

Пайдаланылған әдебиеттер тізімі

1. Разработка приложений для Windows Phone 7 [Электронный ресурс]. - <http://msdn.microsoft.com/ru-ru/windowsphone/default.aspx>
2. <https://www.appypie.com>, <https://snappy.appypie.com/appbuilder/creator-software>
3. https://en.wikipedia.org/wiki/Appy_Pie
4. <https://ru.appypie.com/ebook-app-builder>
5. Пугачев С. В., Павлов С. И., Сошников Д. В. - Разработка приложений для Windows Phone 7.5. – СПб.: БХВ-Петербург, 2012. – 384 с.
6. Хашими С., Коматинени С., Маклин Д. Разработка приложений для Android. - СПб.: Питер, 2011. – 736 с.
7. Майер Р. Professional Android 2: Application Developmentecond EditionM.: Эксмо, 2011. – 672 с.

SRSTI 50.41.25

ADVANTAGES OF THE PLATFORM NODE.JS TO DEVELOP A CHATBOT

S.M.SARSIMBAYEVA

K.Zhubanov Aktobe Regional State University, Aktobe, Kazakhstan

Түйіндемe. Мақалада чат-бота сияқты бағдарламалық жүйелерді құру мәселелері қарастырылған. Пайдаланылатын бағдарламалық шешімдер мен платформаларға шолу жасалған, Node.js бағдарламалық платформасын пайдалану қажеттігі анықталып, негізделген, сондай-ақ Node.js веб сервердің рөлін орындайтыны анықталды. Node.js Telegram, Facebook Messenger және басқа платформалар үшін бағдарламалық жүйелерді – чат-боталарды құруға мүмкіндік береді. Node.js платформасының мүмкіндіктері қарастырылды, бағдарламалық жүйе ретінде чат-боталардың архитектурасы, чат-бота құру кезеңдері. Жүргізілген зерттеу негізінде тауарды жеткізу және тауарды жеткізетіндермен жеткізуге тапсырыс беретін клиенттердің өзара іс – қимыл процесін оңтайландыру мақсатында бағдарламалық қамтамасыз ету-бот чат-бота құрылды. Өзірленген қосымша менеджерлердің, компаниялардың бизнес-құрылымдарының жұмысын оңтайландыруға және жеке клиенттерге жеткізу қызметтерін атқару үшін пайдалануға мүмкіндік береді.

Түйінді сөздер: чат-бота, бэкенд, фронтенд, вебхук, автоматты жауаптар, мессенджер, сайт.

Аннотация. В статье рассмотрены вопросы разработки таких программных систем, как чат-бота. Сделан обзор используемых программных решений и платформ, выявлена и обоснована необходимость использования программной платформы Node.js, для разработки чат-бота, выполняющая также и роль веб сервера. Node.js позволяет разрабатывать программные системы, в том числе и чат-боты для платформ Telegram, Facebook Messenger и других. Рассмотрены возможности платформы Node.js, архитектура чат-бота, как программной системы, этапы разработки чат-бота. На основе проведенного исследования разработано программное обеспечение – чат-бота с целью доставки товара и оптимизации процесса взаимодействия клиентов, заказывающих доставку, с теми кто доставляет товар. Разработанное приложение позволяет оптимизировать

работу менеджеров, бизнес-структур компаний и дает возможность индивидуальным клиентам воспользоваться услугами доставки.

Ключевые слова: чат-бота, бэкенд, фронтенд, вебхук, автоматические ответы, мессенджер, сайт.

Abstract. The article deals with the development of software systems such as chatbots. An overview of the software solutions and platforms used is made, and the need to use the Node software platform is identified and justified.js, for developing a chatbot that also serves as a web server. Node.js allows you to develop software systems, including chatbots for telegram, Facebook Messenger, and other platforms. The capabilities of the Node platform are considered.js, chatbot architecture as a software system, chatbot development stages. Based on the research, a chatbot software was developed for the purpose of delivering goods and optimizing the interaction of customers who order delivery with those who deliver the goods. The developed application allows you to optimize the work of managers and business structures of companies and allows individual customers to use delivery services.

