During my internship program, I had the opportunity to tour the 560-acre Temsa factory. During this tour, all the stages of a vehicle's production process, from start to finish. On the production line, I observed the entire process, starting from the initial design of the vehicle, through assembly, painting, quality control, and final testing. Additionally, I received occupational health and safety training, which emphasized the importance of maintaining safety standards in an industrial environment. At the end of the day, they gave me to IT from my internship program.

About TEMSA

TEMSA Skoda Sabancı Ulaşım Araçları A.Ş. is a manufacturer of buses, midibuses, and light-trucks. As of 2020, it is operating under the partnership of **Sabancı Holding** and **PPF Group (Škoda Transportation)**.

At the TEMSA **Adana** plant, which is established on an area of 500,000 m², a total of 11,500 vehicles are produced annually, including 4,000 buses, midibuses, and 7,500 light trucks, with 1,400 employees.

In IT Department of TEMSA

There is departments in TEMSA such as artificial intelligence, network, software development, SAP, cyber security, backend and server technologies, etc.

Bus of Jean-Claude Juncker in 2014

Temsa used as a Police bus

Temsa Maraton on Istanbul Bogazici Bridge

TEMSA Safir in Jordan

TEMSA Opalin in Dresden, Germany

TEMSA Tourmalin in Kielce, Poland

TEMSA Avenue in Antalya, Turkey

TEMSA Prestige in Zhytomyr, Ukraine

Sayfa No	Çalışmanın		KONTROL
1	Konusu : General Information and meeting about the company	Yapıldığı Tarih: 24/06/2024	

On my second day at TEMSA as an intern, I was given a topic to research about SAP technology. This task required me to delve into the details of SAP, including its various applications and functionalities. I learned about the importance of SAP in streamlining business operations and enhancing efficiency. Furthermore, we had in-depth discussions about SAP, during which we explored how to download and install the necessary applications. We also examined what SAP is, its key features, and the wide range of industries where it is utilized. This comprehensive study provided me with valuable insights into the integration of advanced software solutions in both manufacturing and business processes. Understanding how SAP contributes to optimizing production, managing resources, and improving overall operational effectiveness was particularly enlightening. This experience underscored the critical role of technology in modern industrial settings and equipped me with knowledge that will be beneficial in my future career.

SAP Setup

Setting up SAP is also a challenging part of working with SAP because it requires several applications. First, I downloaded Oracle VM VirtualBox and then set up the operating system using openSUSE Leap. After that, I configured the hosting settings in the virtual box. Next, I downloaded the SAP Developer Edition and adjusted its settings. Then, I configured the network settings and set up the SAP GUI. Finally, I was able to start working with SAP. And tried to learn SAP features and syntax.

Sayfa No	Çalışmanın		KONTROL
2	Konusu : SAP Tutorial	Yapıldığı Tarih: 25/06/2024	

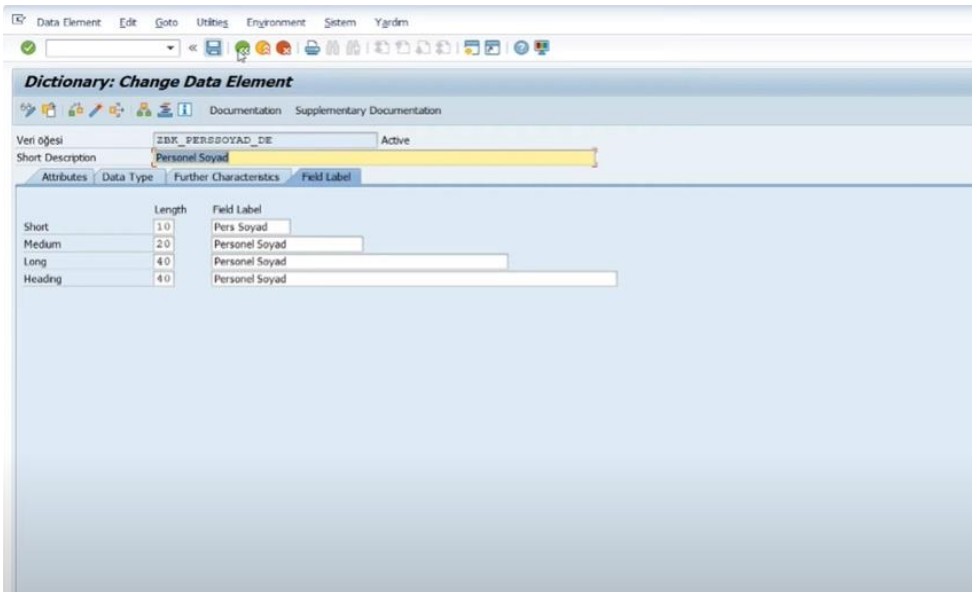
On the third day I also tried to learn SAP features and these are what I learned:

In SAP, every piece of data is associated with a domain, and it's possible for domains or data values to be identical. Within a table, the keyword "key" is used to establish the uniqueness of records, ensuring that each entry is distinct. Additionally, the term "initial value" indicates that the respective field will have a default value and will not be left empty. This setup is crucial for maintaining data integrity and consistency within the system, as it ensures that all necessary fields are populated and that each record can be uniquely identified. Understanding these concepts is fundamental for effectively managing and organizing data within SAP.

Creating programs in SAP can be done using transaction code SE38. This tool allows you to write and manage custom programs within the SAP environment. For creating tables, you use transaction code SE11. This transaction code is used not only for table creation but also for creating data elements and domains. Data elements define the type and length of a field, while domains define the value range and attributes for these data elements.

Once the tables are created, you can view them using transaction code SE16N. This transaction code provides a powerful interface for browsing and managing table data. It allows you to execute queries, filter results, and manipulate table contents efficiently.

By using SE38, SE11, and SE16N, you can create, manage, and view SAP tables and programs effectively. These tools are fundamental for developers working within the SAP system, providing the necessary functionality to build and maintain robust applications.



Sayfa No	Çalışmanın		KONTROL
3	Konusu : SAP Tutorial	Yapıldığı Tarih: 26/06/2024	

I could already write Flutter and use Firebase, and Postman, and recently, I was given a real API to create a TEMSA Approval Mail Component for their TEMSA Campus application. Over the past 1-2 days, I have been refreshing my Dart skills and learning how to interact with a real API that has a large database in Dart. This experience has been valuable in enhancing my understanding of working with complex APIs and integrating them into a Flutter application, allowing me to build robust and efficient components for TEMSA's application. They sent me a Figma design project to assist in designing the application's component. Additionally, they provided access to their API, which is documented on Swagger. I transferred all of the documentation to Postman, allowing me to test and interact with the API efficiently. This process has been instrumental in ensuring that I can accurately implement the designed components and seamlessly integrate the API into the application. Working with Figma for design and Postman for API testing has greatly enhanced my workflow and productivity.

