Law on the Protection of Personal Data - Business Card System

Faculty of Engineering & Natural Sciences

Bursa Metropolitan Municipality

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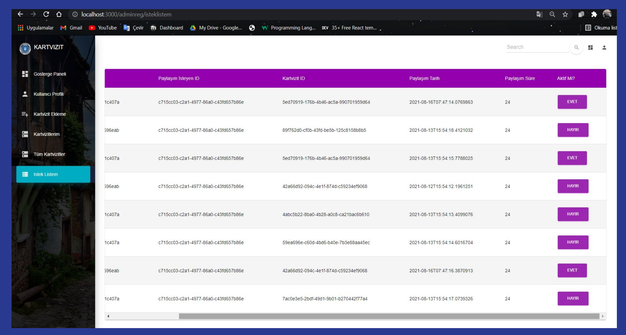
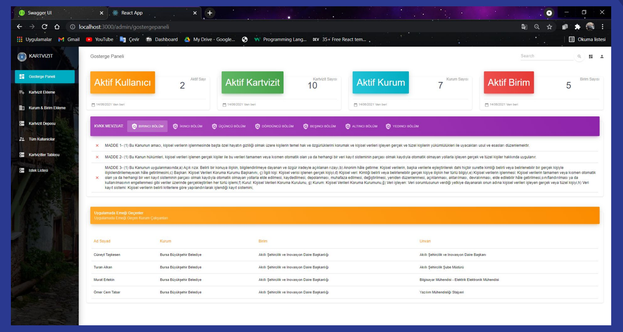
ABSTARCT

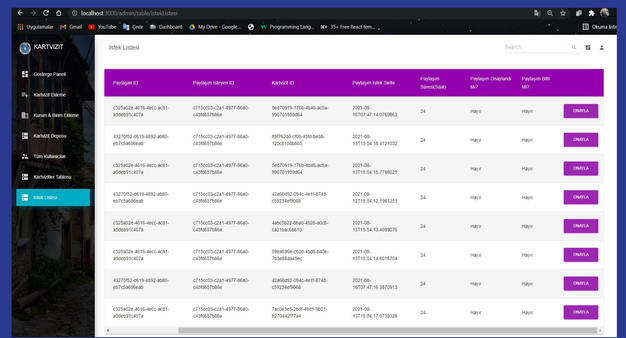
Purpose of this internship poster is to give detailed information about the process of the development of web service in the Department of Smart City and Innovation of Bursa Metropolitan Municipality. In order to achieve the development of web service, experiences have been gained in the framework of ASP.Net Core and Microsoft Entity, in the languages of C#, JavaScript and React, in the technologies of HTML and CSS and in SQL Server for database management. Desired web service were integrated with “e-municipality” system of the municipality and actively used today. Beside technologies, as an outcome fundamentals of agile development process have been experienced and improved skills on critical thinking, problem solving and “part-to-whole” method.

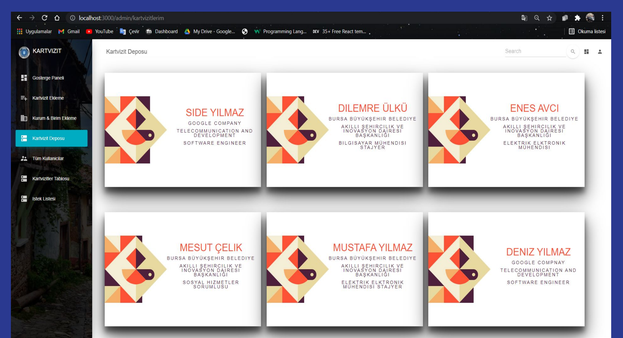
OBJECTIVES

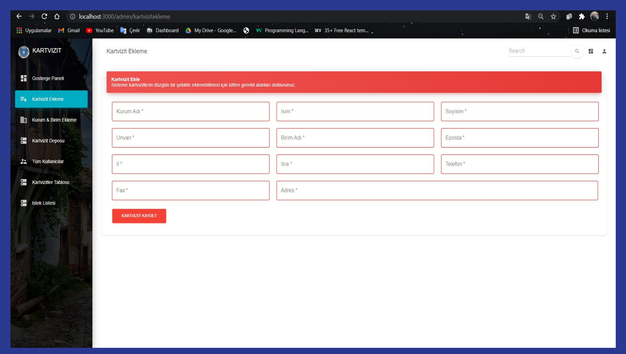
Main aim of the project was to developed a software with all required services to form an integrated system which enables the storage of personal data that is collected as business cards and ensures the personal data that is stored is accessible for a given amount of time if it is requested for monitoring from the staff of municipality or affiliates who added the data. Another objective was to conduct every step in accordance with the personal data protection law and learning fundamentals of processing, monitoring and sharing the personal data within the scope of the law

