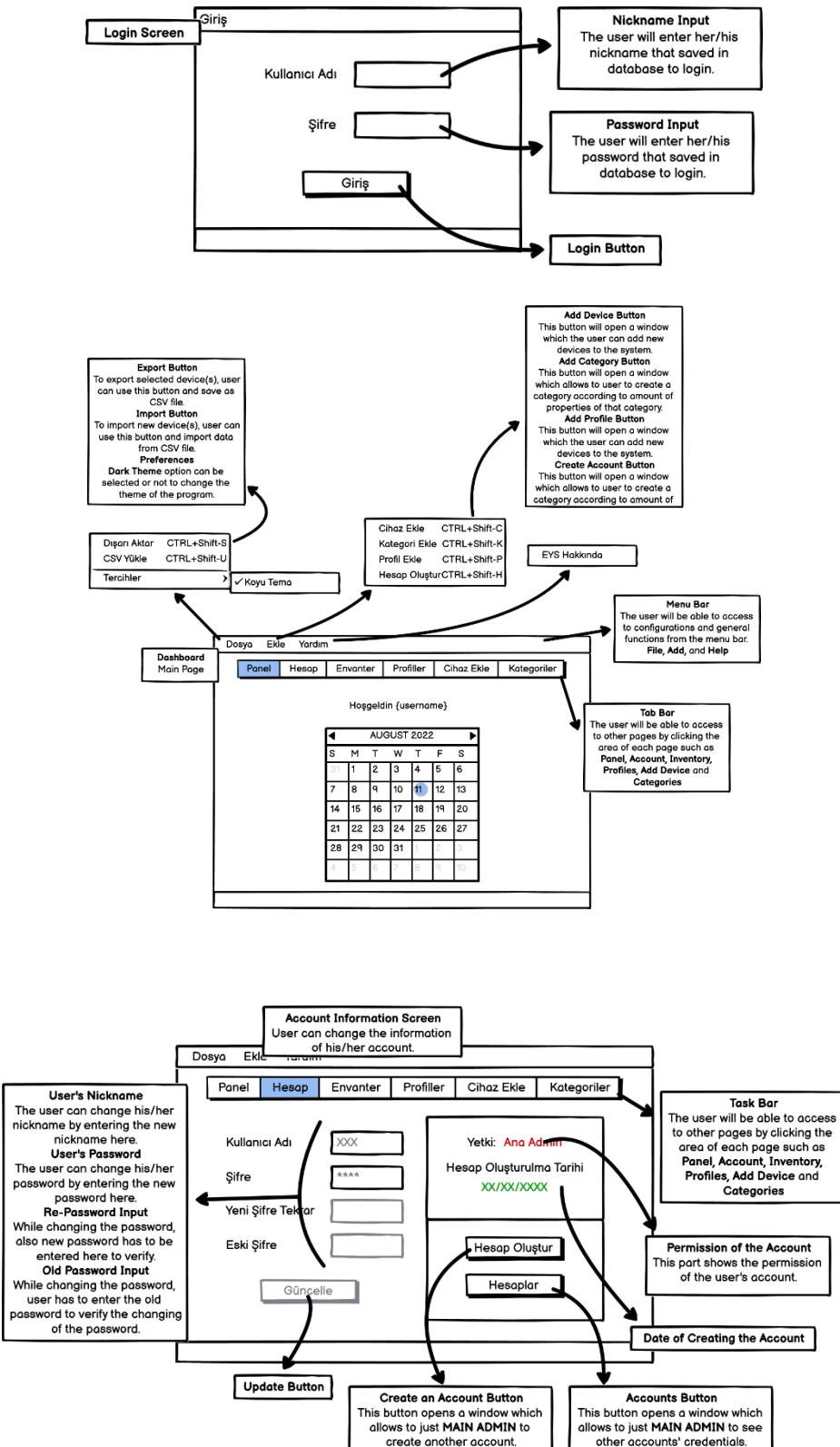
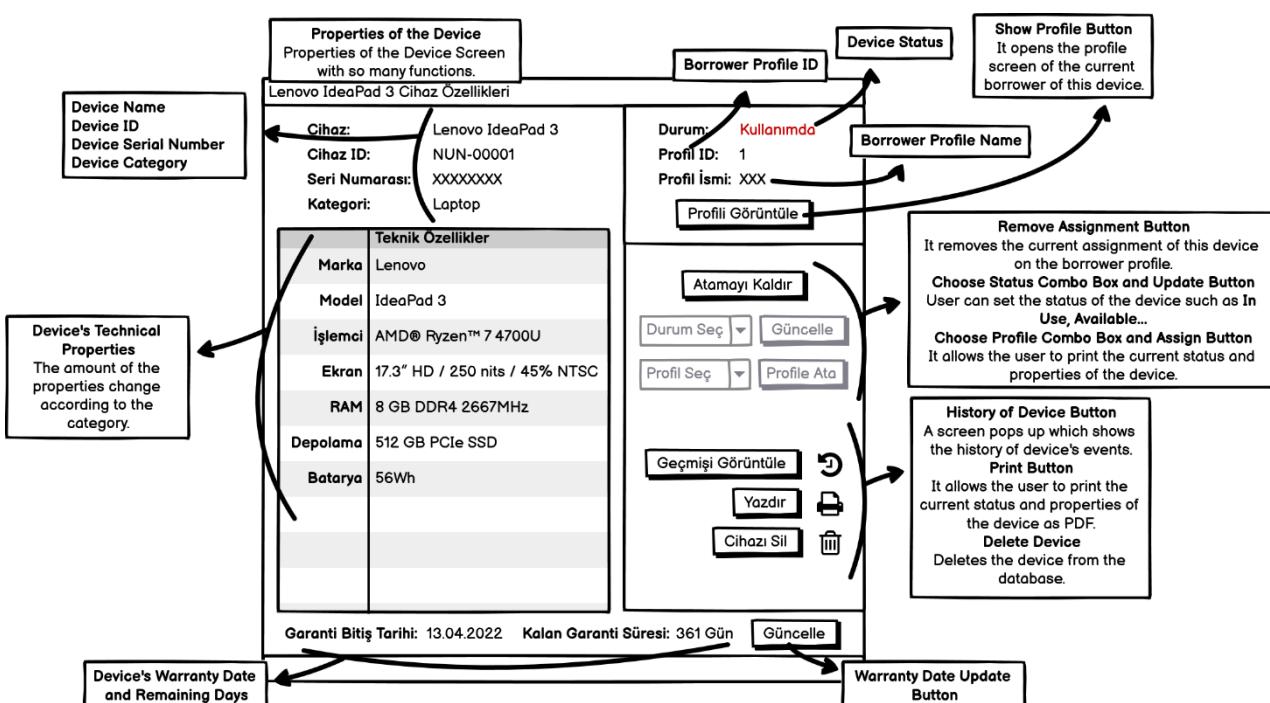
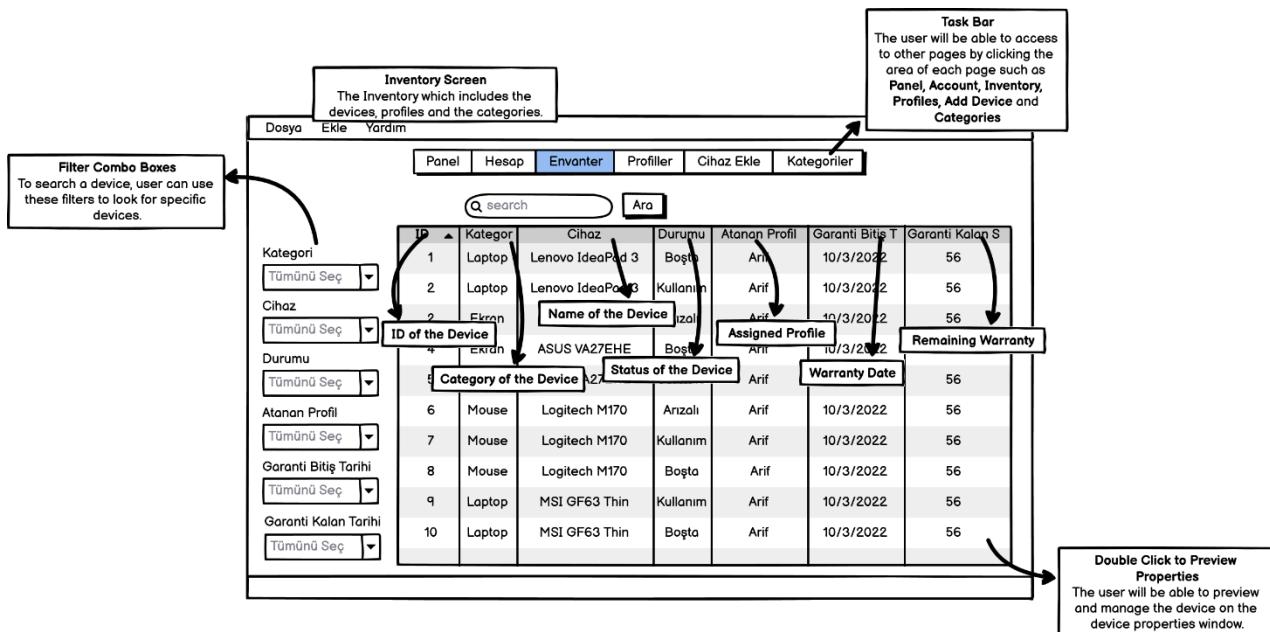
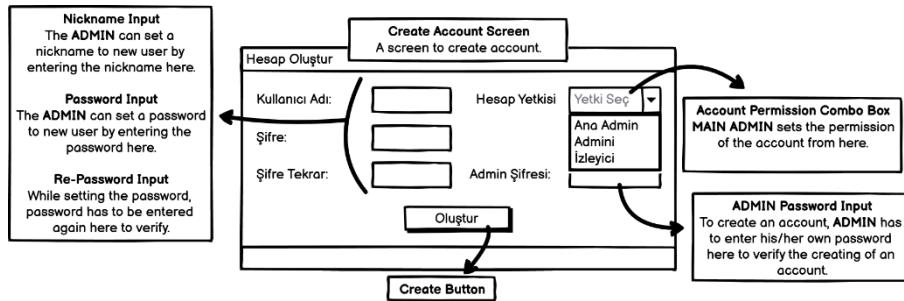