Key words: chatbot, backend, frontend, webhook, automatic responses, messenger, website.

Introduction. One of the developing areas of information technology application in business are chatbots. Chatbots are applications that can conduct a dialogue with the user and send automatic responses to users in social networks, messengers and websites. They are used on platforms such as Telegram, Facebook Messenger, V Kontakte, and Viber.

Chatbots differ significantly depending on the tasks they are supposed to solve. The simplest option is an interactive form, the most complex is an artificial intelligence program that simulates an interlocutor who can maintain a conversation on any topic. Modern chatbots do not rely solely on text, but also know how to show all sorts of useful cards, pictures, links, and forms, creating an atmosphere of using the app. Chatbots also differ in their place of use □ they are used on websites, social networks, and messengers. On the websites of the bots in the chat more often play the role of online counselors. There are more entertainment chatbots in social networks, but there are also options that are useful for business, for example, to search for vacancies and staff, to book tickets, and others. Messengers use a variety of chatbots to solve various tasks. In addition to customer service, these bots can be used to inform or send breaking news, or articles from online publications, to get tips from a fitness trainer, and so on. Chatbots are often used by business structures: banks, mobile operators, tour operators, restaurants, and many other companies.

The article deals with the issues of software development of chatbots. The relevance of the topic, as noted above, is due to the fact that virtual communication is becoming increasingly important and is becoming one of the leading types of communication between people and through such communication, a variety of activities are carried out in the field of small, medium and large businesses, education and other areas. All this allows you to use chatbots for completely different purposes, such as shopping assistance, feedback service, news, games, and much more.

Chatbot development: methods and technologies

Today, there is a fairly large selection of various frameworks and services that can help you create a chatbot. However, to understand how they work, you need to study the architecture and mechanism of the chat bot.

Chatbots can be developed in any programming language that you can use to create a web API. For today, most of them will be either Node.js or PHP, but there are many libraries for creating chatbots written in Java or Python. The software and hardware part of the chatbot application – the backend receives the message, thinks what to answer, and returns the user a response.

Any messenger can act as a platform for the client part of the application-chat bot-frontend: from popular ones like Telegram, Facebook Messenger, V Kontakte, Viber to simple Realtime Chat With Node.js. You can not limit yourself to one platform: the same bot can work on multiple platforms.

You need to establish URL-based connections between the bot and the chat platform, so-called webhooks, which are installed by your web server. Webhooks allow you to securely send and receive messages via simple HTTP requests. All known messengers provide developers with detailed instructions on how to link their bot to their platform.

Currently, there are many chatbot constructors, such as Chatfuel, Botmother, Flow XO, BotKit, Claudia, Bottr, and Aimylogic. For example, BotKit is the most popular set of tools for creating bots. This is an open source product, well documented. Claudia is a chatbot constructor created for use directly in AWS Lambda. Bottr is a simple framework written in Node.js with a ready-made application for testing. To develop a chatbot, in addition to conventional programming technologies, artificial intelligence technologies are also used to understand natural language. There are platforms for developing conversational assistants, both text and voice. As a rule, such platforms have developed functionality for solving NLP problems: clustering logs, searching for semantically similar phrases and other functions, as well as their own development languages, such as Just AI DSL. Chatbot script codes, integration modules for communication with external systems, and autotests. An example of such a platform is the Aimylogic platform.

Development of a chatbot

Development of bots for customer support can include a large number of classified user intents, dozens of directories for extracting entities, and include integrations with several external services. Therefore, the development of a chatbot is a time-consuming task and can be carried out simultaneously by several developers, using version control systems and tools for load testing, with the involvement of copywriters and UX designers.

As an example, let's consider Node development.js chat bot for product delivery that connects customers who need to deliver the product with those who can do it. The chat bot can accept requests for product delivery and send them to the chat bot for processing.

The entire process can be divided into the following stages:

1. Creating a script for a chatbot dialog with the company's clients;
2. Configuration for collecting user requests;
3. Testing bot;
4. Publishing the bot in a Telegram.