Sayfa No	Çalışmanın		KONTROL
4	Konusu : API-Postman Tutorial	Yapıldığı Tarih: 27/06/2024	

I continued working on the TEMSA Approval Mail Component and, during this process, I learned how to convert Dart objects to JSON format and JSON data back to Dart objects. Additionally, I learned how to use tokens to authenticate and retrieve data from the API. This knowledge has been essential for handling data exchange between the frontend and backend, ensuring secure and efficient communication. These skills have further enhanced my ability to work with APIs and develop robust components for the TEMSA Campus application.

```
Class TechOnay GetAllProcessCount{
Data? data;
  List<String>? messages;
  TechOnay_GetAllProcessCount({this.data, this.messages});
  TechOnay_GetAllProcessCount.fromJson(Map<String, dynamic> json) {
    data = json['data'] != null ? new Data.fromJson(json['data']) : null;
    messages = json['messages'].cast<String>();
  }
  Map<String, dynamic> toJson() {
    final Map<String, dynamic> data = new Map<String, dynamic>();
    if (this.data != null) {
      data['data'] = this.data!.toJson();}
    data['messages'] = this.messages;
    return data;}}
```

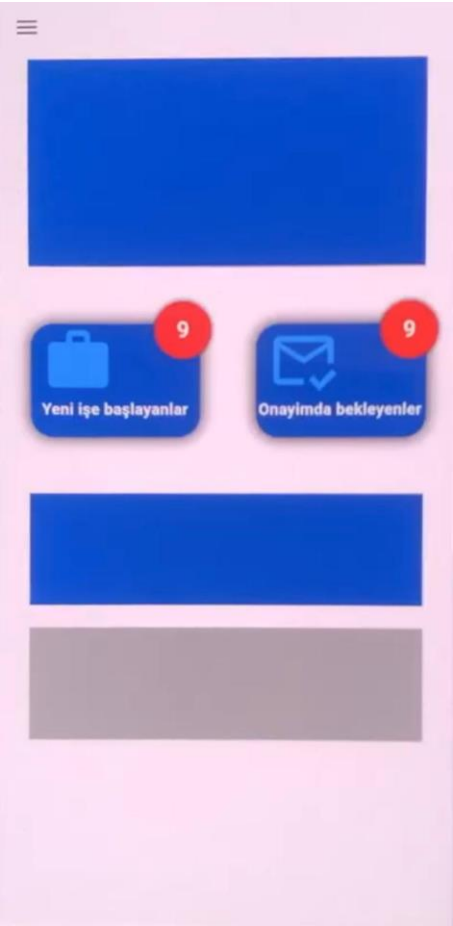
-That is part of the converter of JSON to Dart

```
class FetchService {
  final Dio _dio = Dio();
  Future<List<AuthModel>?> fetchPostItems(
    String url,
  ) async {
    try {
      final response = await _dio.get(url);
      if (response.statusCode == HttpStatus.ok) {
        final data = response.data;
        if (data is List) {
          return data.map((e) => AuthModel.fromJson(e)).toList();
        } else if (data is Map<String, dynamic>) {
          return [AuthModel.fromJson(data)];}}
    } catch (e) {
      print("Error fetching data: $e"); }
    return null;}}
```

-That is my Auth Service

Sayfa No	Çalışmanın		KONTROL
5	Konusu : Flutter-Postman-API Coding	Yapıldığı Tarih: 28/06/2024	

I continued working on the TEMSA Approval Mail Component and began the UI design using Flutter. This process took me one week as I aimed to closely replicate the design provided in Figma. This time was dedicated to ensuring that the user interface matched the original design specifications, which required meticulous attention to detail and thorough adjustments.



All the designs were created by me based on the Figma specifications, and I was specifically tasked with developing the “Onayımda Bekleyenler” section. Initially, the design was static on the first day of the project. This static approach allowed me to focus on getting the layout and visual elements right before incorporating dynamic functionality.

And after added functionality, I made it looks better than tester step.

Sayfa No	Çalışmanın		KONTROL
6	Konusu : Mail Approval Project for TEMSA	Yapıldığı Tarih: 01/07/2024	

I continued working on the TEMSA Approval Mail Component and integrated dynamic data and components into the app. This included adding a profile page with dynamic content, allowing for more interactive and personalized user experiences. The transition from static to dynamic elements involved connecting the UI with the underlying data and ensuring seamless functionality within the application.

```
Class TechOnay GetAllProcessCount{
Data? data;
  List<String>? messages;
  TechOnay_GetAllProcessCount({this.data, this.messages});
  TechOnay_GetAllProcessCount.fromJson(Map<String, dynamic> json) {
    data = json['data'] != null ? new Data.fromJson(json['data']) : null;
    messages = json['messages'].cast<String>();
  }
  Map<String, dynamic> toJson() {
    final Map<String, dynamic> data = new Map<String, dynamic>();
    if (this.data != null) {
      data['data'] = this.data!.toJson();}
    data['messages'] = this.messages;
    return data;}}
```

The data for these features is retrieved using this Flutter service, and the design is also dynamic. This means that any changes made to the data on the server will be reflected immediately in the app. By implementing dynamic data handling and updating the design accordingly, the application ensures that users always see the most current information without needing to refresh or reload manually. The design will be better than that step after testing.

Sayfa No	Çalışmanın		KONTROL
7	Konusu : Mail Approval Project for TEMSA	Yapıldığı Tarih: 02/07/2024	

I continued working on the TEMSA Approval Mail Component and implemented functionality to dynamically retrieve mail information. I added two buttons for users to manually approve or reject emails. Additionally, I introduced a key feature on the mails page: users can swipe right to approve an email and swipe left to reject it. This swipe functionality enhances the user experience by providing an intuitive and efficient way to manage email approvals and rejections directly from the interface.