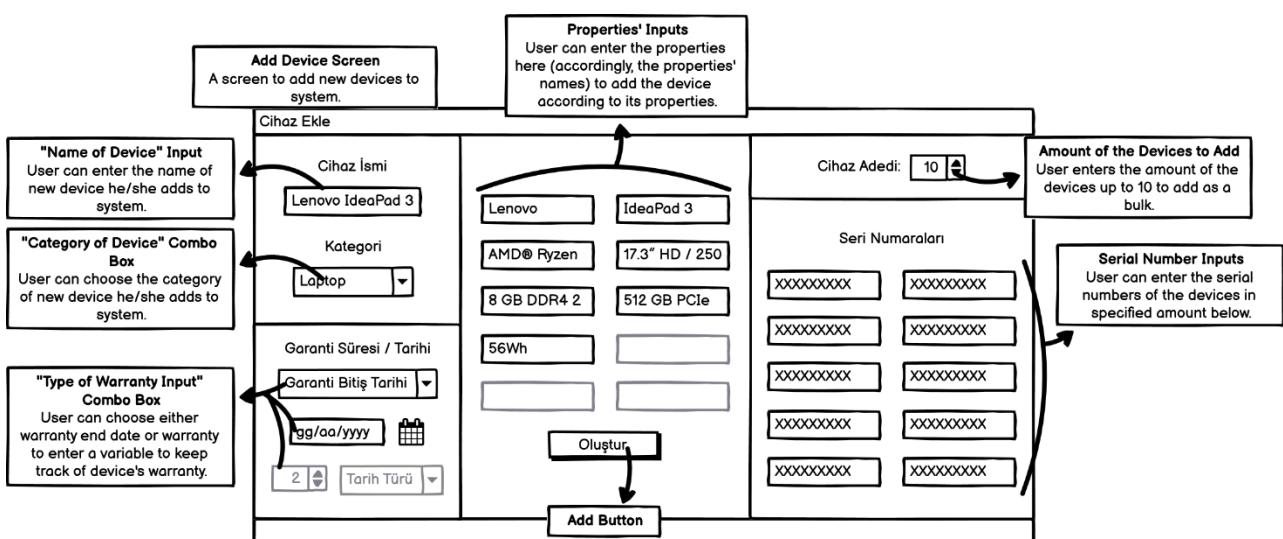
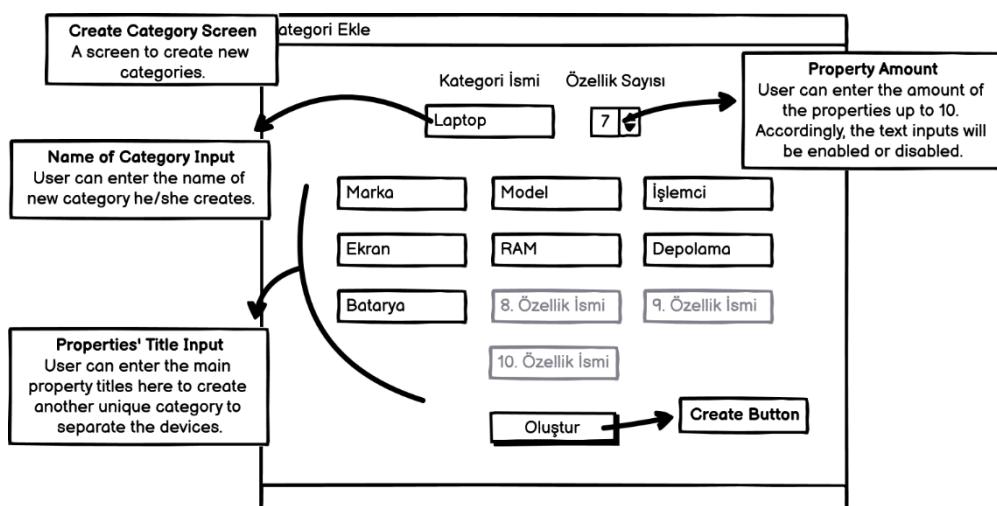
## Design of the solution:

