# A Program Which Can Teach Students about Java Program Language And Its Functions

**Madaminov Uktamjon Ataxanovich , Urazboyev Kamolbek Ulugbek o'g'li , Yo'ldoshev Quvonchbek Sultonboy o'g'li**

Assistant of Urgench branch of Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi, Uzbekistan.
Student of Urgench branch of Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi, Uzbekistan.
Student of Urgench branch of Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi, Uzbekistan.

**ABSTRACT***:* This paper helps to gain knowledge about mobile devices, mobile applications and their development, their role in the learning process, principles, models, educational, technical, methodological, software for mobile learning. The article mainly provides students with specific information on how to use mobile communication tools, learning platforms for specific mobile applications, and how to use electronic resources in them and build their own knowledge and skills.

**KEYWORDS**: Android, tablet, interactive method, mobile platforms, mobility, education, information technologies, apps, object, animation, graphics, modern system.

## I.INTRODUCTION

Currently, we know the role of mobile devices and applications is not only in the education system, but also in many areas, and the demand is high. With the help of mobile applications and the mobile system in general, we can control and manage our activities from anywhere [1]. A few years ago, we used to do things on paper. Over time, with the development of computer technology, this activity became electronic, that is, with the help of computers and information technology. Of course, this has reduced the amount of work we have to do by several hundred times and made it easier [2]. This system is still working today and is showing results. After the introduction of the android system in the information technology market, this work has been reduced several times. Because Android has proven that it can do a lot of things that a computer can do, and in a short time it has risen to the top. The convenience is that it is easy to carry mobile devices, powerful, affordable, convenient, does not choose a place to work and other features. To this end, special disciplines have been set up in higher education institutions today to develop the mobile sector, create applications and put them into practice, and are being taught by specialists today. Improving the effectiveness of education through the use of modern pedagogical and information technologies, non-traditional and interactive methods in the study of science, improving the teaching of programming, development of mobile applications and similar subjects in higher education institutions. Therefore, the development and implementation of a set of teaching materials in accordance with the content of teaching, especially in the form of games, will be the basis for the inclusion of young people in the educational process [3].

The widespread use of distance learning in the education system indicates the growing demand for e-textbooks and mobile applications. Our students take classes online and offline on a personal computer or mobile device. In this sense, the article on the creation of mobile applications in education also helps to quickly, easily and efficiently learn the Java programming language and special components of Android in the Android environment. In addition, mobile learning provides the user with the following opportunities:
Collaborative work of students working on assignments during or outside of class;
- File sharing;
- Interaction between distance learning organization and  parents;
- Mobile learning is not time dependent;
- Expand the boundaries of learning;

Mobile learning is generally considered "light in content," and more in the delivery of audio materials to students, in the exchange of text messages, it is used to participate in surveys, text chats, summarizing and viewing [4]. There are also the following requirements for the structure of mobile education:

- Compactness the potential interruptions in communication between the components of a mobile application should be short in duration.

- High level of microeconomics - small screen sound and small size and high quality images. The small size of the files allows you to download faster.

- Everywhere - from the location of the materials in the mobile training can be obtained anywhere. Mobile communication and mobile devices a huge range of providers of mobile learning services everywhere and for you allows you to use it at a convenient time.

Mobile learning is not just a theoretical possibility. Participants and educators from different countries will have access to a wide range of educational resources using mobile devices, discussing information and sharing information with other students, receiving support from colleagues and teachers, and establishing effective communication [5].