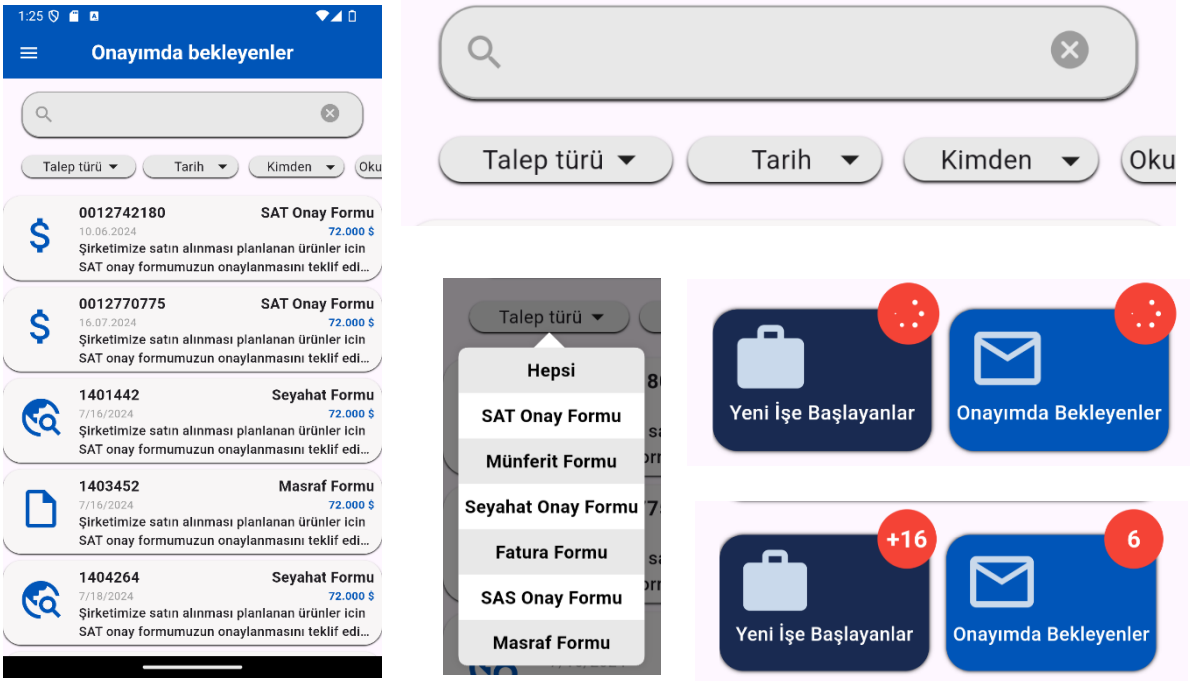
-Mail View Design

-Mail Approve View

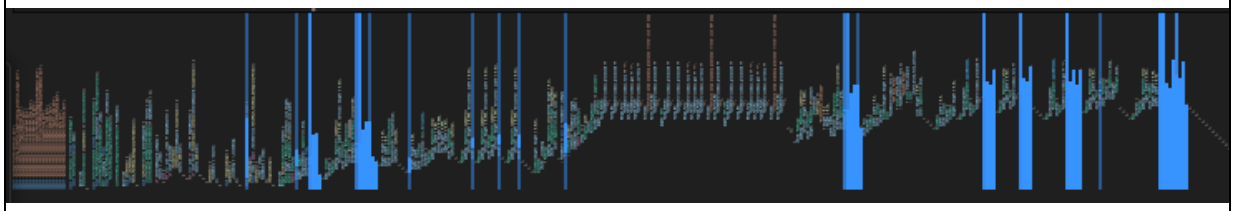
-Swipe example on the left.

Sayfa No	Çalışmanın		KONTROL
8	Konusu : Mail Approval Project for TEMSA	Yapıldığı Tarih: 03/07/2024	

I continued working on the TEMSA Approval Mail Component, progressing to the design of the email layout, search box, and implementing search restrictions. This involved creating a visually appealing and functional layout for the emails, ensuring that all necessary information was displayed clearly and concisely. Additionally, I designed a search box to allow users to easily find specific emails, incorporating search restrictions to refine and optimize the search functionality. This step was essential to enhance the usability and efficiency of the component, making it easier for users to navigate and manage their emails effectively.



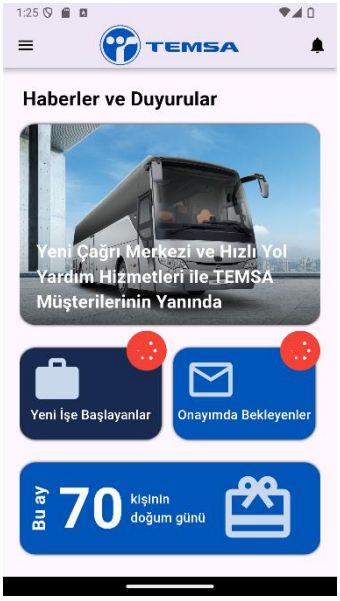
Applications Design I made According to Figma

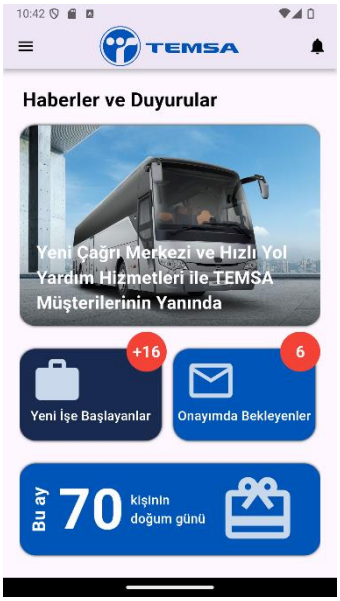


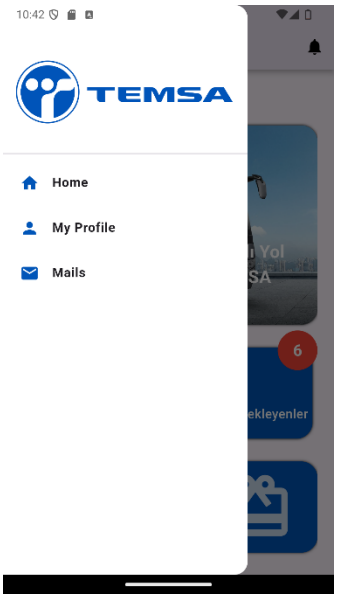
The code looks like above

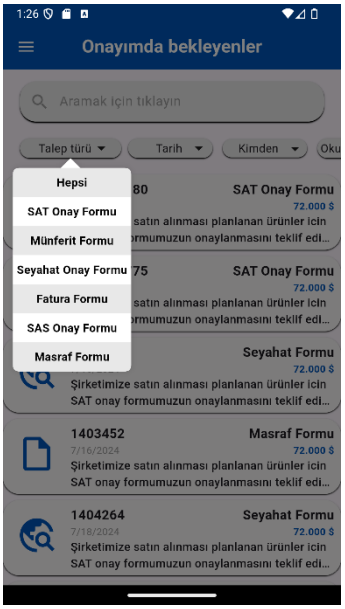
Sayfa No	Çalışmanın		KONTROL
9	Konusu : Mail Approval Project for TEMSA	Yapıldığı Tarih: 04/07/2024	