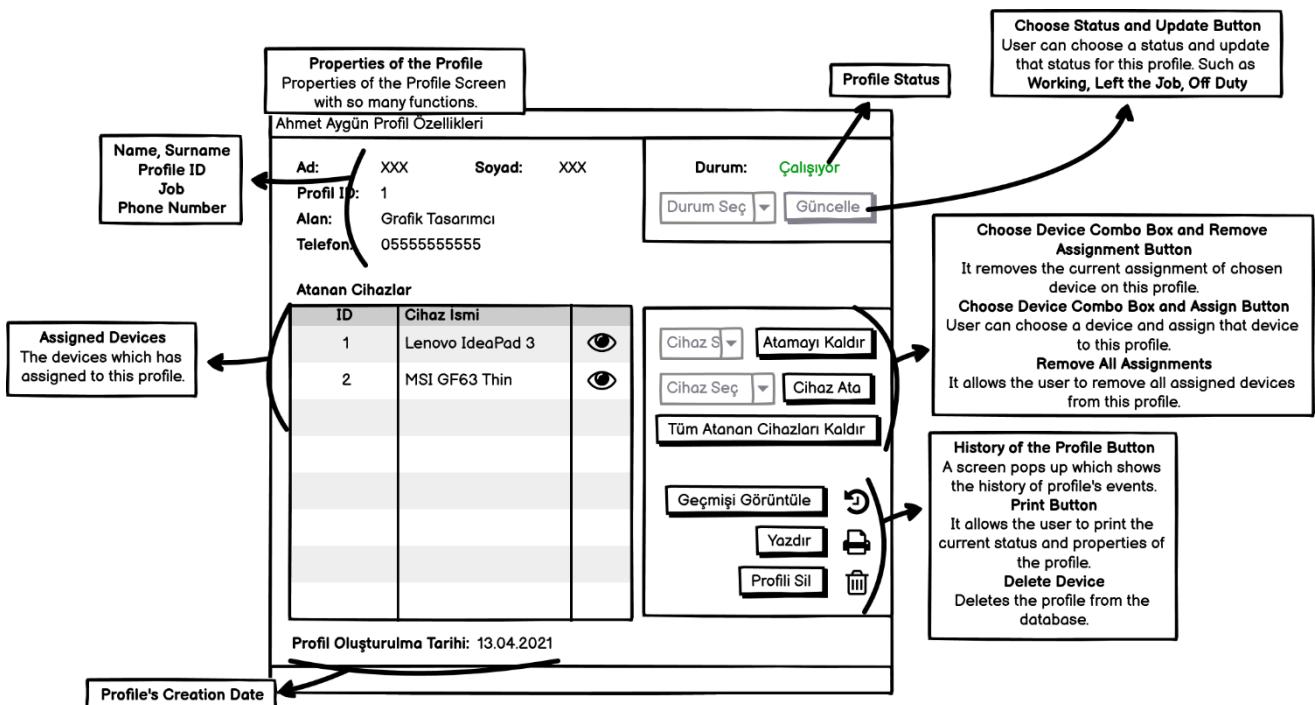
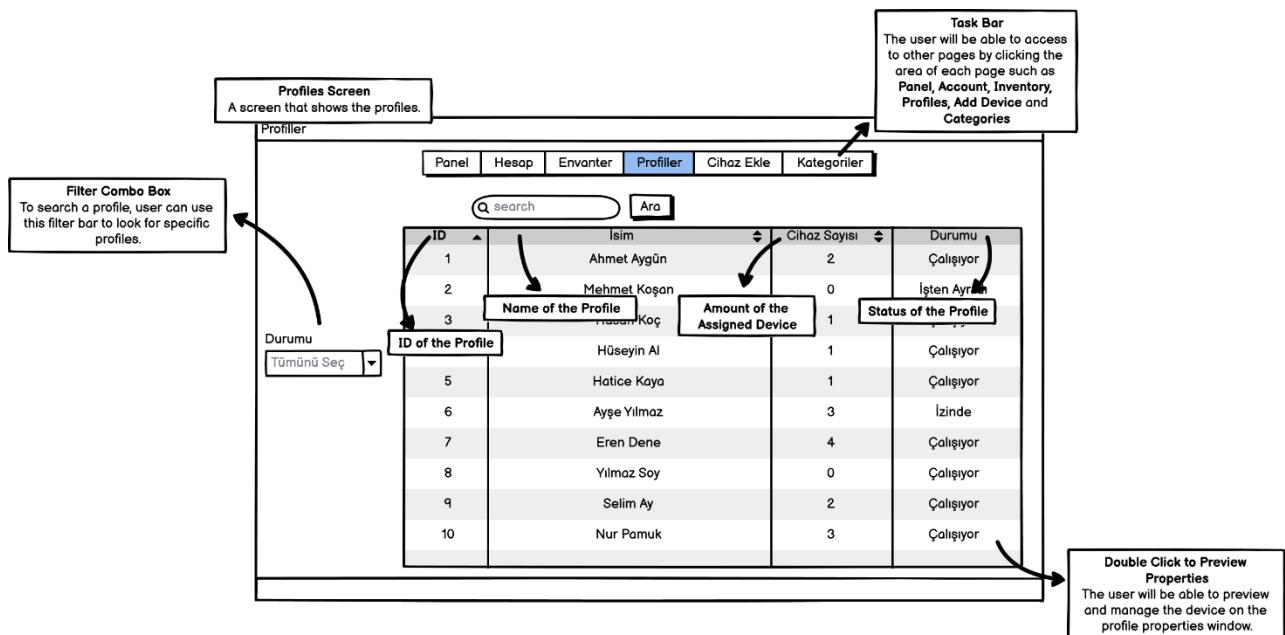
After using an online tool (Balsamiq) to create a detailed design of the product, can be seen in below, I got client feedback (See Appendix 1). After implementing his feedback, I followed the final designs to make sure the final product fulfills the client expectations.

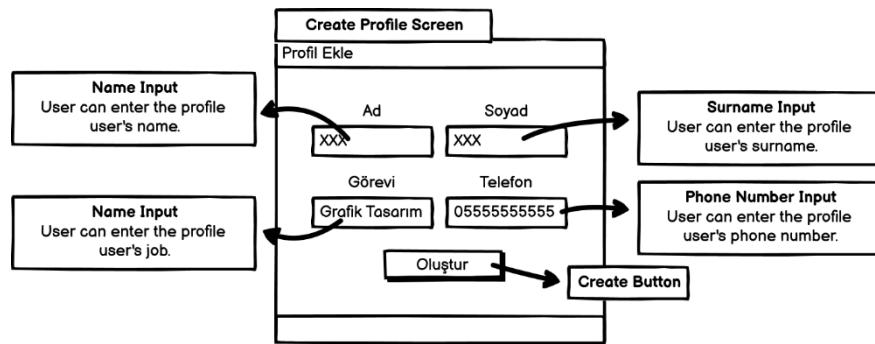




NUN-00001 - Lenovo IdeaPad 3 Geçmiş					
	İşlemler	Parametre	Admin	Saat	Tarih
	Cihaz Sisteme Eklendi	-	XXXX	14:34	12 Nisan 2020
	Barkod Oluşturuldu	-	XXXX	14:40	12 Nisan 2020
	Atama İşlemi	1 / XXX	XXXX	15:30	12 Nisan 2020
	Atama Kaldırıldı	-	XXXX	19:57	13 Nisan 2020
	Cihaz Durum Güncellemesi	Anzalı	XXXX	20:00	13 Nisan 2020







1 - Profil Geçmişi						
Log of the Profile	İşlemler	Parametre	Admin	Saat	Tarih	
User can see the movements or events of the profile here as a list.	Profil Oluşturuldu	-	XXX	13:30	13 Nisan 2021	
	Cihaz Atandı	NUN-00001 / Lenovo IdeaPad 3	XXX	14:40	14 Nisan 2021	
	Atama Kaldırıldı	NUN-00001 / Lenovo IdeaPad 3	XXX	15:30	15 Nisan 2021	
	Durum Güncellemesi	Çalışmıyor	XXX	19:50	15 Nisan 2021	
	Durum Güncellemesi	Çalışıyor	XXX	20:00	16 Nisan 2021	
	Profil Yazdırıldı	-	XXX	12:00	17 Nisan 2021	
	Cihaz Atandı	NUN-00009 / MSI GF63	XXX	14:40	2 Mart 2021	
	Bütün Atamalar Kaldırıldı	<a href="#">Tüm Atanan Cihazlar</a>	XXX	15:30	30 Mart 2021	

**Add Device Screen**  
A screen to add new devices to system.

**Properties' Inputs**  
User can enter the properties here (accordingly, the properties' names) to add the device according to its properties.

**Task Bar**  
The user will be able to access to other pages by clicking the area of each page such as Panel, Account, Inventory, Profiles, Add Device and Categories

**"Name of Device" Input**  
User can enter the name of new device he/she adds to system.

**"Category of Device" Combo Box**  
User can choose the category of new device he/she adds to system.

**"Type of Warranty Input" Combo Box**  
User can choose either warranty end date or warranty to enter a variable to keep track of device's warranty.

**Cihaz İsmi**: Lenovo IdeaPad 3  
**Kategori**: Laptop  
**Garanti Süresi / Tarihi**: Garanti Bitiş Tarihi: 99/aa/yyyy, Tarih Türü: 2