When developing mobile applications, you create a separate view and then write the application code accordingly. We use .xml language to create frontend side. The .xml syntax can be said to be close to the html language. This makes it easier for anyone who knows html to learn .xml. The Android app has .xml and .java files for each layout and is managed by them [6]. Using the java programming language on Android provides many options for the programmer. The reason is that there are many libraries written in the Java programming language for android. Using ready-made libraries, it is possible to create a program with many possibilities, more perfect in terms of design, rich in animation and multimedia [7]. From the beginning, if a programmer writes program code from the beginning, it can take a long time and not achieve the expected result. The use of mobile applications in the teaching of the subject or the subject being taught in the creation of mobile applications in the educational process can significantly increase the effectiveness of the lesson [8]. In this sense, we have developed mobile applications for teaching Java and python programming languages, which are considered modern programming languages today, and tested them in higher education students.
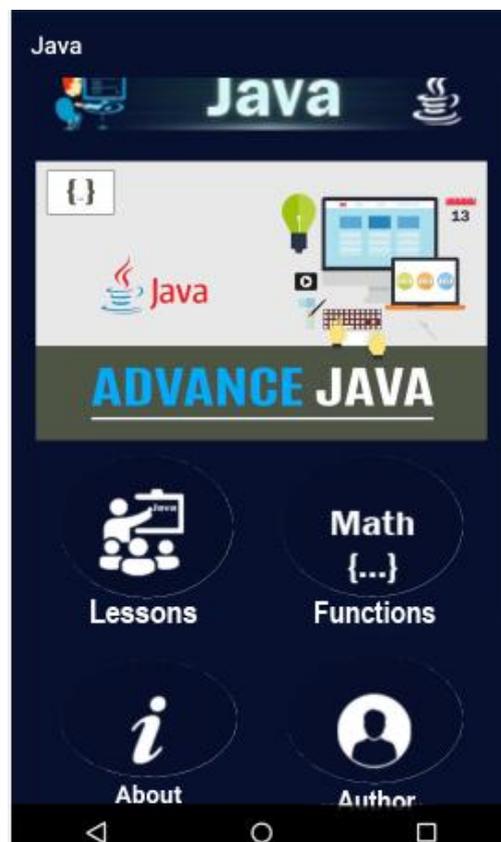


Figure1. Image This picture discribes main page and its capabilities.

Figure 2. Illustration about some math exercises.
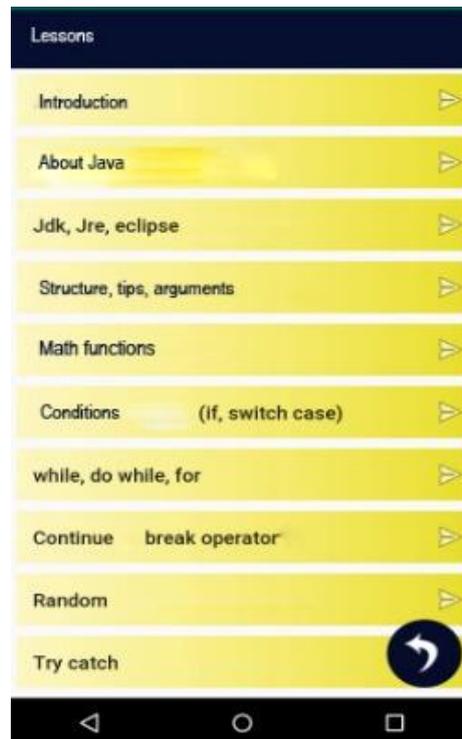


Figure 3. This page shows program language

During the test, we saw a significant increase in students' knowledge and practical skills. Students have proven through practice that they can practice independently outside of the classroom through the app, and that their knowledge of programming, algorithms, and science in general has increased significantly through these mobile apps



Figure 4. Python program language page.
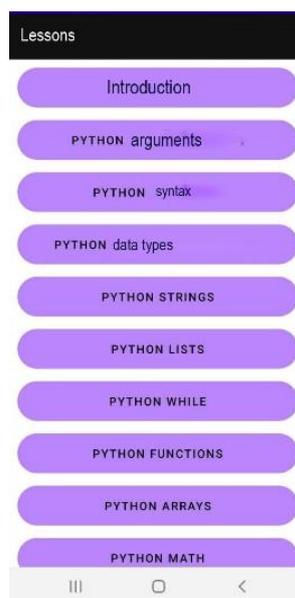


Figure 5. Python program language functions.