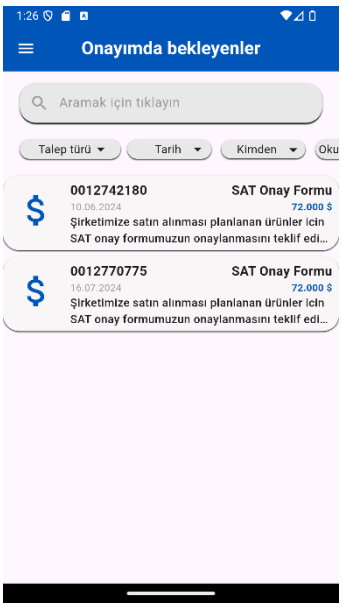
I continued working on the TEMSA Approval Mail Component, progressing to the final stages of the UI design. At this point, I had successfully retrieved all necessary data from the API, ensuring that the component had access to dynamic and up-to-date information. With the data integration complete, my focus shifted to designing the user interface (UI) and user experience (UX) elements. This involved meticulously arranging the data in a visually appealing and user-friendly manner, adhering to best practices in UI/UX design. The goal was to create an intuitive and efficient interface that allowed users to interact seamlessly with the component, enhancing their overall experience. This phase was crucial, as it required attention to detail and a deep understanding of design principles to ensure that the application not only functioned well but also looked polished and professional.

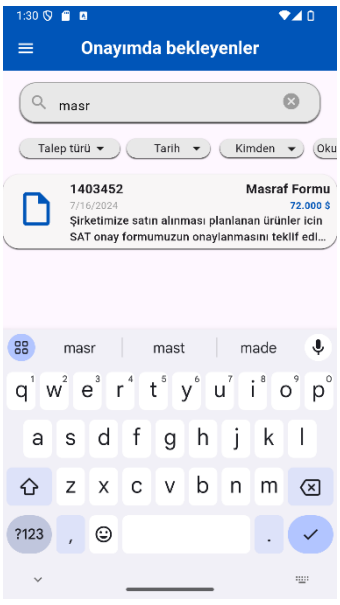








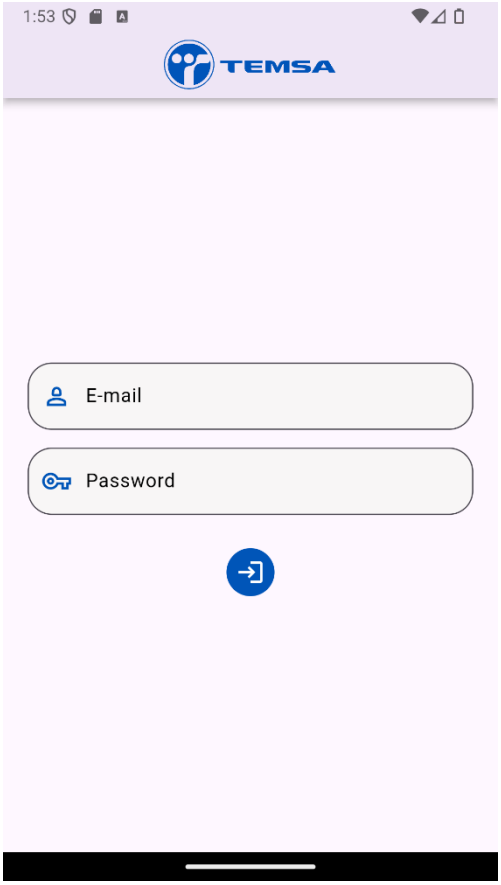




Sayfa No	Çalışmanın		KONTROL
10	Konusu : Mail Approval Project for TEMSA	Yapıldığı Tarih: 05/07/2024	

On the final day of my TEMSA Approval Mail Project, I made some changes and added a few features based on the feedback I received. After implementing these updates, we conducted thorough testing of the project to ensure its functionality and reliability. I then presented the components to other engineers for their comments and suggestions. This collaborative review process was invaluable, as it provided insights and perspectives that helped refine and improve the final product.

Open Page

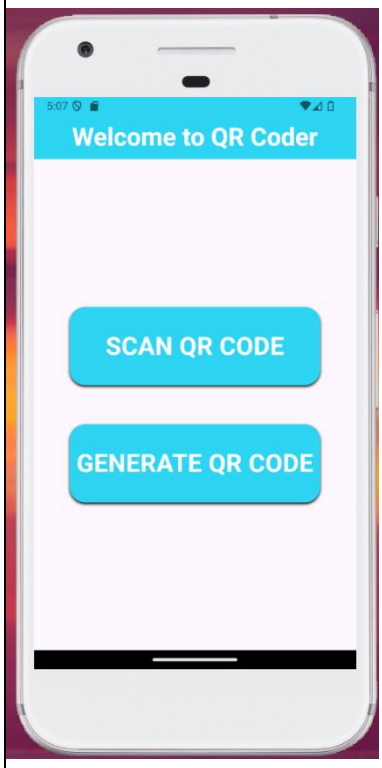


Authorization Page

Finally, I completed my first project, the TEMSA Approval Mail Component, in one week. This project encompassed the full development cycle, from initial design to dynamic data integration, and thorough testing. The experience was both challenging and rewarding, providing me with valuable insights and skills that I will carry forward into future projects.