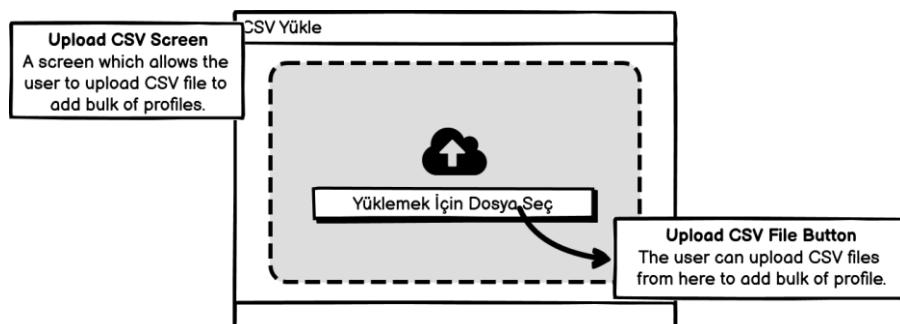
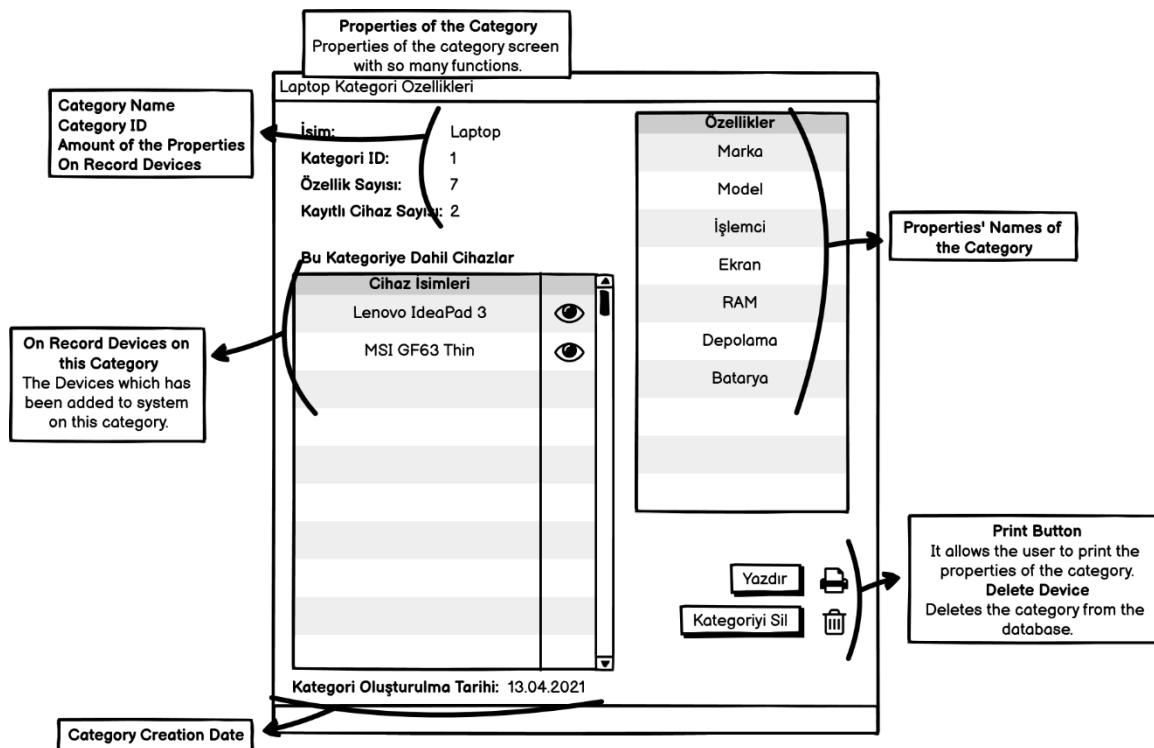
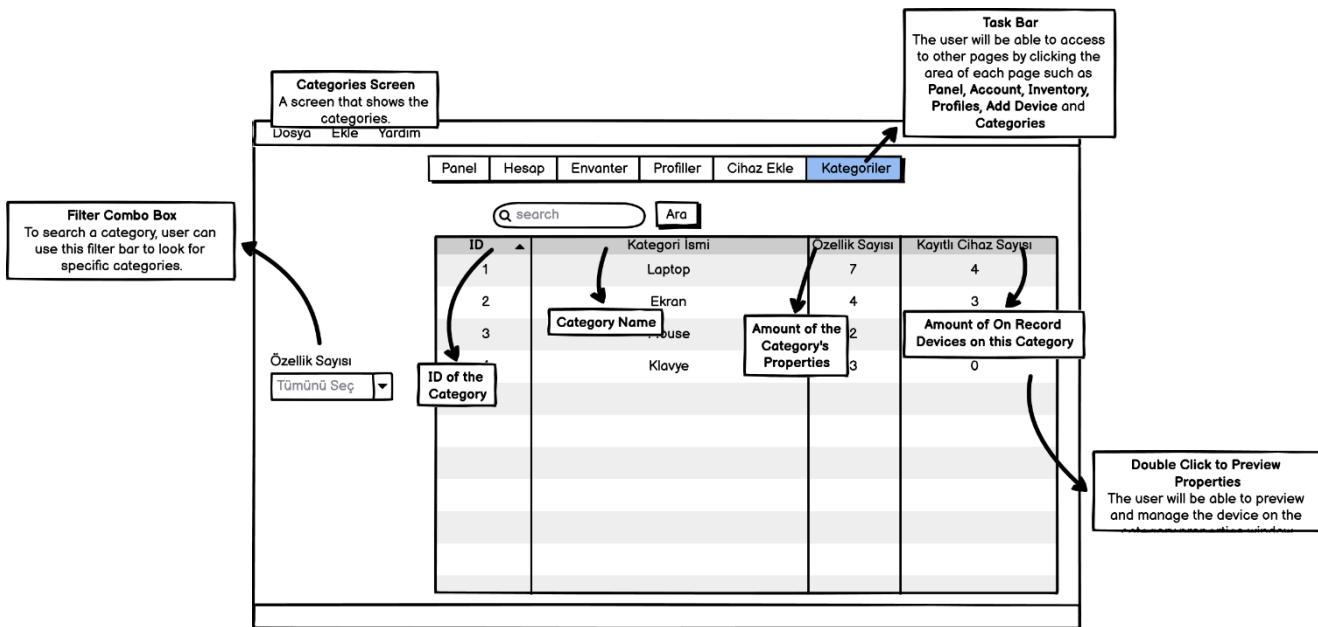
**Cihaz Adedi**: 10 → **Amount of the Devices to Add**  
User enters the amount of the devices up to 10 to add as a bulk.

**Seri Numaraları**  
User can enter the serial numbers of the devices in specified amount below.

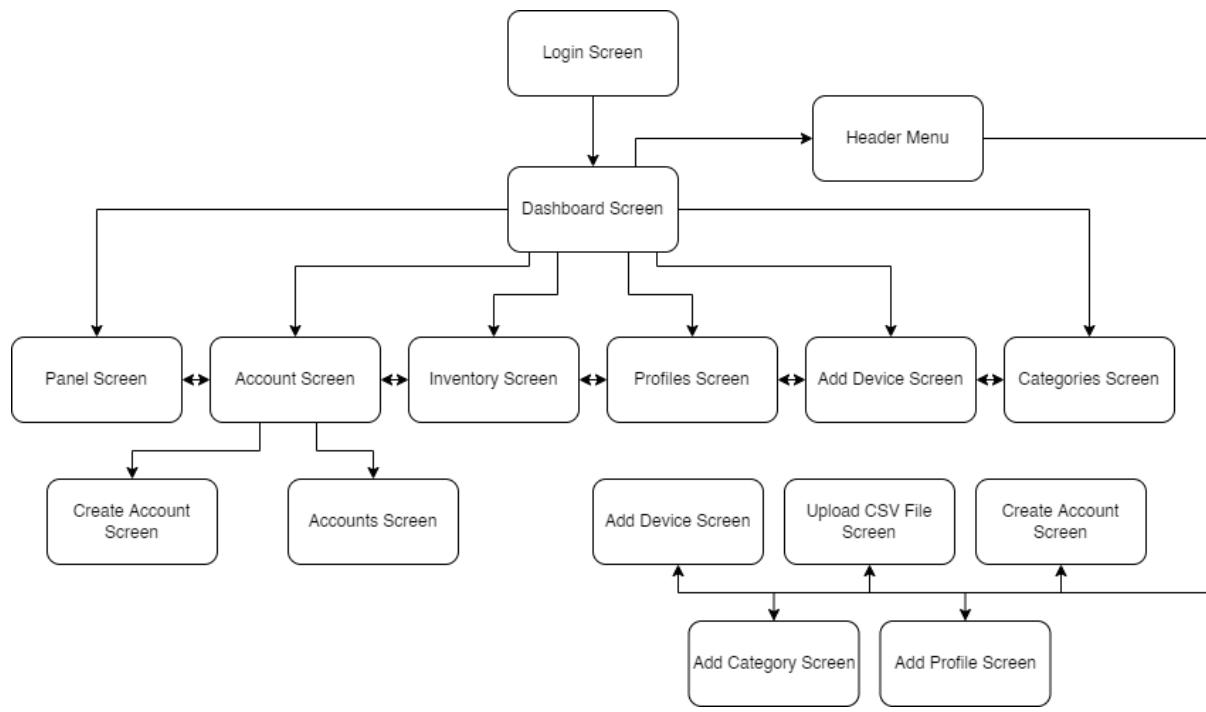
**Serial Number Inputs**  
User can enter the serial numbers of the devices in specified amount below.

```

graph TD
    ADD[Add Device Screen] --> NI1["Name of Device" Input]
    ADD --> NI2["Category of Device" Combo Box]
    ADD --> NI3["Type of Warranty Input" Combo Box]
    NI1 --> CI[CI]
    NI2 --> K[Kategori]
    NI3 --> GS[Garanti Süresi / Tarihi]
    CI --> SA[Cihaz Adedi]
    SA --> SN[Serial Number Inputs]
    K --> SN
    GS --> SN
    GS --> O[Oluştur]
    O --> AB[Add Button]
    AB --> TaskBar[Task Bar]
  