The process of creating a script in a chatbot is reduced to adding blocks and setting transitions between them. The screenshot above shows that the bot script starts with the menu. The menu is intuitive, paying attention to the customer in advance so that he was attentive. Depending on the goal, the client selects the menu and fills in the data using a text block. You can also add an image.

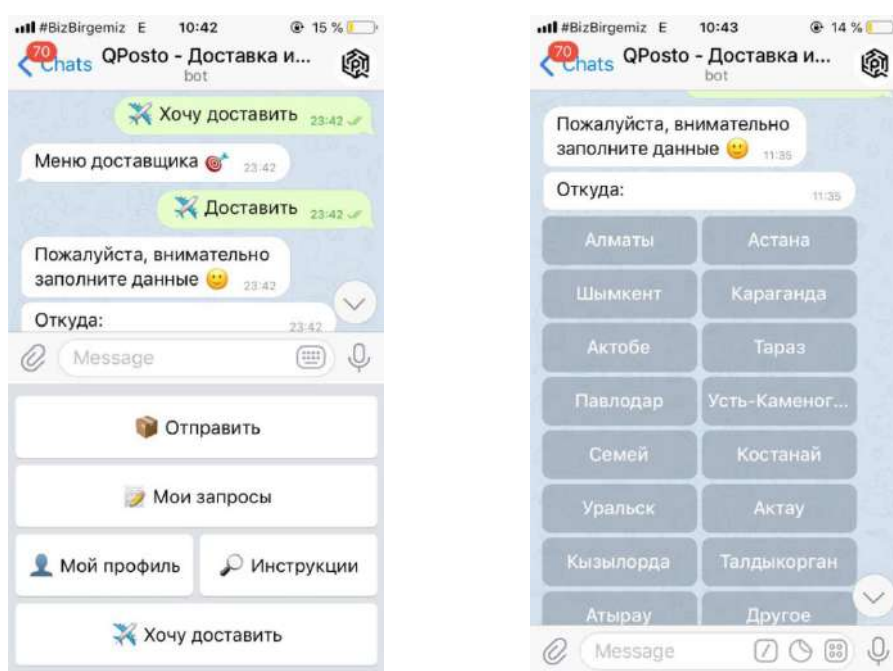


Figure 1. Blocks of chatbot

By selecting the menu item, the client fills in the data. The information entered by the user is saved in variables and becomes available for further use in the script. For example, to send this data to an external system on the server and process it. They search for matches that meet the request and provide a response to the client. To accept various types of data, such as text, numbers, and phone numbers, the system has corresponding blocks that automatically fail to enter the user.

```
public static function getResult($country,$name,$surname,$point,$phone)
{
    $check = "SELECT * FROM Information WHERE phone = :phone";
    $user = Db::getInstance()->select_($check,
        [
            'phone' => $phone,
        ],
        false);

    if(empty($user)) {
        $sql = "INSERT INTO information(country,name,surname,point,unique_id,phone)
VALUES(:country,:name,:surname,:point,:unique_id,:phone)";

        $unique_id = uniqid("U");
        $neworder = Db::getInstance()->Query($sql,
            [
                'country' => $country,
                'name' => $name,
                'surname' => $surname,
                'point' => $point,
                'unique_id' => $unique_id,
                'phone' => $phone,
            ]
        );
        return $neworder;
    }
}
```

Figure 2. Variables used in the chatbot program code

At the next stage, we set up the bot integration and determined how the collected requests from users will be saved and processed. Platform Node.js the site where the chatbot was developed provides an API for integration with its tools.

The app was tested in beta testing mode, creating dialog scenarios in different channels, and experimenting with connecting external systems. At this stage, the dialog was debugged and it was checked whether it is correct and understandable. And currently, the chatbot is used in business.

Conclusion

The software was developed in order to facilitate the business of transporting and delivering goods, which is now, in the age of prosperity of online stores and other factors, the dictates of the time. Using new software solutions – chatbots that preserve the basic functionality of software applications and ease of integration with external systems and channels – this is a new stage in the development of software products.

