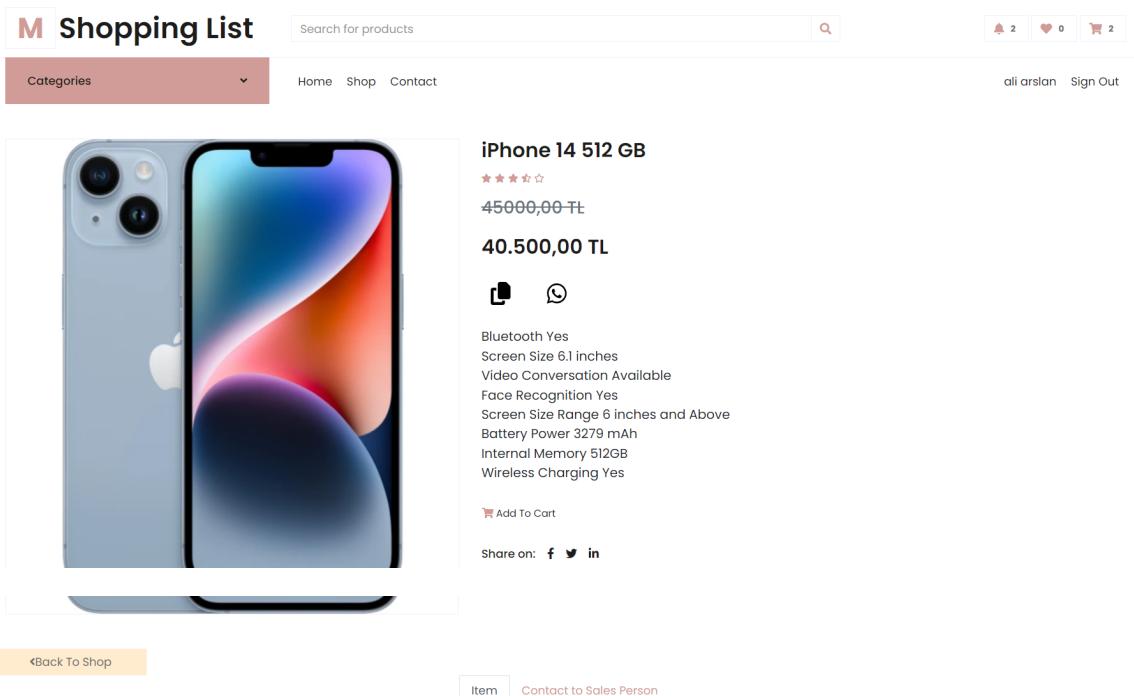
**WhatsApp Share Button:** The button used to share product information on WhatsApp. By clicking this button, the WhatsApp application opens and the user can share the product.

**Product Description:** The description of the product is displayed in a large text box.

**Add to Cart Button:** The button used to add the product to the cart. By clicking this button, the product is added to the cart.

**Social Media Sharing Buttons:** Buttons used to share the product on different social media platforms.

**Contact Sales Representative Tab:** This tab provides the necessary information to contact the product's sales representative.



**iPhone 14 512 GB**

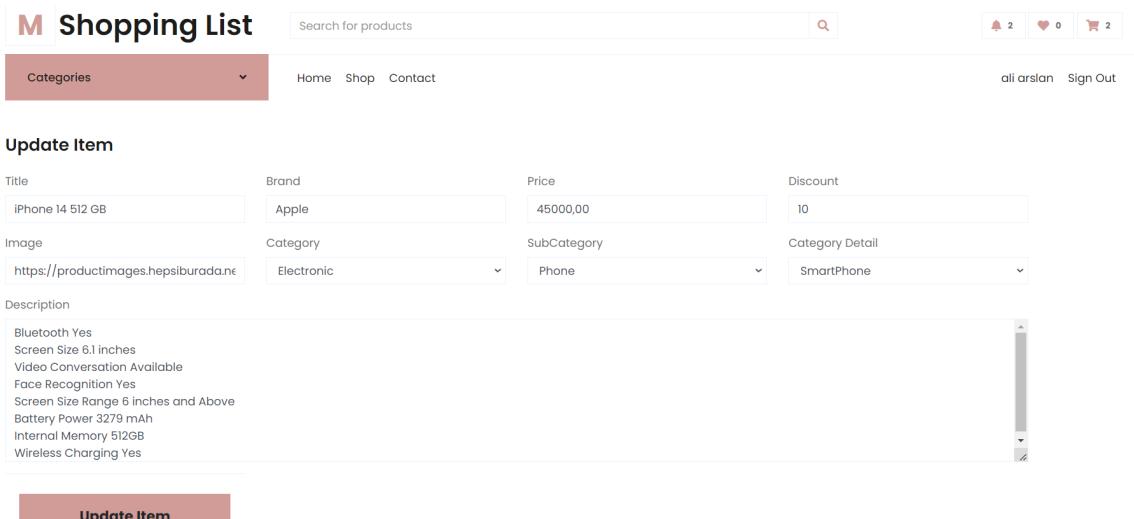
45000,00 TL  
40.500,00 TL

Add To Cart

Share on: f t in

Brand: Apple Category: Electronic Sub Category: Phone Category Detail: SmartPhone

