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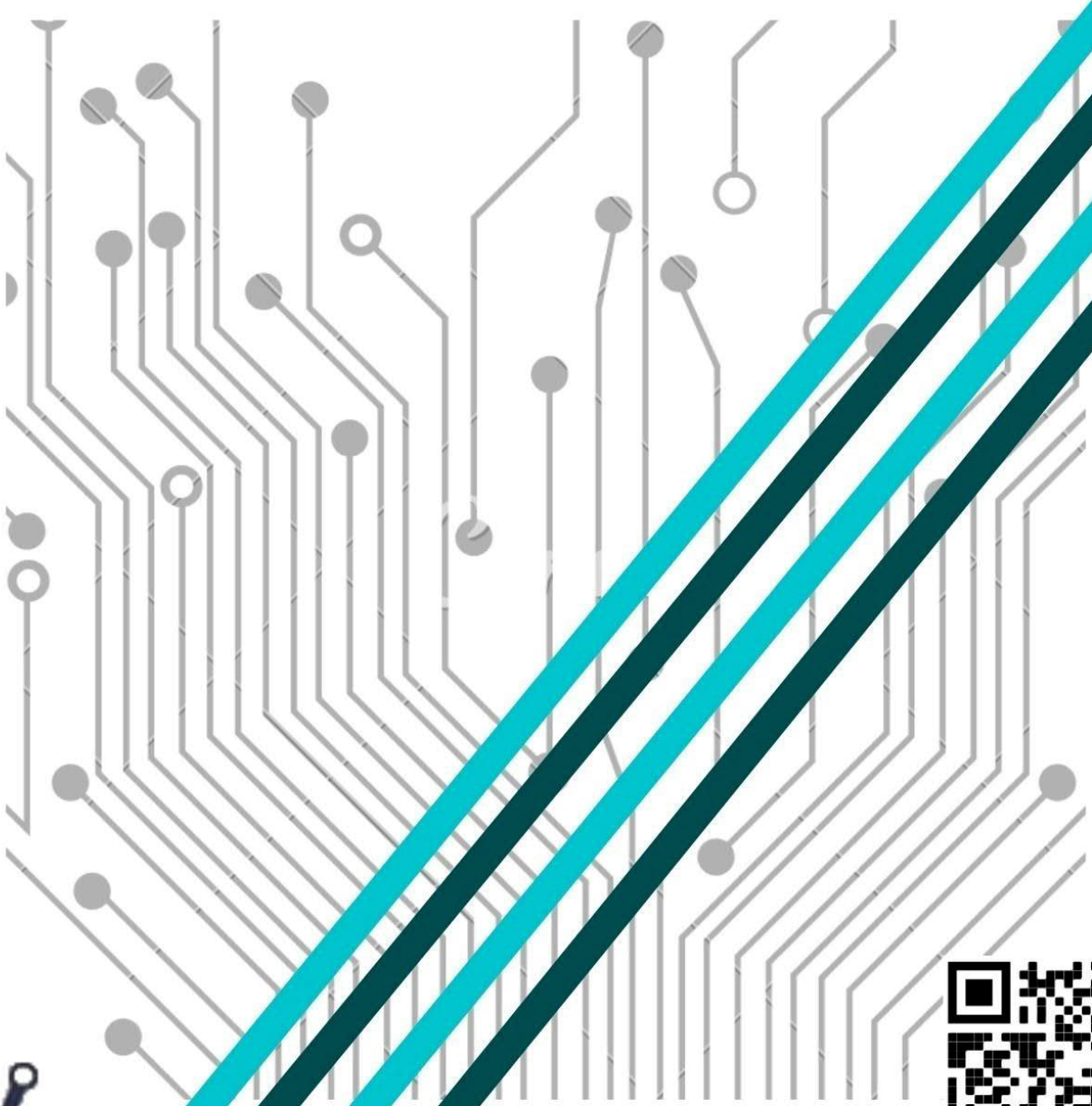

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CONTENTS

ALGORITHM FOR USING THE IRON DEFICIENCY ANEMIA MED ANDROID APP

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Abstract. This program helps to predict, analyze and obtain information about Iron Deficiency Anemia. The sequence of working algorithms of the developed mobile application was prepared, the BackEnd part was created in the Kotlin programming language and the UI part was created in the XML markup language. the application takes the amount of hemoglobin in the blood, the number of erythrocytes as information, and when a special button is pressed, it automatically determines the result of the color index and makes a tentative diagnosis of iron deficiency anemia.

Keywords: iron deficiency anemia, Kotlin programming language, mobile application, BackEnd part, XML markup language, UI part creation.

An algorithm is a set of instructions that describe the procedure for an executor to achieve the result of solving a problem in a finite number of steps.

Such a description of the method of solving the problem should have the following properties:

Discreteness - the algorithm should represent the process of solving the problem as a sequential execution of some simple steps. At the same time, each step of the algorithm requires a finite period of time, that is, the transformation of the initial data into the result is carried out discretely in time.