```

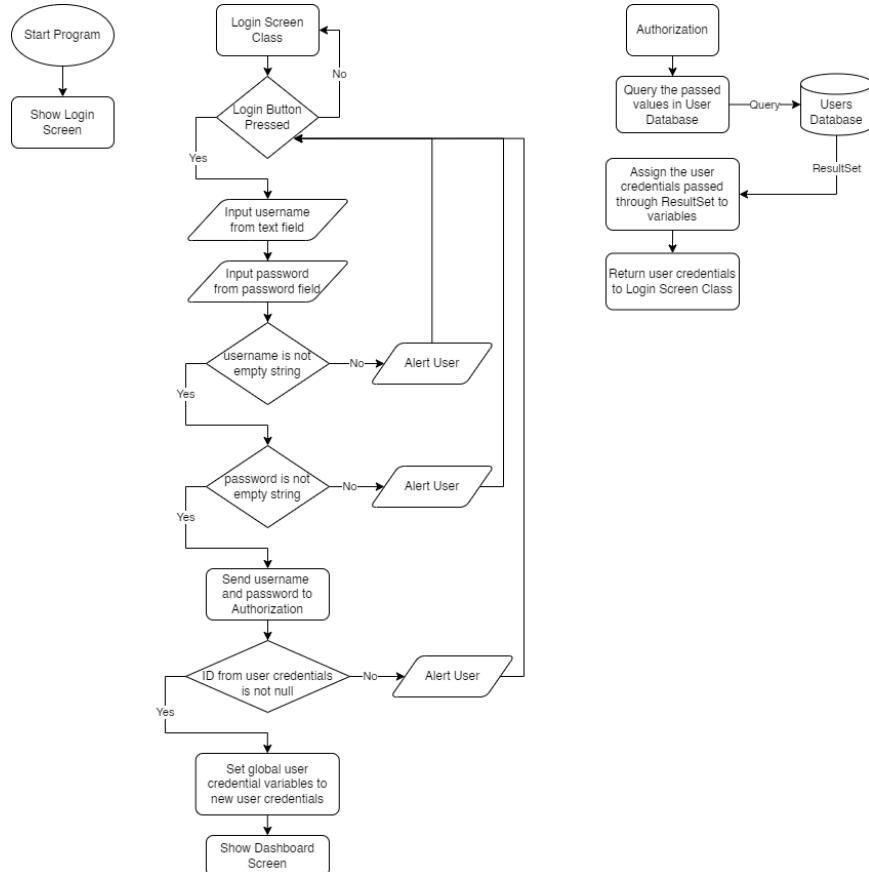


## System Storyboard

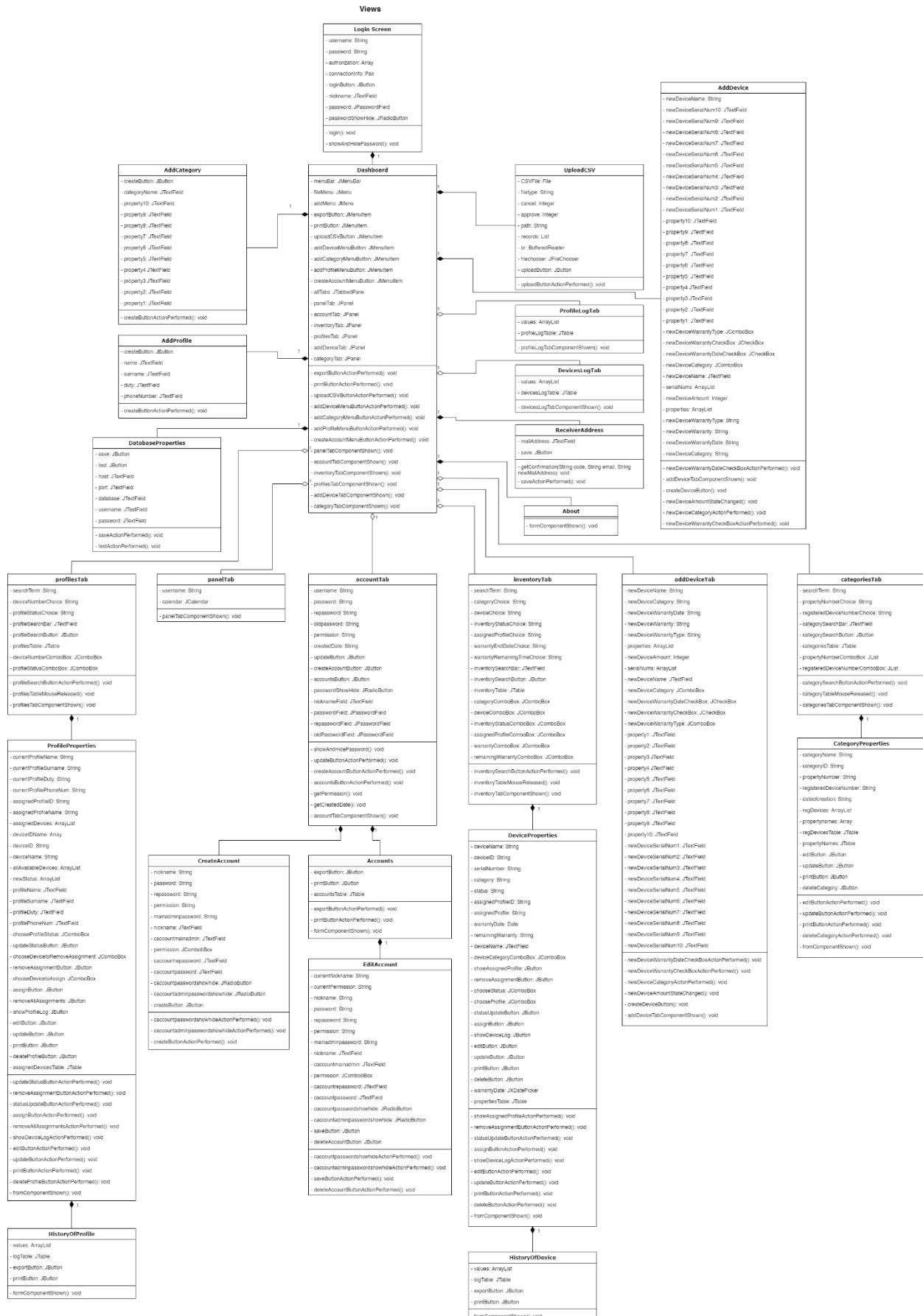


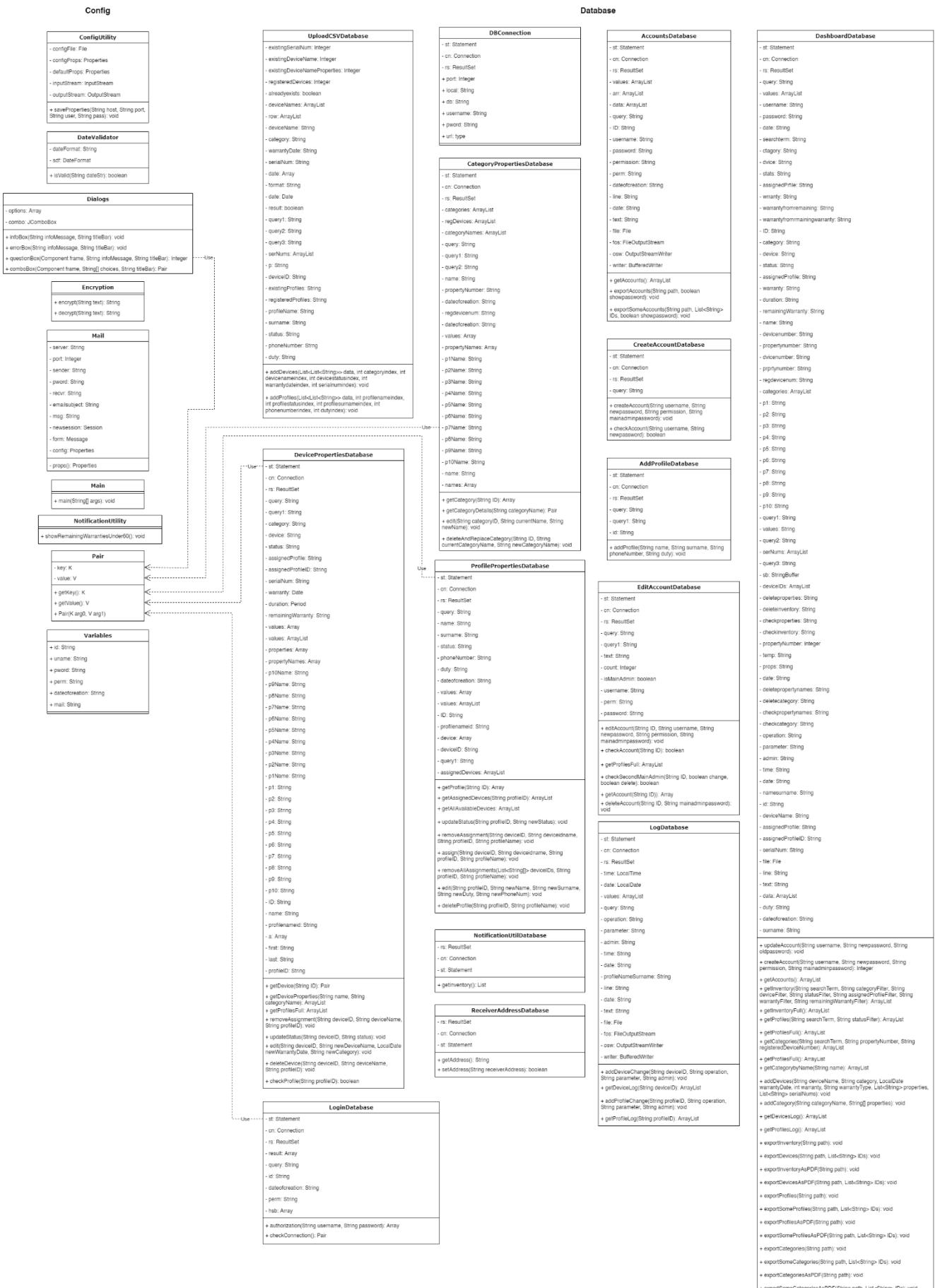