Today, high results can be achieved through the development of similar mobile applications and their widespread application in areas other than education [9]. As an example, it is recommended to identify the role of mobile applications in education and the ways, types and stages of their use, and to teach with a mobile platform in education. The local database SQLite was used to create these programs [10]. Basically the lessons were created in html forms and imported into the web view component. The program includes theoretical information on each topic, practical examples, assignments, laboratory classes, tests, assignments, useful resources on the topic and other information [11]. The topics are grouped according to the topics covered in the subject of mobile applications in education.
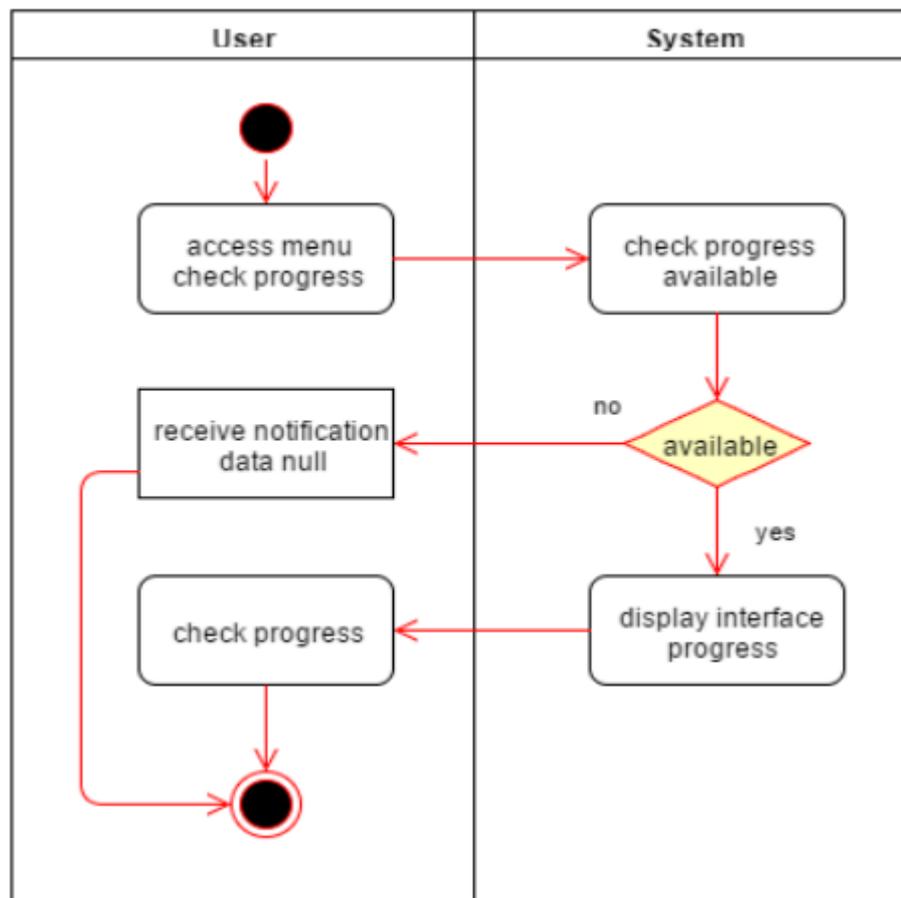


Figure 6. Diagram process for checking the progress

The design application (see figure 5) illustrates the diagram process for validating the user, managing the chatting and checking the progress. The user needs to commence the system through opening application for academic cyber counselling. Moreover, by choosing the category, fulfilling the name and password to validate the user's information detail would lead to the next process in showing the interface main page. When getting finished, the user can start with chatting through accessing the menu. Checking message available as an attempt to display the interface chatting could be further transformed into sending the message, especially in delivering the communication to gain the update. In particular, managing the chatting in delivering therapy service may also be enhanced to see the progress where this stage is made by the advisor on the system available. By clicking the menu on 'progress', the user can easily see the further enhancement through receiving the alert notification made by the system automatically. With this regard, displaying interface progress here refers to the way which has two choices, yes or no. The code 'yes' here means that the system will deliver to the further process on progress side then transferring into the checking progress. However, when the decision 'no', then alert system may give the notification for the user to check the progress.