Determinacy (certainty). At each moment of time, the next step of work is uniquely determined by the state of the system. Thus, the algorithm produces the same result (answer) for the same input data. On the other hand, there are probabilistic algorithms in which the next step of work depends on the current state of the system and the generated random number [1-4].

However, when the random number generation method is included in the list of "input data", the probabilistic algorithm becomes a subspecies of the usual one.

Clarity - the algorithm should include only those commands that are available to the performer and are included in his command system.

Termination (finiteness) - with correctly specified initial data, the algorithm must complete the work and give the result in a finite number of steps. On the other hand, a probabilistic algorithm may never produce a result, but the probability of this is 0.

Mass character (universality). The algorithm must be applicable to different sets of initial data.

Efficiency is the completion of the algorithm with certain results.

A person or some mechanism (computer, lathe, sewing machine) can act as an executor of the algorithm.

The process of developing an algorithm for solving a problem is called algorithmization [5-8].

Algorithms, depending on the order of actions of the performer, are divided as follows:

• Linear algorithm - a set of commands (instructions) executed sequentially in time one after another.

• A branching algorithm is an algorithm that contains at least one condition, as a result of checking which a division into several parallel branches of the algorithm can be carried out.

• Cyclic algorithm - an algorithm that involves multiple repetitions of the same action (the same operations) on new source data. Most of the calculation methods and enumeration of options are reduced to cyclic algorithms. A program cycle is a sequence of commands (series, cycle body) that can be executed repeatedly (for new initial data) until a certain condition is satisfied.

Almost every family has a computer, a laptop, and a tablet. Gadgets have become an integral part of our lives and often perform the functions of children's toys, and school textbooks, and working tools. No need to resist progress. It would never occur to anyone to send a child to school in a horse-drawn cart, and not on a bus, or to use a torch instead of electricity. For better or worse, computer technology is as much a part of our lives as a refrigerator or an airplane. It's impossible to do without them.

Like every phenomenon, the modern technology boom has clear pros and cons. Today, no one will be surprised if he sees a schoolboy or student with a smartphone or tablet in his hand. Training should take place in an electronic

environment. However, in one case, this leads to the fact that young people learn better (additional opportunities, etc.), and in another case, the use of gadgets negatively affects the learning process (they are distracted from the main thing, play games, do not know how to search for information and etc.) [9-11].

The use of information technology tools opens up new opportunities for the qualitative improvement of education, increasing its intensity.

The Guidelines contain information on the advisability of using mobile applications in the educational process.

This material is intended for the general pedagogical community, applicable in working with students not only of the technical school, but also of secondary schools in order to increase interest in the subject. The connection between school and college is inseparable. From February 3 to February 16, 2020, Kuzbass schools held lessons on the topic "Personal Assistants".

"Numeral Lesson" is an Al-Xorazm educational project, within the framework of which schoolchildren get acquainted with the basics of programming and digital technologies in a playful way. Each of the lessons is devoted to a specific topic and is aimed at developing digital knowledge and skills within the framework of the national project "Digital Economy".

We think that not only schoolchildren, but also our students and teachers will take an active part in the All-Russian educational project, and the use of "personal assistants" by students of the technical school in their educational and professional activities will give good results [12,13].

IT-technologies should become a kind of guide in the formation of the educational route of the student. And every teacher has the opportunity to properly adapt the use of gadgets for educational purposes.

Using mobile apps in class.

Cons and pros.

To date, there are a large number of mobile applications for solving computational problems that any teacher of mathematics can use in class during the primary consolidation of knowledge and for self-control and introspection. The use of each application must be justified and balanced.

Today, there is rapid development in every field around the world. A clear example of how important information technology is today is the fact that every industry continues its work using the perspectives of the IT industry in this tense process, that is, industries are trying to digitize themselves. Including in the field of Medicine, efforts are being made to digitize this field not only in the world, but also in Uzbekistan. Several of the applications developed and won in the "mGovAward" competition held in our country were intended for the digitization of certain services in the field of medicine.

This is the origin of our small android application.

This application was developed with the support of our teacher Ermetov Erkinbay Yakhasbayevich.

A cross-platform mobile application for a man-made educational environment is developed for the fulfillment of some social and educational functions. In my image, it should have the following functional options:

- Remote access via the Internet;
- Editing a user profile;
- Access to the camera and gallery of the device to upload a user photo;
- Sending and accepting friend requests;
- Message exchange;
- Entry into the discipline;
- Creating discussions within the discipline;
- Publication of comments as part of the discussion and laboratory work;

Downloading and viewing files published within the discipline and laboratory work. Figure 1 shows a diagram that reflects the functionality required for implementation in a mobile application.