Sayfa No	Çalışmanın		KONTROL
11	Konusu : Mail Approval Project for TEMSA	Yapıldığı Tarih: 08/07/2024	

My engineer assigned me a new project to work on, which involves handling QR codes for batteries. I used the same API as the TEMSA Approval Mail Component because the battery list is also available there. The project requires that the battery list be displayed on an open page, showing, for example, 10 batteries along with their QR code URLs. When I click on the 7th battery to change its QR code, the app should open the camera, scan a new QR code, and then post its URL to the server. After this, the process continues sequentially with the 8th, 9th, and 10th batteries. Similarly, if I start from the 5th battery, it will proceed as follows: 5th, 6th, 7th, 8th, 9th, and 10th but when I want to stop that process I can go back to open page. I spent two hours retrieving all the battery information, but I found that I didn't have access to use the POST method with the provided API. As a result, I decided to use Firebase for creating the application. Before refreshing my Firebase skills, I created a basic QR code generator and scanner application. This initial step helped me understand the fundamentals of QR code functionality and provided a foundation for integrating these features into the larger project.



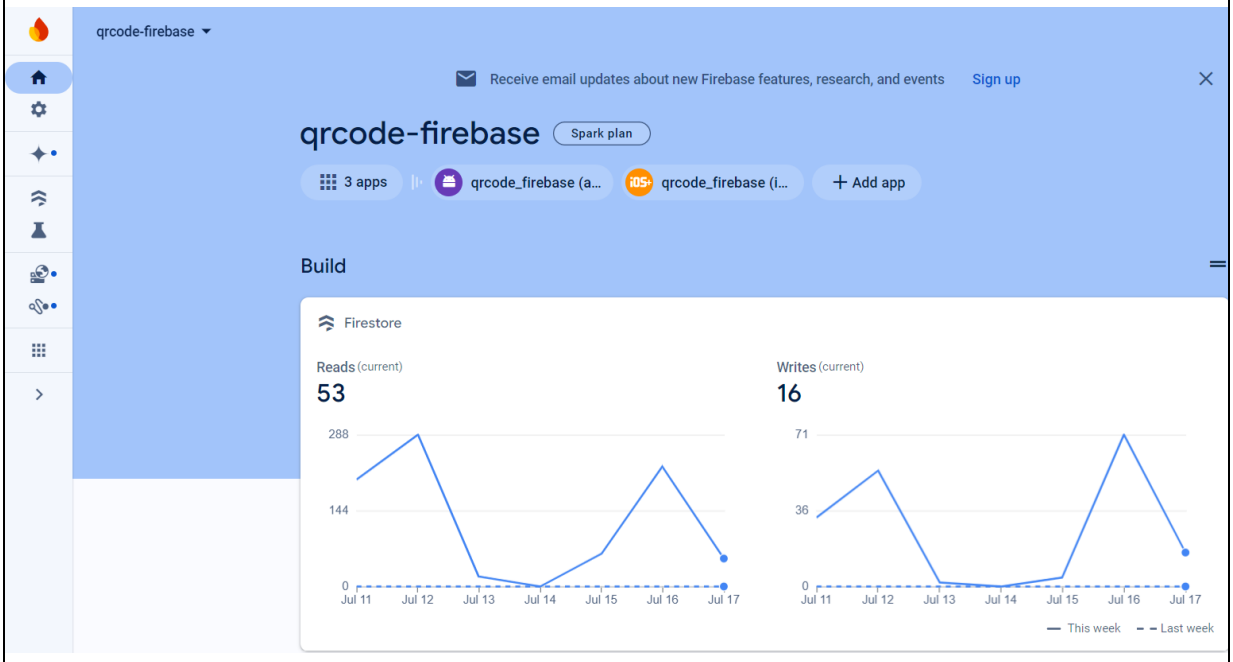
Sayfa No	Çalışmanın		KONTROL
12	Konusu : Scan and Generate QR Code App	Yapıldığı Tarih: 09/07/2024	

I took some time to refresh my Firebase skills and then integrated Firebase into my Flutter project. This involved configuring Firebase with the project, setting up necessary services, and ensuring that the app could effectively communicate with Firebase for data storage and retrieval. This integration is crucial for leveraging Firebase's capabilities to manage and synchronize data in the application.

<u>These are step of adding firebase to flutter VS Code project(Terminal Codes)</u>

1. firebase login
2. dart pub global activate flutterfire_cli
3. flutter pub add firebase_core
4. flutter pub add firebase_auth
5. flutter pub add cloud_firestore
6. npm install -g firebase-tools
7. flutterfire configure
8. Finally add that code to main:

```
WidgetsFlutterBinding.ensureInitialized();

  await Firebase.initializeApp( options: DefaultFirebaseOptions.currentPlatform);
```



Sayfa No	Çalışmanın		KONTROL
13	Konusu : Firebase Tutorial	Yapıldığı Tarih: 10/07/2024	

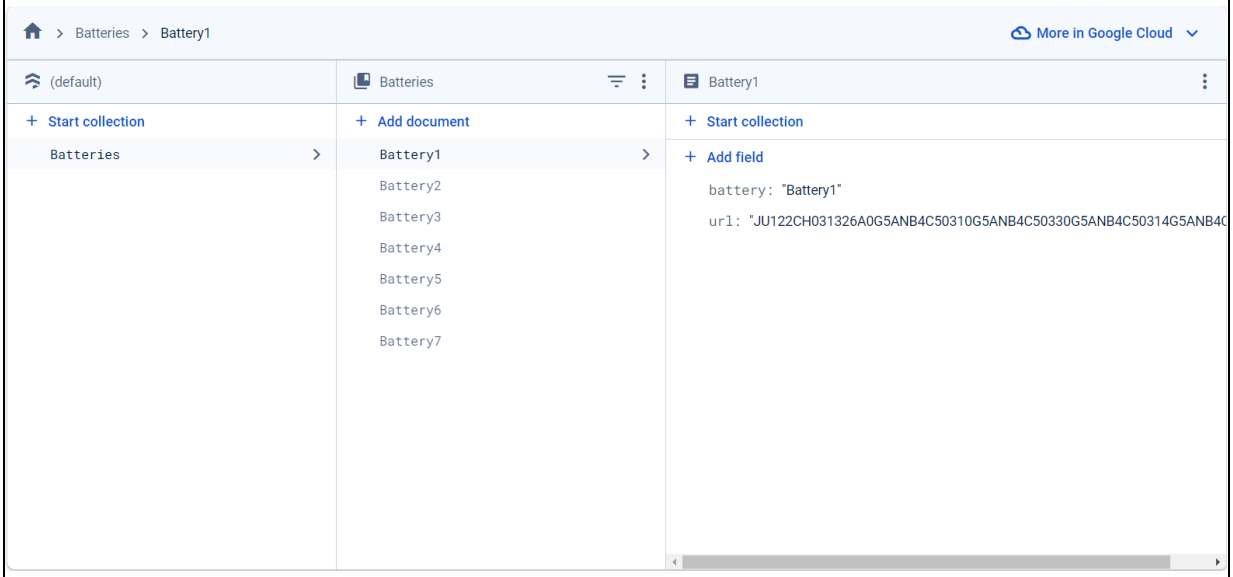
I created a QR code application using VS Code and took some time to refresh my skills with Firebase functions. After reacquainting myself with Firebase functions, I integrated these functionalities into my Flutter project. This process involved setting up Firebase functions to handle backend operations and ensuring that they were properly connected with the Flutter app. This integration allowed the app to utilize Firebase for processing and managing QR code-related tasks effectively.