**6.14.Update Item Page:** The user can update the information of an existing product via this page. It can perform the update process by changing the fields such as product title, brand, price, discount, picture, category, subcategory and category detail. Page design and functionality are designed to allow users to easily update product information.



**Update Item**

|  |            |             |                 |
|--|------------|-------------|-----------------|
| Title  | Brand      | Price       | Discount        |
| iPhone 14 512 GB   | Apple      | 45000,00    | 10              |
| Image  | Category   | SubCategory | Category Detail |
| <a href="https://productimages.hepsiburada.net">https://productimages.hepsiburada.net</a>  | Electronic | Phone       | SmartPhone      |
| Description<br>Bluetooth Yes<br>Screen Size 6.1 inches<br>Video Conversation Available<br>Face Recognition Yes<br>Screen Size Range 6 inches and Above<br>Battery Power 3279 mAh<br>Internal Memory 512GB<br>Wireless Charging Yes |            |             |                 |
| <input type="button" value="Update Item"/>   |            |             |                 |

**6.15.MyProducts Page:** Users can view, review, update or delete the products they own using the "My Products" page. The design and functionality of the page is designed to allow users to easily manage their products.

The screenshot shows a user interface for managing products. On the left, there's a sidebar with 'Categories' dropdown and links for Profile, Adresses, Reminders, My Products (which is selected), Baskets, Security, and Log Out. The main area has a search bar and navigation links for Home, Shop, Contact, and user info ali arslan / Sign Out. Below is a table with product details:

| #  | Img | Title   | Category   | Brand           | Price                       | Options  |
|----|-----|---|------------|-----------------|-----------------------------|--|
| 20 |     | Asus TUF Gaming FX506HE-HN011 Intel Core i5 11400H 8GB 512GB SSD RTX 3050Ti Freedos 15.6" FHD Portable Computer | Electronic | Asus            | 21.000,00 TL                | <a href="#">Detail</a> <a href="#">Update</a> <a href="#">Delete</a> |
| 24 |     | Story Of Basics V-Neck, Short Sleeve Men's T-Shirt  | Male       | Story Of Basics | 349,00 TL                   | <a href="#">Detail</a> <a href="#">Update</a> <a href="#">Delete</a> |
| 29 |     | iPhone 14 512 GB  | Electronic | Apple           | 45000,00 TL<br>40.500,00 TL | <a href="#">Detail</a> <a href="#">Update</a> <a href="#">Delete</a> |

At the bottom, there's a 'New Items' button.

**6.16.Add Basket Page:** Users can create a new cart using the "Add Order" page. By filling out the form, they can choose the status of the basket and the address they want to associate. In this way, users can create a new basket for order management. Page design and functionality are designed to enable users to easily create carts.

The screenshot shows a 'New Basket' form. It includes fields for 'Status' (with a dropdown for 'Gift suggestions for Mother's Day'), 'Address Name' (with a dropdown for 'Summery'), and a large red 'Create Basket' button.

**6.17.Basket Detail Page:** This page allows user to view order details, edit product quantity and share cart using share code. Page design and functionality are designed to allow users to easily view and manage order details.

The screenshot shows a shopping list interface. At the top, there's a navigation bar with developer names and links. Below it is a search bar and a cart icon showing 3 items. A red header bar says "Categories". The main area has a table for products:

| Img | Title   | Price        | Quantity | Total     | Remove |
|-----|---|--------------|----------|-----------|--------|
|     | Asus TUF Gaming FX506HE-HN011 Intel Core i5 11400H 8GB 512GB SSD RTX 3050Ti Freedos 15,6" FHD Portable Computer | 21.000,00 TL | - 1 +    | 21.000,00 | X      |
|     | iPhone 14 512 GB  | 40.500,00 TL | - 1 +    | 40.500,00 | X      |
|     | Story Of Basics V-Neck, Short Sleeve Men's T-Shirt  | 349,00 TL    | - 1 +    | 349,00    | X      |

To the right, there's a "Share Code" button and an "Apply Share Code" button. Below the table is a "Cart Summary" section with icons for download and share, and a "Share Code:" field containing "slr3thsp6j". The total price is listed as "61.849,00 TL" with a "Save the Cart" button below it.

