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OPTIMIZATION OF PROJECT MANAGEMENT PROCESSES

The purpose of the study is to create an autonomous telegram bot that allows the user to quickly and intuitively interact with the medical service:
– register, make an appointment, get information,
– cancel a visit,
– administration can see the full list of appointments and work with the patient database.

Information technologies today have not only changed the way people interact, but also radically transformed healthcare services.

In the realities of modern Ukraine, especially after the COVID-19 pandemic and in the context of increasing digitalization, more and more medical institutions need effective tools for prompt communication with patients.

One of the most promising solutions in this direction is the use of instant messengers, in particular Telegram, as a platform for creating interactive bots that act as a virtual assistant.

This was the starting point for the development of this diploma project. Telegram bots have long established themselves as a convenient and versatile tool for automating routine tasks, from notifying about events to processing user requests.

Their advantage lies in the fact that you do not need to install separate applications or learn to interact with them – the interface is intuitive and already familiar to millions of users.

In a medical context, it allows you to bring services closer to the patient, make the process of making an appointment, obtaining information about doctors or scheduling visits as simple and accessible as possible.

Thus, the purpose of the study is to create a multifunctional telegram bot for servicing users of a medical institution.

It is planned to implement the following functions: user registration, appointment with a doctor, viewing doctors' schedules, cancellation of appointments, automatic appointment reminder, as well as administration by the clinic staff.

The objectives of the study are:
– to study the structure and needs of medical institutions in terms of digital communication; analysis of modern solutions in the field of telegram bots;
– design of the architecture and logic of the telegram bot, adapted for a medical service;
– implementation of a database for storing user records; adding confirmation mechanisms, doctors' schedules, administration;
– implementation of the button menu as the main form of the user interface; testing the bot in a real environment and collecting feedback.

The novelty of the development lies in the combination of several key functions within one Telegram bot:
1. making an appointment,
2. reading the schedule from a separate JSON file,
3. confirmation of actions,
4. the presence of an administrative panel,
5. button menus,
6. automatic reminder mechanism.

This allows us to consider the project not only educational, but also ready for use.

The practical significance of the work lies in the possibility of using a telegram bot in a real medical institution.

The solution does not require a separate server or cloud environment – the entire database is stored locally, the code is open for editing, and the interface is adapted for the average user.

In addition to the direct implementation of the bot, the study also includes the creation of system documentation, logical model, specifications, test scenarios The results of testing functional requirements confirmed the operability and compliance of the system with the technical specifications, which certifies its readiness for practical use.

In further research, it is planned to expand the functionality of the application, including the addition of analytical reports, integration with artificial intelligence tools to predict the timing of tasks, support for a multilingual interface., as well as examples of work in Telegram.

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