Firebase Functions

```
 import 'package:cloud_firestore/cloud_firestore.dart';

class Batteries {

  final CollectionReference batteries =

      FirebaseFirestore.instance.collection("Batteries");

//CREATE

  Future<void> add_batteries(String url) {

    return batteries.add({"url": url}); }

//READ

  Stream<QuerySnapshot> get_batteries() {

    //final battery = batteries.orderBy("url", descending: true).snapshots();

    final battery = batteries.snapshots();

    return battery;}

//UPDATE

  Future<void> update_batteries(String docID, String url) {

    return batteries.doc(docID).update({"url": url});}

//DELETE

  Future<void> delete_batteries(String docID) {

    return batteries.doc(docID).delete();}}
```

Sayfa No	Çalışmanın		KONTROL
14	Konusu : Get-Post-Delete-Update Functions with Firebase	Yapıldığı Tarih: 11/07/2024	

I set up a database using Firebase Cloud Firestore and manually added the batteries and their corresponding URLs. This was necessary because users are not able to add batteries through the application; they can only update the URLs of existing batteries. This approach ensures that the battery information is preloaded into the database, and the application can manage updates to the QR code URLs as needed.

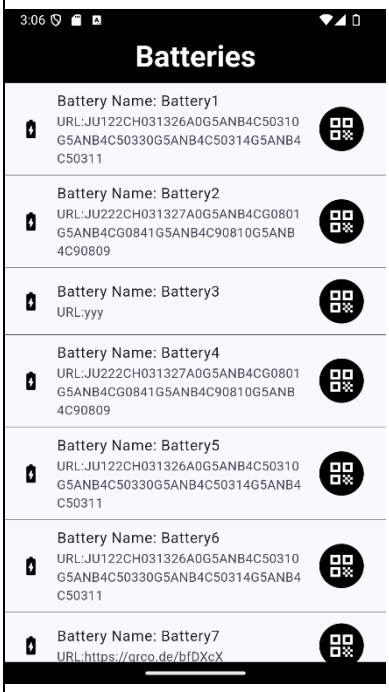


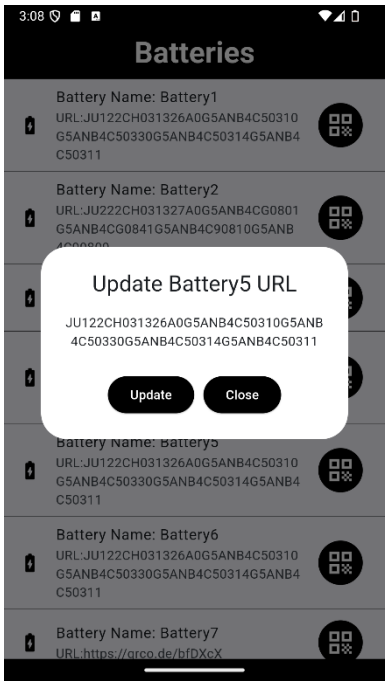

```
rules_version = '2';

service cloud.firestore {
  match /databases/{database}/documents {
    match /{document=**} {
      allow read, write: if true;
    }
  }
}
```

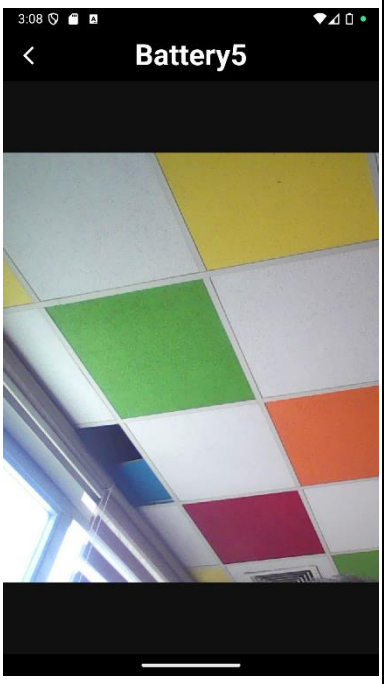
And I gave permission for reading and writing for my flutter project after that I started the UI design and fetching datas from database.

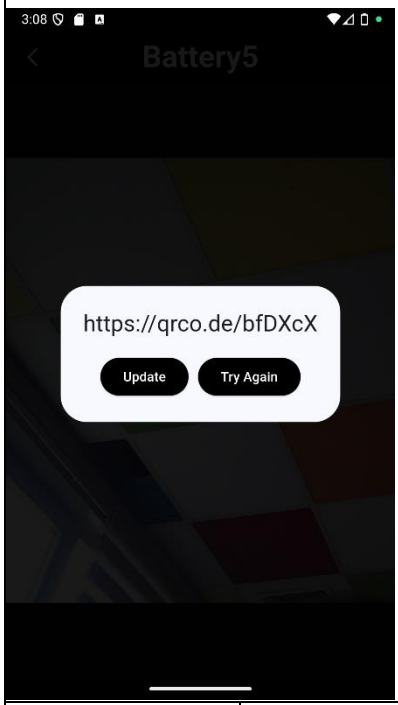
Sayfa No	Çalışmanın		KONTROL
15	Konusu : QR Code Project for TEMSA	Yapıldığı Tarih: 12/07/2024	

I retrieved all the battery data from Firebase and displayed this battery-URL information on an open page within the application. I then integrated the QR code application, which I developed over 12 days, into the original app. Additionally, I designed a user interface for the QR code functionality to ensure a seamless and intuitive user experience. This integration and design work allowed the app to effectively manage and display battery information while incorporating QR code scanning capabilities.









These are my pages for update batteries' URL.