**6.18.Baskets Page:** This page allows the user to view their order, select the main cart, review, update and delete order details. At the same time, the page design and functionality are designed to allow users to easily manage their orders.

The screenshot shows a shopping list interface with a sidebar for settings and a main area for baskets.

**Settings:**

- Profile
- Adresses
- Reminders
- My Products
- Baskets
- Security
- Log Out

**Baskets:**

| #  | Main                                | Status                            | Created Date        | Total Price  | Share Code | Options  |
|----|-------------------------------------|-----------------------------------|---------------------|--------------|------------|--|
| 30 | <input checked="" type="checkbox"/> | Doğum günü için beğenilen ürünler | 9.08.2023 11:54:27  | 61.849,00 TL | slr3thsp6j | <button>Details</button> <button>Update</button> <button>Delete</button> |
| 41 | <button>Select Main</button>        | Gift suggestions for Mother's Day | 10.08.2023 13:17:16 | 0,00 TL      | je3lako2ul | <button>Details</button> <button>Update</button> <button>Delete</button> |

A small "1" is at the bottom left, and a "New Basket" button is at the bottom center.

**6.19.Security Page:** This page is designed to provide users with account security and data privacy. Users can secure their accounts by creating a new password or perform actions related to the option to completely delete their account.

The screenshot shows a header with developer names and social media links. Below is a navigation bar with 'Categories' dropdown, 'Home', 'Shop', 'Contact', and user info ('ali arslan', 'Sign Out'). A search bar and a shopping cart icon (2 items) are also present. The main area has a 'Settings' sidebar with options like Profile, Addresses, Reminders, My Products, Baskets, Security, and Log Out. The main content area shows fields for 'New Password' and 'Password Again' with a note about account deletion. Buttons for 'Save Password' and 'Delete My Account' are at the bottom.

**6.20.Contact Page:** This page offers a simple and user-friendly contact form that users can use to submit questions and get in touch. It also provides information on how to make the shopping experience enjoyable and makes it easily accessible with contact information.

The screenshot shows a header with 'Categories' dropdown, 'Home', 'Shop', 'Contact', and user info ('ali arslan', 'Sign Out'). A search bar and a shopping cart icon (3 items) are also present. The main content area features a 'Contact For Any Queries' section with input fields for 'Your Name', 'Your Email', 'Subject', and 'Message'. To the right is a 'Shopping List' section with contact info: address (123 Street, Izmir, Turkey), email (shoplistmonov@gmail.com), and phone (+90 345 67890). A 'Send Message' button is at the bottom left.

**6.21.Shop Page:** This page is used to create a store page where users can filter, sort and add products to their cart while shopping. It is equipped with features that enrich the user experience and is designed to enable users to easily find and shop products.

The screenshot shows a grid of three products. Product 1: 'Midi Pull On Closure Skirt S-XXXL Plus Size' (540,00 TL) with 'View Detail', 'Add To Cart', and a heart icon. Product 2: 'Lenovo V15 G2 ITL Intel Core i5 1135G7 8GB 51...' (14,000,00 TL) with 'View Detail', 'Add To Cart', and a heart icon. Product 3: 'MSI PULSE 17 BI3VFK-404TR Intel Core i7 1370...' (52,000,00 TL) with 'View Detail', 'Add To Cart', and a heart icon.

# M Shopping List

Search for products



2 0 3

Categories

Home Shop Contact

ali arslan Sign Out

## Filter by price

- All Price
- ₺ 0 - ₺ 2.000
- ₺ 2.000 - ₺ 5.000
- ₺ 5.000 - ₺ 10.000
- ₺ 10.000 - ₺ 20.000
- ₺ 20.000+



Sort by ▾

## Filter by Subcategory

- All Subcategories
- Phone
- Computer & Tablet
- Clothes
- Shoes
- Clothes
- Shoes

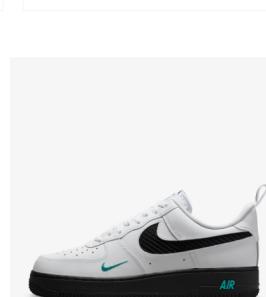


## Filter by Category Detail

- All Category Details
- SmartPhone
- Laptop

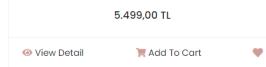
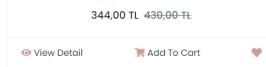


