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ІТ-ПРОСТІР СЬОГОДЕННЯ: ТЕНДЕНЦІЇ, ІННОВАЦІЇ ТА ПЕРСПЕКТИВИ РОЗВИТКУ

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MINISTRY OF EDUCATION AND SCIENCE
OF UKRAINE
V. N. KARAZIN KHARKIV NATIONAL UNIVERSITY

**IT-SPACE OF TODAY:
TRENDS, INNOVATIONS
AND DEVELOPMENT PROSPECTS**

Collection of abstracts
of the II International Scientific and Practical
Student Conference

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IMPROVING THE INFORMATION SYSTEM OF A LOGISTICS COMPANY BY IMPLEMENTING TELEGRAM BOTS

The purpose of the study is to improve the existing information system of a logistics company using the technology of implementing telegram bots in a web application, as well as to maximize the optimization of human resources and material costs at each of the main stages of development. The results of the study are methods and algorithms for the effective implementation of telegram bot technology in a web application during development. The source code of the created applications and their elements written in JavaScript using React and NodeJS libraries, the analysis of optimization results with a conclusion on the possibility of using the selected tools to achieve the main goal of the study.

As of today, a large number of logistics companies suffer from the problem of uncomfortable work in offices and from home: improving control and optimizing business processes, which does not relate to the direction of the employee's task and affects his inappropriate distribution of working time during the day, saving labor

resources and increasing productivity and efficiency. The only solution for the implementation of such tasks is to improve the existing automated system by introducing telegram bots. To date, a large number of automated systems have been created and implemented, which are used both for the coordination of extremely complex operations and production, and for the control of ordinary purchases after going to the supermarket. The field of activity of the enterprise, in our case, as well as its scale, do not matter, because the improvement of automation through the introduction of telegram bots literally permeates any of them. The main direction of development of an automatic system is the provision of certain services, namely the ability to order some food products, stationery, etc. Also, another of the main directions of the development of an automatic system is the creation of a convenient system of "days off" (a system for requesting and confirming weekends or vacations by employees). An additional option is the possibility of creating a convenient system for control, management, use and ordering certain bonuses from the company. Organization of ordering consumer goods, stationery and goods that are in no way directly related to work (for example, any board games for recreation), active use of the latest technologies of customer service (in our case, employees of the company), which allows you to achieve maximum comfort, efficiency of system users, saving time at almost all stages of the system application.

Today, quite a few logistics companies have a common problem of inconvenience of working in the office and from home, including improper distribution of working hours, as well as loss of productivity and efficiency due to the impact on business processes that are not directly related to the employee's tasks. To solve these problems, it is necessary to improve the existing automated system by introducing telegram bots. Currently, there are a fairly large number of automated systems in various industries, including complex operations and procurement control. Improving the level of automation with the help of telegram bots can be applied in almost any industry. One of these areas is the process of providing a variety of services, including ordering goods, such as food or stationery. Another important aspect is the creation of a system for requesting and confirming days off or vacations, as well as a management system and ordering bonuses in the company. Ordering consumer goods, stationery, and other goods that are not directly related to work, together with the use of advanced technologies for customer service, provide maximum comfort, time savings, and increase the efficiency of system users at all stages of its use. Telegram bots have a fairly convenient interactive interface with an adaptive design, which should simplify the management of all processes related to processing, selection, and ordering. Telegram bots allow managers to quickly obtain the necessary important information and implement effective economic policies. The use of telegram bots to improve automated management systems in a logistics company has an undoubted positive effect. New information technologies should become quite an important tool for optimizing the management system and even providing a competitive advantage.

Among the existing technical problems in the already existing information system of the logistics company for the period of operation, the following problems were identified:

1. Issues with updates and data synchronization: The food ordering app should display up-to-date information about food availability, prices, menus, and other details.

2. Data Security: Ensuring data security is a critical aspect when using the system.

3. Issues with Feedback and User Support: An app for a logistics company should provide effective feedback to customers, including the ability to ask questions, get help, and resolve issues.

4. Technical Errors and Glitches: The app sometimes encounters technical errors that can lead to improper operation.

5. Stability and reliability issues: The application for a logistics company must be stable and reliable to ensure smooth operation and avoid failures at a critical moment.

6. User Interface Issues: A logistics company app has a complex or non-intuitive interface, which can be a barrier for users to use the app.

Improving the operation of the information system consists in the development and implementation of telegram bots, with the help of which you can create full-fledged JavaScript web applications for selecting and ordering any available type of product, taking into account the wishes of the client and his price category. The implementation of telegram bots is mostly characterized by a fairly convenient interactive interface with an adaptive design, which should simplify the management of many processes related to ordering, selection and processing, allow the manager to receive the necessary information in time and then the company. The latest information technologies should become an important toolkit for optimizing the management system and providing undeniable competitive advantages. form the correct economic policy of the network. There is an undoubted positive effect from the thoughtful use and implementation of telegram bots in order to improve automated management systems in the logistics sector. Technologies that can ensure the implementation of these tasks are web technologies that allow you to create a website using certain software platforms. To create the developed web application, frameworks such as ReactJS, NodeJS, and Telegram Bot API were chosen. Nodejs is one of the most common and popular frameworks that allows you to create REST APIs. With the help of this platform, the server part of the application was created, where it is the processing of user requests, as well as everything related to the database, that should be performed. There are quite a few UI frameworks, but for a specific task, you need to choose the one that will be optimal for creating web pages in terms of functionality. The ReactJS library is considered one of the best platforms for developing platforms of varying degrees of complexity. The browser (client) part of the application is created on this platform. Telegram Bot API is a set of tools specifically for working with bots in the Telegram environment. With the help of the Telegram Bot API, all requests must be made via HTTPS and receive certain updates. The study analyzed approaches and tools for developing web applications, as well as the process of integrating the Telegram Bot API into a web application. The paper considered the SSR (Server-side Rendering) and SPA (One-Page Application) approaches in terms of their architecture, advantages and disadvantages, and

functionality. The paper also considered web application development tools, such as HTML, CSS, and JavaScript, as well as their role in creating a web interface. In addition, the paper considered the use of JavaScript frameworks, in particular ReactJS and Redux, and analyzed their advantages and capabilities. The use of frameworks made it possible to reduce the effort and time required to develop web applications due to the availability of ready-made components and expansion of functionality. The paper also analyzed the integration of the Telegram Bot API into the web application with an emphasis on the use of the Node.js and its Telegraf module. The use of the Telegram Bot API expands the capabilities of the web application, provides user interaction thanks to the Telegram messenger environment, and distributes various bot functions. As a result of the analysis, we can conclude that the choice of approaches and tools for the development of web applications depends on the specific requirements for the project, as well as on the list of user needs and the scale of the task. The integration of the Telegram Bot API into the web application improves its user experience and functionality.

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INTELLIGENT METHODS FOR DIALOGUE SYSTEMS WITH NATURAL LANGUAGE INTERFACE

The purpose of the study is to develop an algorithm for an intelligent system that is able to conduct a dialogue with the user in natural language. The result of the study is to analyze the existing modern methods of building dialogue systems with a natural-language interface, which is based on an ontological description of processes and objects of the subject area, as well as software that implements this method.

The rapid development of modern computer technologies, as well as computer equipment, makes it possible to solve more and more complex problems in various

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Електронне наукове видання
комбінованого використання
Можна використовувати в локальному та мережному режимах

ІТ-ПРОСТІР СЬОГОДЕННЯ: ТЕНДЕНЦІЇ,
ІННОВАЦІЇ ТА ПЕРСПЕКТИВИ РОЗВИТКУ

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