Sayfa No	Çalışmanın		KONTROL
16	Konusu : QR Code Project for TEMSA	Yapıldığı Tarih: 16/07/2024	

PROBLEM

I could only open camera 1 time and after that step I couldn't reach the camera features. I really wasted my time during this problem.

```
ElevatedButton(style: ButtonStyle(backgroundColor: MaterialStateProperty.all<Color>(

Colors.black)), onPressed: () {

Navigator.pushReplacement(context,

MaterialPageRoute(builder: (context) => ScanQrcode2(

batteriesList: widget.batteriesList,

startIndex: widget.startIndex,

endIndex: widget.endIndex)));},

child: Text(Try Again",style: TextStyle(color: Colors.white)))
```

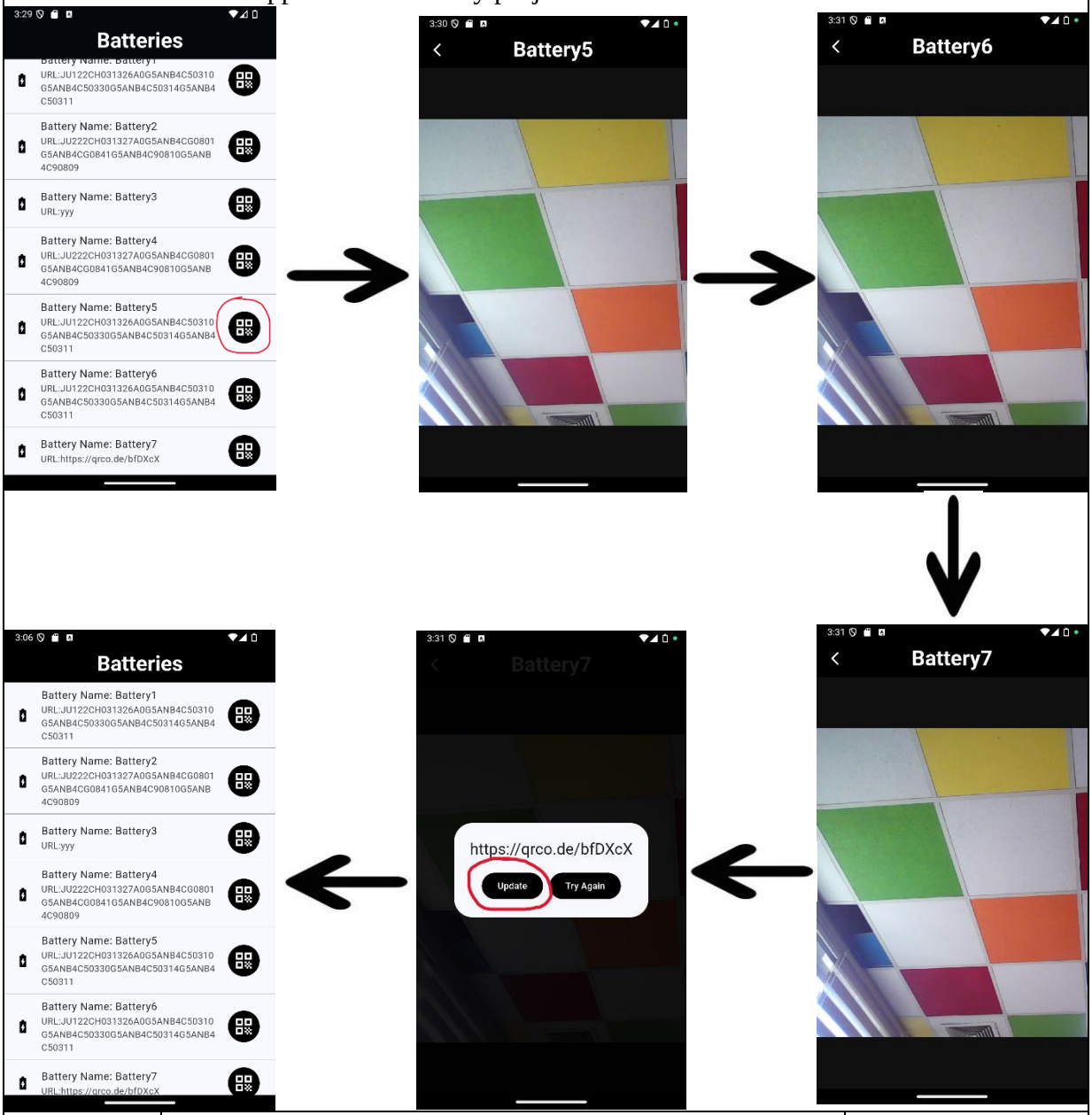
I encountered a challenge where I could only access the camera once, and subsequent attempts to use it were unsuccessful. This issue stemmed from the way the camera was being managed within the application. To address this, I examined how to properly use the dispose() function, which is crucial for cleaning up resources and managing the lifecycle of controllers in Flutter.

By implementing the dispose() function, I ensured that the CameraController was properly released and refreshed when navigating back to the previous page. This approach allowed the camera to be reinitialized correctly each time it was needed, resolving the issue and enabling consistent access to the camera for QR code scanning. The use of dispose() proved to be an effective solution for managing resources and ensuring smooth functionality within the app.

```
ElevatedButton(style: ButtonStyle(backgroundColor: MaterialStateProperty.all<Color>(

Colors.black)), onPressed: () {

cameraController.dispose();

Navigator.pushReplacement(context,

MaterialPageRoute(builder: (context) => ScanQrcode2(

batteriesList: widget.batteriesList,

startIndex: widget.startIndex,

endIndex: widget.endIndex)));},

child: Text(Try Again",style: TextStyle(color: Colors.white)))
```

ADDING PROPERTY

When I clicked the update button, I could only update the URL for a single battery at a time and that is waste of user's time. However, the requirement was to enable sequential updates for multiple batteries. To address this, I focused on developing the feature to allow for updating battery URLs in sequence. I implemented a solution that enabled users to update the QR code URL for a selected battery and then automatically proceed to the next battery in the list for further updates. This sequential updating process ensured that users could efficiently update multiple battery URLs without having to manually select each one repeatedly. This enhancement improved the user experience and streamlined the update workflow within the application. And my project seems like that after I add that feature.