- Monitor
- Sweatshirt
- Trousers
- T-shirt
- Shirt
- Skirts
- Cabrio
- Sedan
- SUV
- Station Wagon
- Electric
- Hatchback
- Pickup
- Chopper



- Racing
- Sailboat
- Motoryacht
- Coupé
- Lawn
- Furniture
- Milk
- Kitchen Tools
- Appliances
- Sneakers

Filter



Outdoor Plastic Table  
344,00 TL 430,00 TL

Samsung ND Solo Mikrodalga  
5.499,00 TL

Nike Air Force 1 '07  
2.519,99 TL 2.799,99 TL

View Detail Add To Cart

View Detail Add To Cart

View Detail Add To Cart

## 7 Project Development Stages

**Determining Project Objectives and Scope:** As a first step, the purpose and scope of the project were determined. This process, the main purpose of the "Shopping List Application" is to help users create, manage and track their shopping lists.

**Needs Analysis and Requirements Determination:** At this stage, the needs and expectations of the users were analyzed. Detailed requirements of the project were determined. Details on features and functionality have been revealed. This process takes place in the project as the part where basic features such as user registration, shopping list creation, product search are determined.

**Resource Planning:** At this stage, the resources to be used in the project were determined. Technologies such as .NET Core and .NET MAUI, physical resources such as development and test environments such as software developers, designers and database specialists were planned for the Shopping List Application project.

**Creating a Timeline:** A timeline has been created for which phases of the project will be completed and when. Estimated times for stages such as needs analysis, design, development, testing and deployment were determined. This process includes a detailed time plan that includes the project stages and the total project duration.

**Risk Management:** Possible risks were identified, analyzed and measures were taken against these risks. For example, risks such as technological difficulties, lack of resources or changes in requirements were identified and how to deal with them was planned.

**Team Roles and Responsibilities:** The project team was formed and the roles and responsibilities of each member were determined.

**Progress Monitoring and Reporting:** Project progress was regularly monitored. In the daily scrum meetings, the mentors were informed about the developments. More detailed demonstrations were made to the mentors by sharing the screen with the weekly scrum meetings.

**Quality Control and Testing:** The quality of the developed software was checked. It has been ensured that basic features such as shopping list creation, product search, user registration are working properly.

**Distribution and Deployment:** The developed application has been distributed and put into use for end users. Provided necessary training and support for users.

## 8 Project Management

During the project journey, we utilized a planning application named Trello to keep track of our progress. This tool enabled our team to collaboratively brainstorm ideas, add enhancements, and easily manage our daily tasks. For version control, we initially started with GitHub. However, due to issues with merging versions, we opted to use WinRAR to manage version control effectively. Progressing through daily meetings, we meticulously planned our activities day by day.

Trello, our chosen planning application, proved invaluable in maintaining a structured workflow. It allowed us to visualize tasks, allocate responsibilities, and monitor the progression of each task. By leveraging Trello's features, we enhanced our team's coordination and task management, ensuring that we remained aligned with project goals and timelines.

Version control, a critical aspect of software development, initially involved GitHub. However, in order to streamline version merging, we transitioned to utilizing WinRAR. This adaptation provided us with a more controlled and efficient method for managing and synchronizing code changes across our team.

The inclusion of daily meetings further enriched our project management approach. Through these meetings, we discussed ongoing tasks, addressed challenges, and outlined our objectives for the day. This iterative planning process ensured that we remained adaptable and responsive to evolving project needs.

Overall, our strategic utilization of Trello, the transition to WinRAR for version control, and the implementation of daily meetings collectively played a pivotal role in fostering a collaborative, organized, and successful project journey.

## **9 Security**

To ensure the security of the website, we obtained an SSL certificate to encrypt communication and safeguard it. Additionally, for secure storage of user passwords during registration, we encrypted them using the bcrypt algorithm and stored them in the database. This method provides an effective approach to enhancing the security of our users' passwords.

In our project, there are controllers responsible for managing user authentication processes. Through these controllers, users are required to undergo authentication procedures before logging in. Access to pages requiring authorization is restricted without proper authentication. This approach safeguards against unauthorized access and enhances the security of user data.

All these measures reflect steps taken to preserve the privacy of user data, ensure security, and prevent unauthorized access. Such security measures are crucial to ensuring the project operates securely and reliably.

## 10 Distribution and Publishing

Our app's distribution and publishing process includes steps for users to access your app. Here's a step-by-step look at the deployment and publishing process of our app:

**Server and Infrastructure Preparation:** A suitable web server was selected to deploy the .NET Core based web and API application. Our MSSQL database is installed and configured. Security measures such as required SSL certificates have been taken.