References

1. Dzhansarsam S. Razrabotka chat-botov i razgovornyih interfeysov. – M.: DMK-Press. – 340 s.
2. Paraskevov A.V., Kadentseva A.A., Moroz S.I. Perspektivyi i osobennosti razrabotki chat botov // Nauchnyy zhurnal KubGAU – 2017. – №130(06), S. 45-51.
3. Matveeva N.Yu., Zolotoryuk A.V. Tehnologii sozdaniya primeneniya chat-botov // Nauchnyie zapiski molodyih issledovateley – 2018, № 1, S.28-30.
4. Galtsov V.P. Intellektualnyie chat-botyi, tehnologii ih sozdaniya i primeneniye // Vestnik nauki, – 2019. – T.5, № 6(15), S.178-182.

5. Messina Chris. 2016 will be the year of conversational commerce // A Medium Corporation. URL: <https://medium.com/chris-messina/2016-will-be-the-year-of-conversational-commerce1586e85e3991#.t8o4698iu> (data obrascheniya: 30.11.2019).
6. Zhigach A. Pochemu internet-messendzheryi snova stali populyarnymi. URL: http://www.dp.ru/a/2015/04/07/Tak_v_chem_zhe_messedzh (data obrascheniya: 30.11.2019).
7. Yaremenko M.M., Afanaseva I.V. Preimuschestva ispolzovaniya chat-botov pered prilozheniyami i veb-servisami. Obosnovanie vyibora Telegram kak platformyi dlya razrabotki chat-bota// Naukove mislennya, Materialyi XV Vseukrainskoy praktichno-poznovatelnoy internet-konferentsii, 2020 Harkov, Ukraina, <http://naukam.triada.in.ua/index.php/konferentsiji/45-p-yatnadtsyata-vseukrajinska-praktichno-piznavalna-internet-konferentsiya/292-preimushchestva-ispolzovaniya-chat-botov-pered-prilozheniyami-i-veb-servisami-obosnovanie-vybora-telegram-kak-platformy-dlya-razrabotki-chat-bota> (data obrascheniya 24.03.2020)

МРНТИ 14.35.07

ДИСТАНЦИОННЫЕ ФОРМЫ ОБУЧЕНИЯ КИБЕРБЕЗОПАСНОСТИ.

Г.А. БАЙДРАХМАНОВА

*Актюбинский региональный государственный университет им. К.Жубанова, г.Актөбе,
Казахстан.*

Аннотация: В статье рассматривается обучение кибербезопасности в условиях дистанционного образования. Формулируются цели, выделяются факторы, актуализирующие использование дистанционных образовательных технологий и электронного обучения в кибербезопасности. Наблюдаются сдвиг к оцифровке и визуализации результатов учебной деятельности, особенно это касается информационной безопасности. Выделены и обоснованы перспективы развития дистанционного образования в Казахстане. Описывается структура и содержание системы дистанционного обучения на основе использования среды Zoom и www.univer.arsu.ru. Определяются функции участников образовательного процесса в системе дистанционного обучения. Представленный в статье материал апробирован в ходе реализации дополнительных профессиональных программ на базе Актюбинского регионального государственного университета им.К.Жубанова.

Ключевые слова: Кибербезопасность, дистанционное образование, информационная безопасность, дистанционные технологии, цифровыми компетенции, цифровые образовательные ресурсы.

Аңдатпа: Мақалада қашықтықтан білім беру жағдайында киберқауіпсіздікті оқыту қарастырылады. Қашықтықтан білім беру технологиялары мен киберқауіпсіздікте электрондық оқытуды пайдалануды өзектілендіретін факторлар және мақсаттар қалыптасады. Оқу іс-әрекетінің нәтижелерін цифрлауға және визуализациялауға ауысуы байқалады, әсіресе бұл ақпараттық қауіпсіздікке қатысты. Қазақстанда қашықтықтан білім беруді дамыту перспективалары бөлініп, негізделген. Zoom және www.univer.arsu.ru орталарында пайдалану негізінде қашықтықтан оқыту жүйесінің құрылымы мен мазмұны сипатталады.