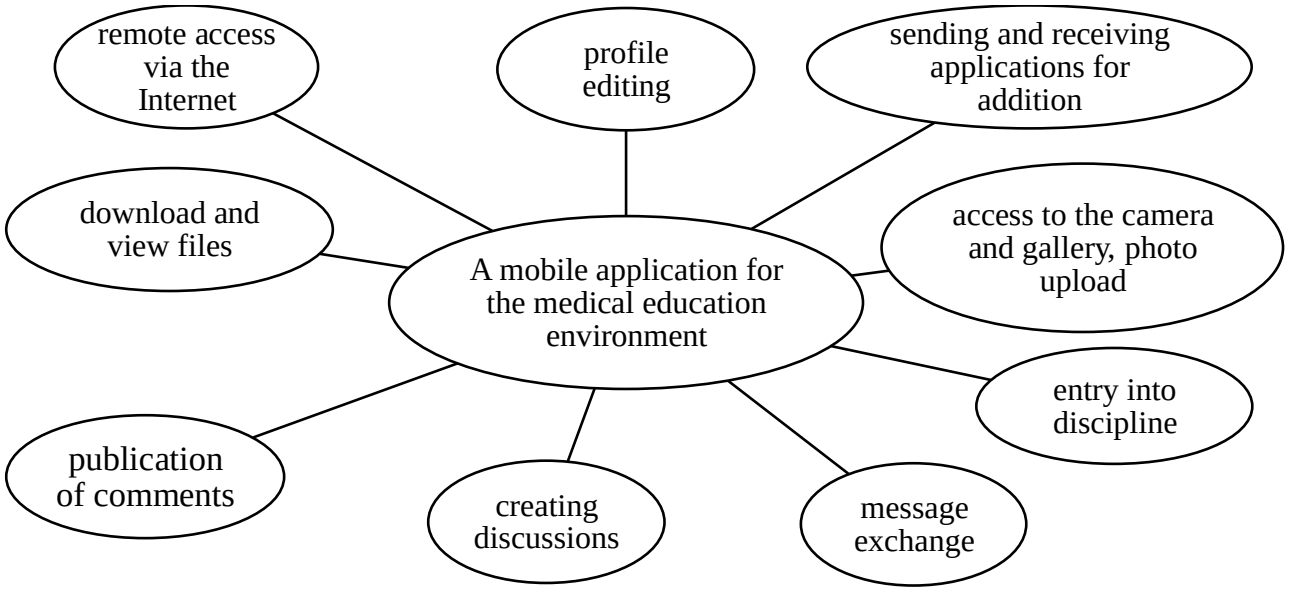

Figure 1. Diagram that reflects the functionality required for implementation in a mobile application

Figure 2 - Program launch

Figure 3 - Program launch

Figure 4 - Program launch

Figure 6 - The process of the program

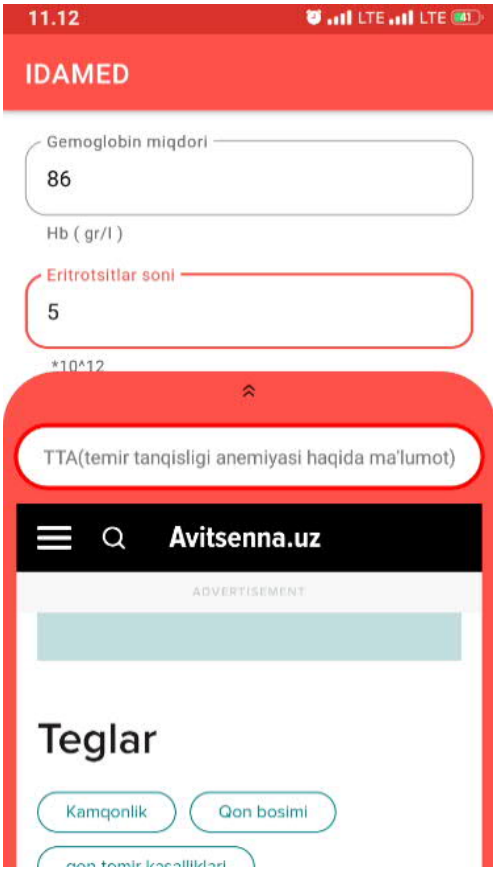

Figure 5 - The process of the program

IDAMED – Iron Deficiency Anemia MED application is an android application (Fig. 2,3,4) that determines the level of Iron Deficiency Anemia based on several data. This application takes the amount of hemoglobin in the blood, the number of erythrocytes as information, and when a special button is pressed, it automatically determines the result of the color index and makes a tentative diagnosis of iron deficiency anemia, that is, filling out a specially indicated questionnaire and providing the necessary information. after entering the data it will output something like below. You have moderate hypochromic anemia, and the conditions observed in you such as "headache, weakness, dry mouth" may be caused by this disease. At the end of the program, information about this disease and preventive information will be shown, this information will be downloaded from a special site on the Internet (Fig. 4,5).

Although this application is very small. Wrote some code for development. The application was created in the Android Studio programming environment in the Kotlin programming language and the UI part in the XML markup language.