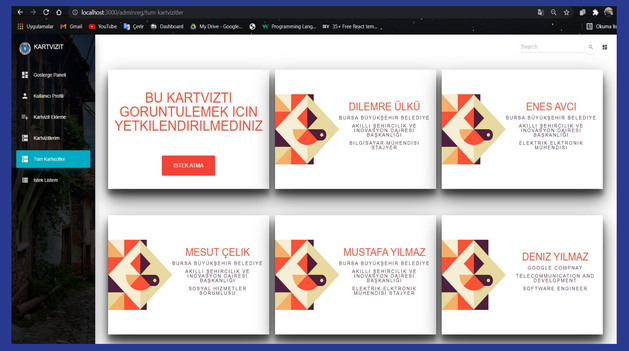






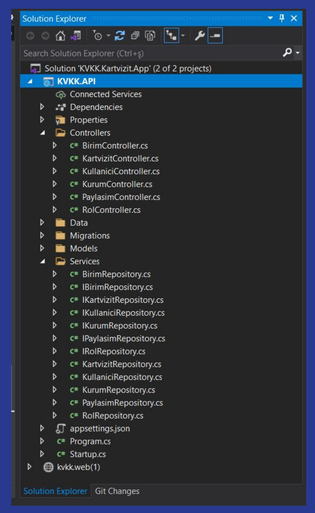






METHODS & TOOLS

Project was conducted as a part-whole method as in the agile development process. For the implementation of backend service ASP.Net Core and C# were main languages integrated with Microsoft Entity Framework and Swagerr UI was the main technology for controlling APIs. Database service were created by SQL Server and personal datas were managed by SQL Server Management system. Web service were developed by using React and Javascript which powered by the technologies HTML and CSS.



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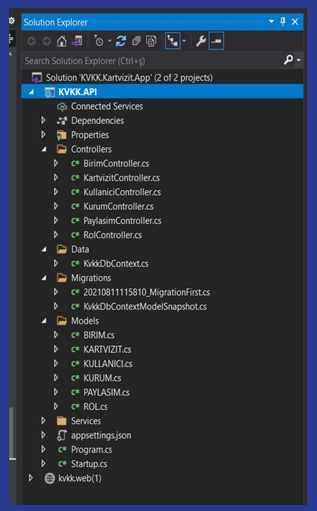

DETAILS & RESULTS

Project is conducted according to the text of the disclosure within the scope of the Law on the Protection of Personal Data No.6689. Criterias according to the legislation was examined in order to develop the web services accordingly. Software includes 3 main parts which are frontend, backend and database service.

In backend service; modals, repositories and APIs were implemented according to the desired roles within the system. APIs were implemented within the scope of CRUD operations with the usage of frameworks of ASP.Net Core and Microsoft Entity Framework. In order to check the consistency of APIs SwaggerUI was mainly used for backend service. Direct data migration was supplied by Microsoft Entity Framework to the SQL Server and datas were managed by SQL Server Management System. Additionally, libraries were implemented for the encryption and decryption of personal data .

For the user interface of the web service, programming languages of React and Javascript were preferred which is supported by HTML and CSS. Interface was designed upon to the main dashboard design with sidebar which consist of links where the content of the links changes according to the role of the user. The idea behind of the process was whenever a user was not authorized for monitoring the data, monitoring request was asked and approved by the owner of the data who has added to the system or by super admins. Roles were consider as changable by the chocice of super admin.

As a result, web service was integrated with the “e-municiplaity system” and actively used today and processing, monitoring and encryption of the personal data have been achieved.

CONCLUSION

In conclusion, maintainable and consistent system was developed in accordance with the fundamentals of agile development and law on the protection of personal data. Additionaly, became trained about being a full stack developer with the technologies that was experienced and personal improvements have been gained in writing modular code, quality assurance, risk management and test and integration processes.