The process starts from the relation amongst the class illustrated in detail towards the use case diagram and sequence diagram. With regard to the system proposed above, there are three core users such student, advisor. In line with the subsequent process, the stage should be transformed into the study achievement stage where the users have chance to simultaneously relate to the procedural context to the head of department program. There is needed to further analyse the significance and effectiveness of this model framework in higher education (HE). The outstanding expectation will be achieved through developing the mobile application of academic cyber.

## II. CONSLUSION

In short, the use of mobile applications in science teaching opens up a wide range of opportunities for faculty and students [12]. The organization of the educational process in educational institutions on the basis of mobile applications creates a number of innovations related to the rapid updating of teaching materials based on the latest achievements of science. This scientific article discusses in detail the possibilities of modern programming languages and their methodological aspects in mobile applications created on the basis of working in it. With the help of the developed software it is possible to increase the interest of students in science and the effectiveness of education [13].

## REFERENCES

[1]     Decree of the president of the Republic of Uzbekistan on measures to ensure more effective organization of the process of acquisition of rights over land parcels and other immovable property as part of the South Caucasus pipeline expansion project more ...  Collection of legislative acts of the Republic of Uzbekistan, 2017, article 6, Article 70.

[2]     Zaripov O.Q., Madaminov U.A. Learn Graph program on the subject of "Computer Graphics" // State Patent Office of the Republic of Uzbekistan: Certificate № DGU 06992.  28.08.2019 y.

[3]     Madaminov U.A., Allaberganova M.R., Kutliyev S.O., Avezov M.A., O'razboyev N.U. (2020). Methodology of electronic educational resources creation and use of applications // International Journal of Applied Research. pp. 133-135. ISSN Print: 2394-7500.

[4]     Dagiene V, Grabauskiene V. (2011) Transformation of individual learning through informatics and information technology activities in primary school // Intern. Journal of Digital Literacy and Digital Competence, Vol. 2, No 3, pp. 1–14. ISSN 1947-34942011

[5]     Company(s) nor Stack Overflow. Android™ Notes for Professionals. 1329 pages, 2019.

[6]     Jan. F. Darwin. Android recipe collection. 2nd edition. Moscow. Saint-Petersburg. Kiev.  2018.

[7]     Uktamjon Madaminov, Anorgul Ashirova, Aardor Kutliyev, Khujatov Nurbek Jumaboyevich. Didactical potential of using the electronic textbook in the process of learning computer graphics. Pyschology and Education(ISSN: 0033-3077) 2021.

[8]     J. Lee, W. Lin, Y. Huang, "A Lightweight Authentication Protocol for Internet of Things", International Symposium on Next-Generation Electronics, ISNE 2014.

[9]     The treacherous 12, Cloud Computing top threats 2016, "Top threats working group, Cloud Security Alliance (CSA)".

[10]    K. Zhao, L. Ge, "A Survey on the Internet of Things Security." Computational Intelligence and Security, Ninth International Conference, IEEE 2013.

[11]    A. Perrig, J. Stankovic, and D. Wagner, "Security in wireless sensor networks." Communications of the ACM 47, no. 6 (2004): 53-57.

[12]    M. Panwar, A. Kumar, "Security for IoT an effective DTLS with public certificates." International conference on advances in Computer Engineering and application (ICACEA) 2015.

[13]    P. Mahalle, N. Prasad, R. Prasad, "threshold cryptography  -relied group authentication (TCGA) scheme for the Internet of things.".