## Flow Charts

### Login Process:



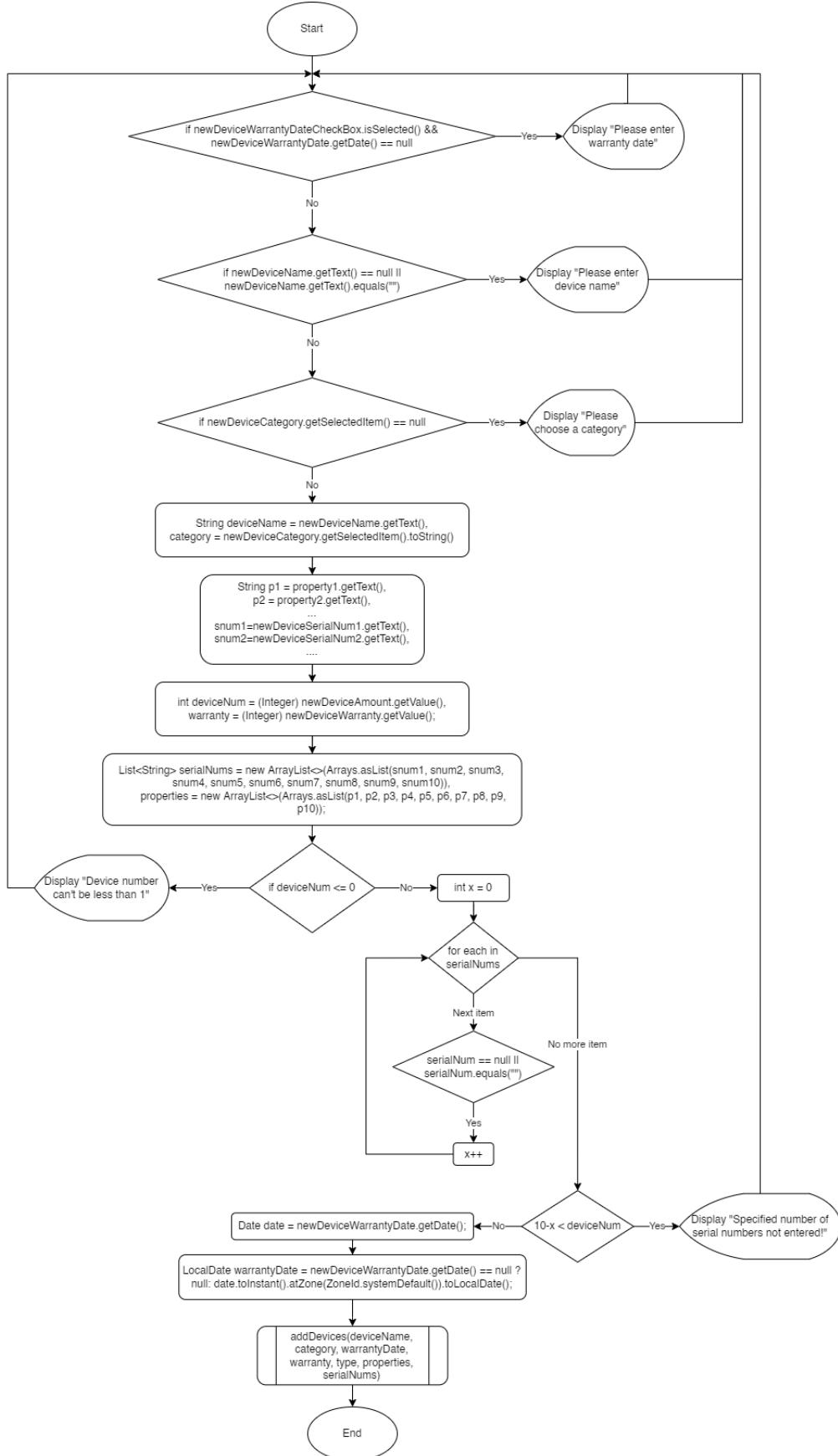
## UML Class Interaction Diagram:



