

# SE 216 – SOFTWARE PROJECT MANAGEMENT

## Spring 2023-2024

### Project Proposal

#### MediShare

##### Problem Definition

Some of the biggest problems today are misuse of medicines, waste of paper and uninformed prescribing. People often store their medication for future use and may consume it without realizing it. People often store their medication for future use and may consume it without realizing it. However, this can be dangerous if the medication has expired, potentially harming their health. To prevent this, notifications and reminders are sent when medication has expired.

Most medicines are chemicals, and some people may be allergic to one of these chemicals, or the reaction of two different chemicals can cause dangerous health problems. People know they are allergic but may forget which active ingredients they are allergic to, but allergies are recorded in health systems. If the answer to the question a doctor asks a patient when prescribing medication is wrong, the medication the patient takes can be harmful and lead to worse consequences. To prevent this, the contents of the prescribed medicines, the medicines and substances that should not be used together, and the system organized according to the patient's allergic status, will give an error and eliminate this problem.

In the event of an unusual situation, the doctor may prescribe medication without restriction by completing a form. However, these prescriptions will also be recorded to prevent irregular use.

Patients struggle to find answers to their questions due to early closure of health centers and information pollution on the internet. There is a lack of accessible sources for patients to obtain reliable information.

Labels on medicines used in pharmacies are a waste of paper. Through the application to be used, people will be able to see how much of the medicine they need on their phone, computer or tablet, they will receive notifications from the application at the time of taking the medicine and they will be able to receive this information as a text message. In this way, they will be able to access information even without an internet connection. In addition, medicines prescribed in a hospital cannot be bought in a pharmacy in another town. For example, a prescription written in Istanbul can be used by someone in Antalya. Thanks to this application, prescriptions will fall into the system and with the instant QR code to be scanned from the phone, both the security problem and possible misuse in the access area will be eliminated.

##### Background Information

The E-Nabız application used in our country is an innovation that has emerged from the merger of the healthcare and software worlds. This innovation has brought some shortcomings. The E-Sağlık has been in use since 2005. It contains our personal information, health information and all our information under the name of health, but although the system contains health

information, it does not give any error or information even if the medicine that will cause an allergic reaction is prescribed during the prescription, which causes many situations such as vomiting and progression of the disease on behalf of the patient.

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The application will provide patients with a live support system. Initially, patients will interact with artificial intelligence to get answers to their questions. If they are unable to resolve their issue with artificial intelligence, they will have access to 24/7 live support.

Our application has an extensive library of videos to enable users to use their medicines correctly. The videos explain the correct use of each medicine step by step and allow patients to clearly learn how to take their medication. Animations, accompanied by healthcare experts, give users access to reliable information about their medicines, thus ensuring full compliance with treatment plans and supporting the prevention of possible side effects.

In Turkey, a large number of medicine boxes are sold, for example 2.4 billion medicine boxes in 2020. Our program offers a premium membership for pharmaceutical companies, which generates revenue for the state and application writers by supporting sales and marketing. The program provides a file of the most prescribed drugs that are sold in the market to premium companies, allowing them to produce drugs in areas where they are needed. The range of drugs available in pharmacies is set to expand. With this increased diversity, pharmaceutical companies will compete to produce higher quality drugs. This competition will result in an improvement in drug quality, while prices will decrease, making it easier for the public to access high-quality, affordable drugs. 2.4 billion labels were printed accordingly and there was a waste of paper, and a significant portion of these medicines consist of drugs prescribed by doctors for profit. As the world's population grows and the need for green spaces increases, our application will be able to track both the wrong medication given to the patient and the location of the printed labels through the pages in the application. The drugs entered by the doctors from the panel will be monitored and if they exceed a certain quota, the system will send a notification to make an audit.

Finally, after the adoption of e-prescription in Turkey, the drugs prescribed in different cities can be taken by people who are not sick and this cannot be tracked. Our application will be able to provide their medicines with the QR code that is instantly generated by the pharmacist and the QR code that is instantly received on the phone, and in this way the use of drugs by people who should not be using drugs will be prevented.

#### Objectives

- Keeping a record of the prescribed medication and recording it quickly in the system.
- Only authorized people can access the system, prescribe and monitor medication.
- Information on the frequency of use and side effects of medicines recorded in the system.
- Keeping the health record up-to-date by establishing a connection with electronic health systems.
- To prevent paper waste by reducing the labels used on medicines.
- Reducing unconscious and wrong drug use.
- To help patients quickly and accurately find answers to their questions.
- Provide companies with separate analyses for sales and marketing to increase competition in the market.

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#### Approval Signatures and GitHub Accounts

GITHUB: SE-216-Section1Group4

[https://github.com/  
SE216Section1Group4/SE-216-  
Section1Group4](https://github.com/SE216Section1Group4/SE-216-Section1Group4)

Batuhan CAN

Erkan Efe YEŞİLÇİMEN

Hüseyin Atacan AKGÜN

Emin Buğra AKSOY

Samet Tolga ESEN

Bartu ERDEM