	Çalışmanın		KONTROL
18	Konusu : QR Code Project for TEMSA	Yapıldığı Tarih: 18/07/2024	

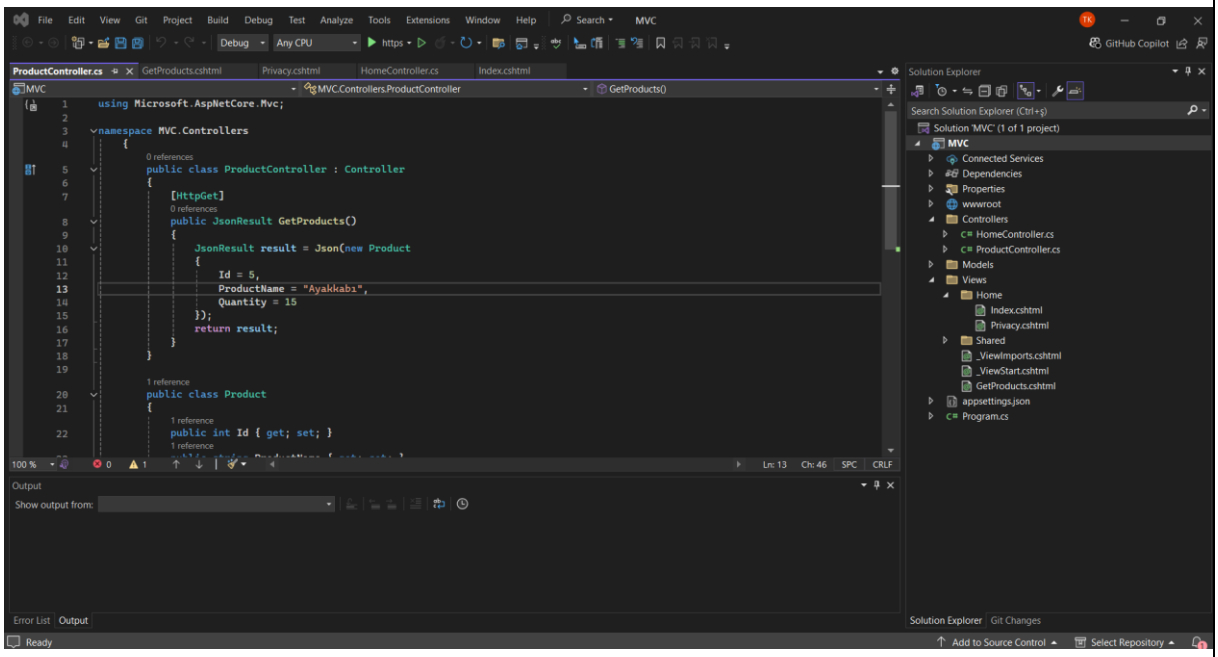
ASP.NET TUTORİAL

After I successfully completed the QR Code project for TEMSA, I decided to further enhance my skills in backend development by learning ASP.NET Core, as I was eager to write APIs and improve my proficiency in backend languages. To start this journey, I first downloaded and installed all the necessary tools required for ASP.NET Core development, including Visual Studio as my integrated development environment (IDE) and the .NET SDK, which provides the libraries and tools needed to develop .NET applications. Following this setup, I immersed myself in learning by watching comprehensive ASP.NET Core tutorials on YouTube, where step-by-step instructions helped me understand how to set up my development environment, create projects, and build APIs. Additionally, I delved into the official ASP.NET Core documentation available on Microsoft's website, which provided in-depth explanations and examples of the framework's features and capabilities. To supplement my learning, I actively engaged with the developer community by reading through numerous threads and discussions on Stack Overflow, which not only helped me troubleshoot issues but also allowed me to understand best practices and learn from the experiences of other developers. This multifaceted approach to learning ASP.NET Core has significantly enhanced my backend development skills, providing me with the knowledge and confidence to implement robust backend solutions in future projects.

Through this process, I also learned the necessary terminology and technologies associated with backend languages in great detail, thoroughly understanding various key concepts such as RESTful API design, middleware components, dependency injection, entity framework, and asynchronous programming, as well as becoming familiar with essential tools and frameworks like Swagger for API documentation, Postman for API testing, and Git for version control, which altogether have solidified my expertise and prepared me for advanced backend development tasks.

	Çalışmanın		**KONTROL**
19	Konusu : ASP.NET Core Tutorial	Yapıldığı Tarih: 19/07/2024	

I tried to write my first ASP.NET codes and learn MVC, diving into the intricacies of the Model, View, and Controller components, and their respective purposes within my project. By focusing on the Model, I gained an understanding of how it represents the data structure and business logic, enabling the application to manage and manipulate data efficiently. Exploring the View component allowed me to see how the user interface is rendered, ensuring that data from the Model is presented in a visually appealing and user-friendly manner. Through the Controller, I learned how to handle user input and interactions, linking the Model and View by processing incoming requests, performing appropriate operations, and returning the correct responses. This comprehensive study of MVC architecture provided me with a solid foundation in organizing and structuring my ASP.NET applications, leading to more maintainable, scalable, and efficient code.



	Çalışmanın		KONTROL
20	Konusu : ASP.NET Core Tutorial	Yapıldığı Tarih: 22/07/2024	

PRATİK ÇALIŞMANIN GÜNLERE DAĞILMA ÇİZELGESİ

Öğrencinin Çalıştığı Günler	Günlük Çalışma Saati	İşyeri Amirinin İmzası	Öğrencinin Çalıştığı Konular
24/06/2024	9.45		General Information and meeting about the company
25/06/2024	9.45		SAP Tutorial
26/06/2024	9.45		SAP Tutorial
27/06/2024	9.45		API-Postman Tutorial
28/06/2024	9.45		Flutter-Postman-API Coding
01/07/2024	9.45		Mail Approval Project for TEMSA
02/07/2024	9.45		Mail Approval Project for TEMSA
03/07/2024	9.45		Mail Approval Project for TEMSA
04/07/2024	9.45		Mail Approval Project for TEMSA
05/07/2024	9.45		Mail Approval Project for TEMSA
08/07/2024	9.45		Mail Approval Project for TEMSA
09/07/2024	9.45		Scan and Generate QR Code App
10/07/2024	9.45		Firebase Tutorial
11/07/2024	9.45		Get-Post-Update-Delete Functions Usage with Firebase
12/07/2024	9.45		QR Code Project for TEMSA
16/07/2024	9.45		QR Code Project for TEMSA
17/07/2024	9.45		QR Code Project for TEMSA
18/07/2024	9.45		QR Code Project for TEMSA
19/07/2024	9.45		ASP.NET Core Tutorial
22/07/2024	9.45		ASP.NET Core Tutorial