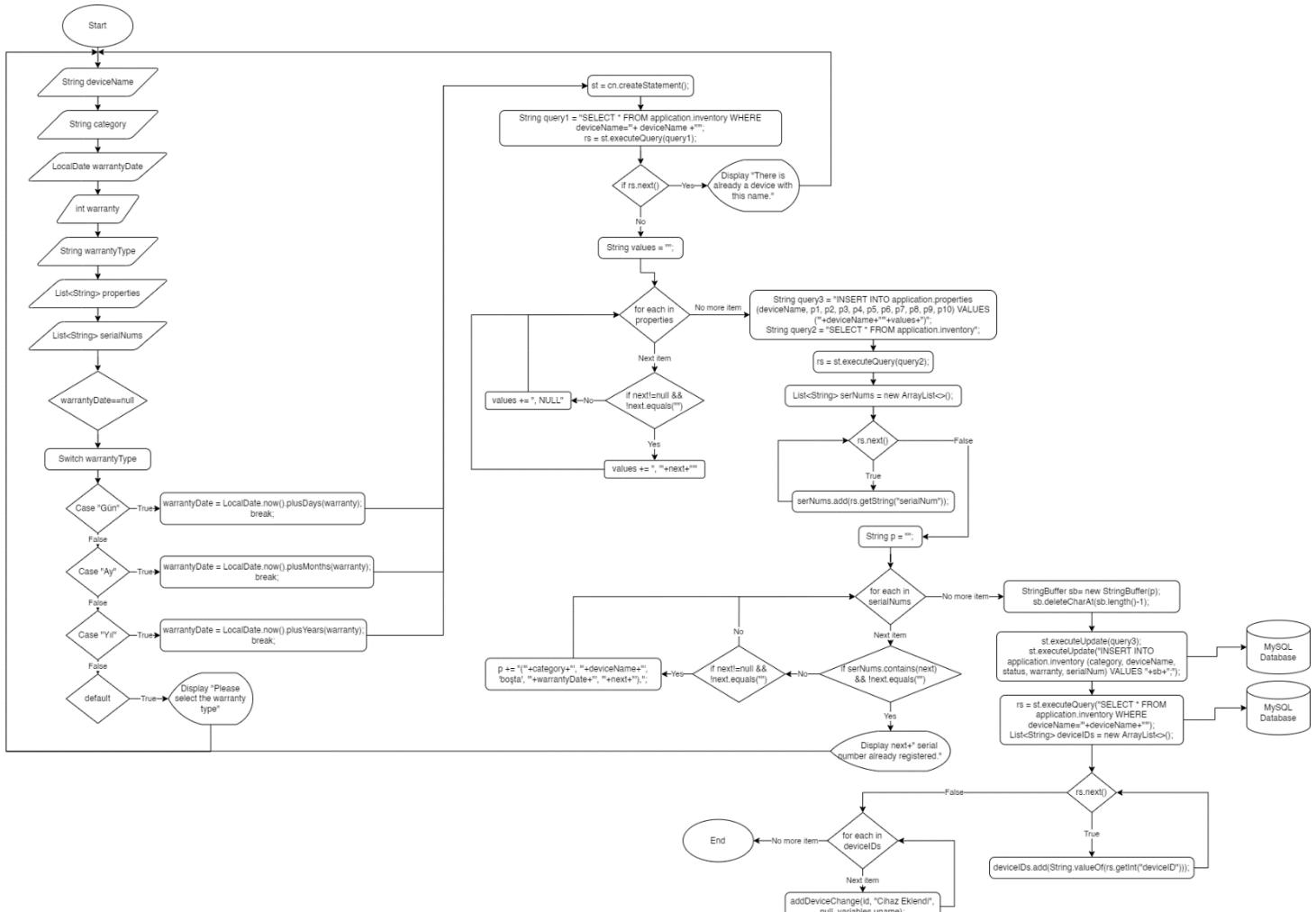


## Algorithmic Flow Charts:

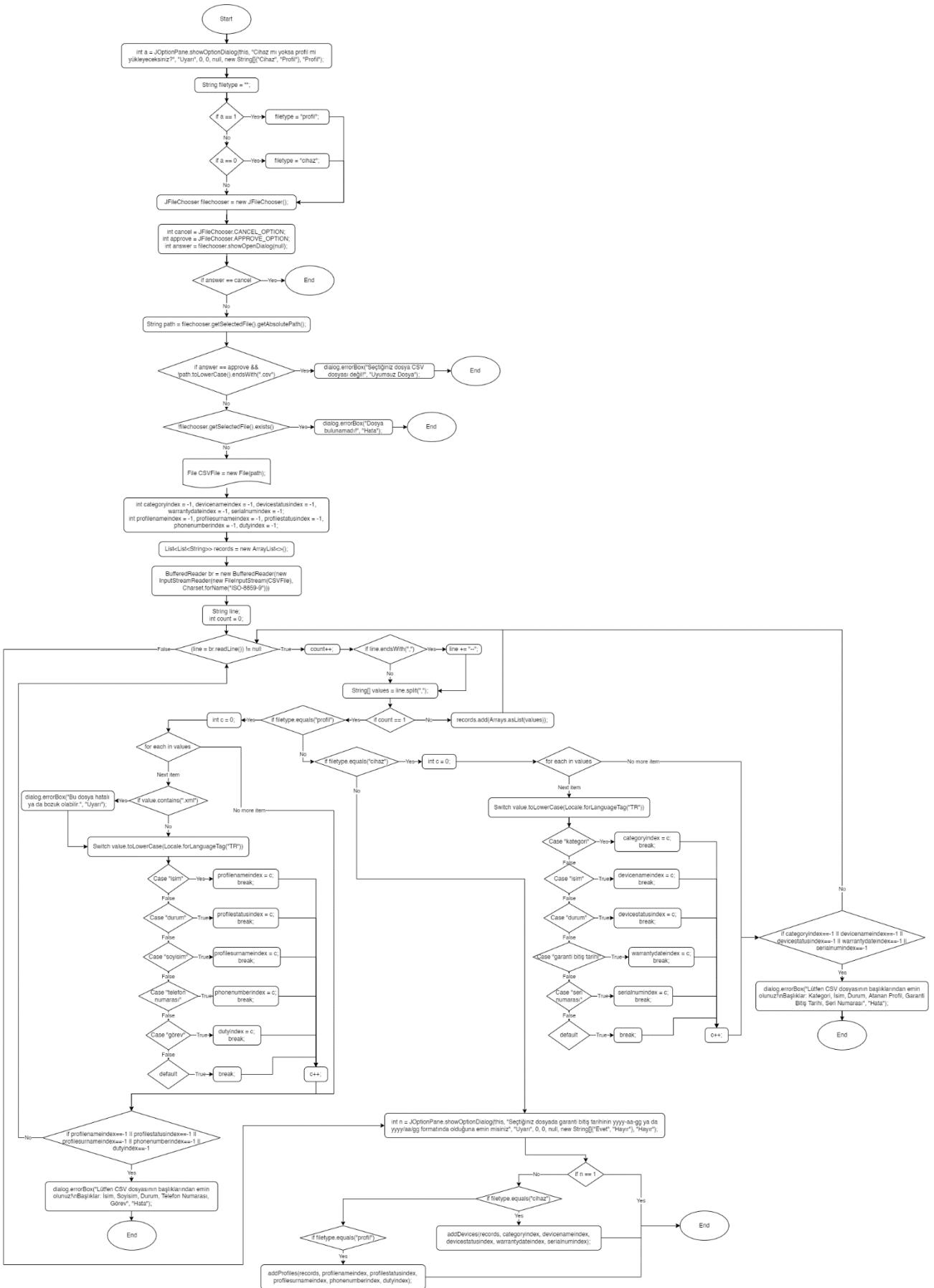
### Adding Devices Front-End Method



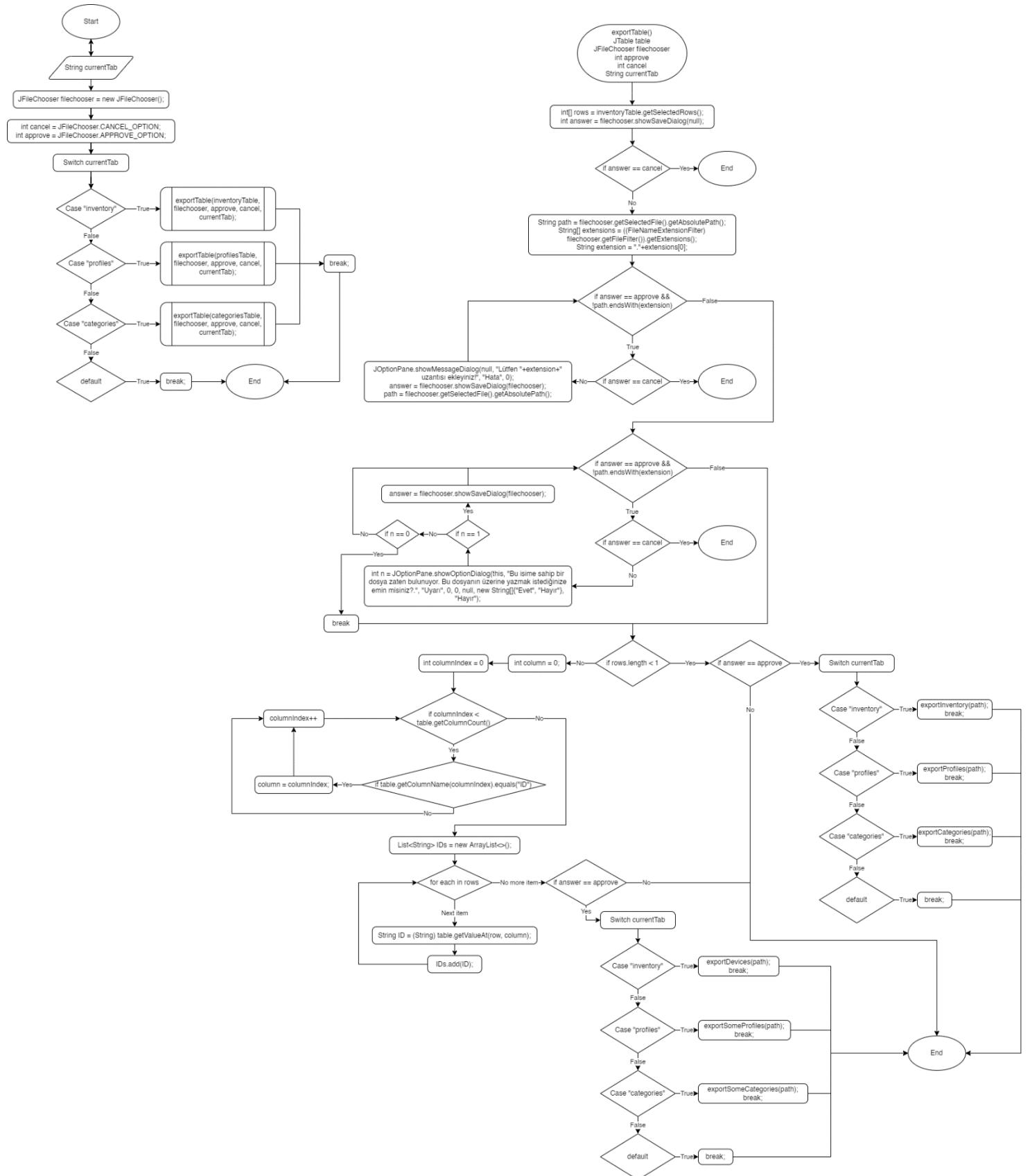
## Adding Devices Back-End Method



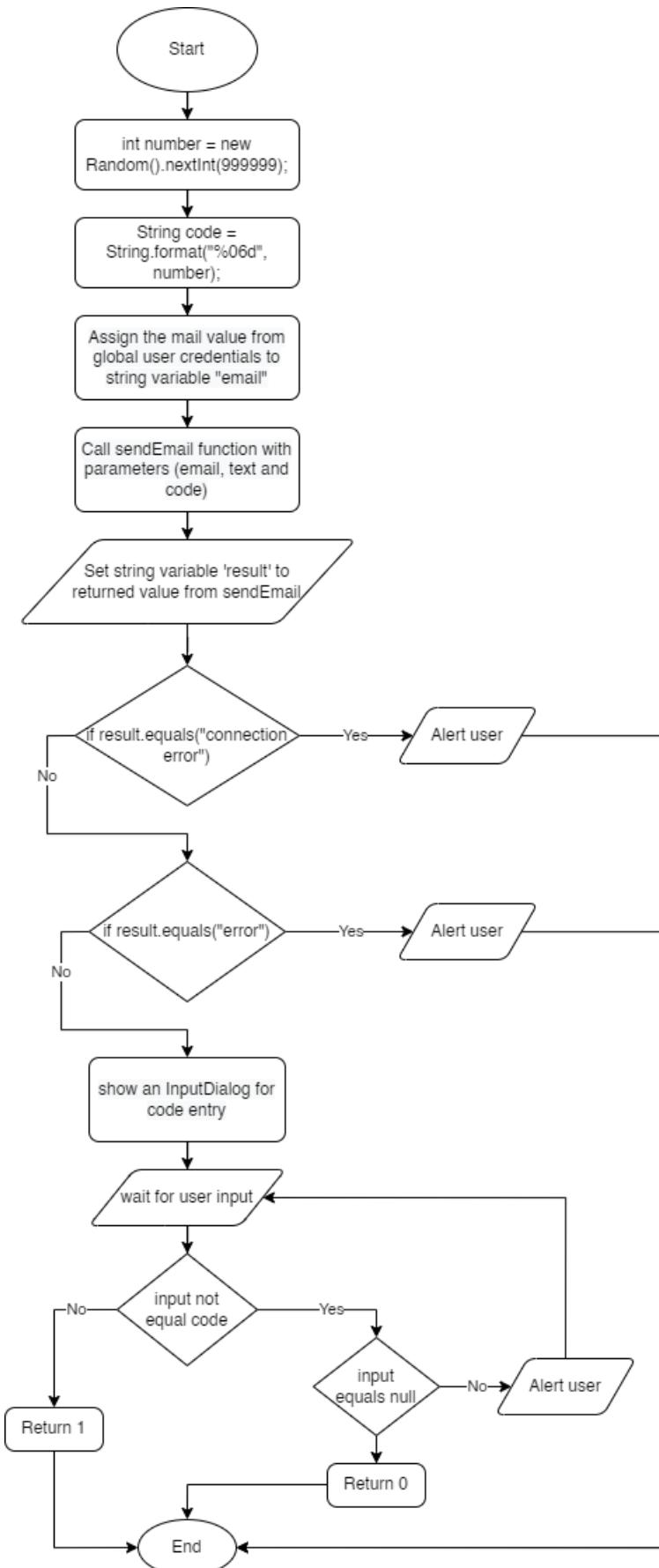
## Importing a CSV File



## Exporting data into a CSV File



## Sending mail for verification



## Justification for data structure

For this assignment, array lists will be the primary data structure used. All of the objects, profiles, categories, and their information will be collected in and initialized for use in this structure. For this solution, an array list is appropriate as it is a dynamic data structure meaning it will be able to expand in size as the user adds more items or elements and access to data easier. This will further make the solution more scalable for the IT specialists in that school.

## Test Plan

Action to be tested	Method	Success Criterion	Tested
<b>Login</b>	Entering proper account credentials –username, password- and checking if the dashboard screen comes up or a “wrong credentials” dialogue comes up.	1	Yes
<b>Display Accounts</b>	Login with a not “Main Admin” account to check the visibility of the button. Opening the accounts window to check the accounts.	2	Yes
<b>Create Account</b>	With a Main Admin account, open the Create Account window and enter required information.	3	Yes
<b>Edit Account</b>	With a Main Admin account, double click to the elements in the Accounts table after displaying all of the accounts. Then, entering the required information to check if the program gives the necessary errors or accepts the information.	3	Yes
<b>Hierarchical Permission System</b>	Login with both of the three permissions separately and check the following functions respectively: Create Account, Edit Account, Display Accounts, Add Device, Add Category, Add Profile, E-Mail Address Configuration	4	Yes
<b>Remaining Warranty Warning</b>	Comparing all of the devices’ warranty in the inventory with the ones shown on the warranty warning dialogue that is shown after login.	5	Yes
<b>E-mail Verification</b>	Trying out each verification required functions to test if the e-mail comes to the mail address specified: Create Account, Edit Account, E-Mail Address Configuration	6	Yes

<b>Display Inventory</b>	Opening the inventory tab to check if all registered devices are shown in the table.	7	Yes
<b>Display Profiles</b>	Opening the profiles tab to check if all registered profiles are shown in the table.	7	Yes
<b>Display Categories</b>	Opening the categories tab to check if all registered categories are shown in the table.	7	Yes