**Application Configuration:** Set up our application (environment) configurations (for example, database connection array). Identify the distribution version of your application (for example, development, production).

**Database Distribution:** The database that your application will use has been moved to the server and database schemas have been created.

**Web Application Deployment:** Our .NET Core-based web application has been deployed to the server.

**Distribution of Mobile Application:** Our .NET MAUI based mobile application will be sent to the relevant application stores (App Store, Google Play). Application information and screenshots will be added in accordance with the requirements of the relevant stores.

**Creating the Product Database:** Move the database to a server that our application can access.

**Sync and Backup Settings:** Configured data synchronization and backup mechanisms. Secure synchronization and backup of users' data was ensured.

**User Training and Promotion:** Prepared training materials for the users of our application (user manuals, video tutorials, etc.). Promotional materials have been created that highlight the benefits and features of your app.

**User Feedback and Monitoring:** After publishing our app, users' feedback will be tracked and corrections or improvements made as needed.

**Updates and Release Management:** Our application will be regularly updated.

**Download and Usage Monitoring:** Our app's downloads and usage statistics will be monitored. This can help you understand the performance and popularity of our app. The distribution and publishing process is an important step that will make our app easily accessible to our target audience. By working meticulously at every stage, our application will be presented to our users without any problems.

## 11 Maintenance and Support

After the project goes live, maintenance and support processes are very important to ensure that the application runs smoothly and users have positive experiences. Here are the possible maintenance and support processes for our shopping list app:

**Regular Updates:** It is important to provide regular updates to keep your app up to date, add new features, fix bugs and improve the overall user experience. These updates are required to adapt to new platform versions, provide security updates, and respond to user requests.

**Bug Fixes:** Quick response is required to fix user-reported bugs and issues. It's important to collect user feedback and prioritize these bugs using a bug tracking system.

**Performance Improvements:** It is important to monitor the performance of the application and improve it as needed. Performance issues such as slow response times or clumsiness can negatively impact the user experience.

**Security Updates:** It is critical to make security updates to ensure the security of the application. To ensure data security and privacy, vulnerabilities should be scanned regularly and any vulnerabilities identified should be quickly fixed.

**Data Backup and Synchronization Problems:** Our application provides synchronization between multiple devices, necessary measures will be taken to prevent or solve synchronization errors. It is also important to ensure that users back up their data securely.

**User Support:** An effective user support mechanism will be established to assist our users and answer their questions.

**Collaboration and Communication:** Effective communication between the development team, test teams, and users is essential for successful project management. Collaboration may be required to evaluate user feedback and add new features or improvements as needed.

**Backup and Recovery Plans:** Backup and recovery plans have been created for unexpected situations or system crashes. This is necessary to prevent data loss and quickly restore system state.

**User Training:** Documentation or training materials are provided to help users better understand the features and usage of the app.

**Performance Monitoring and Analysis:** It is important to use analytics tools to monitor application performance and understand user behavior. This data can help plan future updates and improvements.

All these processes are important for the long-term success of our application. Regularly scheduling maintenance and support activities will increase user satisfaction and help maintain the reliability and functionality of your application.

## **12 User Training**

To ensure your efficient use of our application, we have prepared a step-by-step user guide to provide you with guidance, as well as an instructional video offering visual explanations.

### **User Guide:**

When you first open the application, you will be presented with a user guide containing detailed information on how to use the core functionalities. This guide covers the main features of the application, menu options, and insights into the user interface.

### **Instructional Video:**

Furthermore, we also provide an instructional video demonstrating the application's usage step by step. This video visually explains the main functions and usage process of the application. Each step is comprehensively explained in the video, aiming to enable users to quickly grasp the application's usage. In this way, we offer both written and visual guidance to cater to different learning preferences, ensuring that all users can effectively utilize the application. Feel free to use these resources to enhance your proficiency in using our application.

## 13 Additional Needs

When launching the project live, we opted for a hosting service like Somee. Of course, different server providers can be used as per preference. When deploying a website, it's crucial not to overlook setting up an SSL certificate for security reasons. An SSL certificate enhances privacy and security by encrypting user data during transmission.

Another aspect to consider when taking the project and API live is using separate domain names. Deploying the project and API on distinct domain names offers better organization and management. This way, both components can be scaled and managed independently.

During the deployment process, it's necessary to set up the database on your hosting service. Additionally, to optimize project performance, reviewing the database settings in the 'appsettings.json' file will be essential. This ensures more efficient management of database access and queries.

All these steps will assist you in addressing important aspects such as security, performance, and scalability when transitioning the project to a live environment.