<b>Device Properties</b>	Double click to an element in the Inventory table and check if all the information associated with the device are correct.	8	Yes
<b>Search and filter</b>	Write a property/serial number/device name/etc. to check if the searching function is working in inventory tab. Then select all of the choices given in the filters section to check if the filters are working. Do this with the profiles and categories, too.	9	Yes
<b>Profile/Category Properties</b>	Double click to an element in the Profiles/Category table and check if all the information associated with the profile/cateogry are correct.	10	Yes
<b>Add Device</b>	Open Add Device Tab or window and fill all the required fields with proper information: components, categories, properties, serial numbers and warranty dates.	11	Yes
<b>Log of devices and profiles</b>	Check the Device Log and Profile Log Tabs to check all the actions match with the reality or if there is any missing action.	12	Yes
<b>Add Category</b>	Open Add Category window and fill all the required fields with proper information: name and component titles.	13	Yes
<b>Add Profile</b>	Open Add Profile window and fill all the required fields with proper information: name, surname, duty, identity number.	14	Yes
<b>Assign Device</b>	Open Device Properties screen for a device and select a profile from combobox and try to assign, then check if it is successful from the device status and the “Show Proile” button. Open Profile Properties screen for a profile and select a device from combobox and try to	15	Yes

	assign, then check if it is successful from the Assigned Devices table.		
<b>Export Table as CSV File</b>	Open either Inventory, Profiles, Categories and Accounts and click Export as CSV button. Check if a file chooser screen comes up. Then select a file path for CSV File to be saved and click save. Open the saved CSV File and check if the selected elements or all of the elements are saved.	16	Yes
<b>Import Profiles</b>	Click Import button and select “Profile” choice from the screen poped up. Then choose a CSV file from the file chooser screen and check if each condition specified in the code is properly working and the program shows a summary window after importing the profiles.	17	Yes
<b>Import Devices</b>	Click Import button and select “Device” choice from the screen poped up. Then choose a CSV file from the file chooser screen and check if each condition specified in the code is properly working and the program shows a summary window after importing the devices.	18	Yes