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**Rus-Eng 5**

MOBILE APPLICATION DEVELOPMENT FOR THE EDUCATIONAL PROCESS QUALITY MONITORING

Currently, during the educational process, the teacher needs to conduct various surveys among students that allow them to determine the relevance of the course and evaluate students' knowledge. There are various options for conducting surveys, such as questioning or surveying students. There are various variations of conducting surveys, such as surveys or surveying an audience, but they are too time-consuming. In this regard, there is the problem of automating the monitoring of the quality of the educational process. One of the solutions to this problem is to develop a mobile application to simplify the monitoring process. So, the teacher will be able to create a survey from a mobile device, and students will be able to quickly answer by scanning a QR code on him. The survey results are automatically saved to the database, so the teacher gets quick access to statistical information.

Before you begin developing an application, you must implement its conceptual modeling. One of the most convenient notations for this is IDEFO. Building an AS-IS diagram is not possible because Currently, the implementation of this process is complicated and cannot be formalized. We proceed to the construction of the TO-BE diagram. The process of AO diagram is defined as "Monitor the quality of the educational process." The input parameter will be “Educational content” and the output: “Statistical information” and “Report”. The process will be carried out by the teacher using a mobile application based on documentation. The decomposition of this process is shown in Figure 1.

Figure 1 - Decomposition of the process. “To monitor the quality of the educational process”

Based on this diagram, a diagram of use cases in UML notation was constructed, which shows the interaction of users of the developed application (actors). The teacher performs the processes: “Create a survey” and “Collect statistical information”. The creation of a survey includes such a process as the formation of a QR code that allows you to quickly access it. On the part of the student, the processes “Scan the code” and “Pass the survey” are taking place.

 In conclusion, it is worth noting that the development of a mobile application will be carried out for all popular mobile OSs in the Russian market: Google, Android, Apple iOS and Windows Phone, and a REST API will be developed to unify requests to the server side. The server part will be a combination of the Python programming language and the free framework for Django web applications using the MVC (model-view-controller) design pattern.

List of references

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APPLICATION OF THE SYMBOL SYSTEM IN PUBLIC BUILDINGS

In all public buildings, a system should be provided for easy access to reference information on services, the procedure and conditions of service, and the possibility of access to certain objects in the building. In this case, it is necessary to carefully consider the presence and location of the targeted visit area.

A targeted visit area is a place where a person receives a service. It can be organized in the lobby at the reception, at the entrance to the building, in classrooms, in the reading or auditoriums and other places, depending on the specific service provided.

Mostly reference information is placed in printed form on tables, stands, various signs and displays. In such a case, it is necessary to provide for a certain number of rules when using symbols in this system of providing reference information, which will be discussed later.

In the navigation and orientation system there is the following important concept - information support. It characterizes the accessibility of an object and its understanding by a person. The presence of sufficient and complete information support saves time and reduces the cost of physical forces, which is especially important when using the facility with a low mobility group. In particular, information accessibility is a key factor in orienting in the public space for certain categories of people with limited mobility, people with hearing disabilities or hearing impairments. It should be borne in mind that for people with hearing problems one type of equipment is provided, and for people with vision problems others. And it is also mandatory to establish signs that help to clearly interpret the availability of such equipment.

- It is necessary to use colors and symbols in the interior elements in accordance with the type of object.

Color should be used delicately. There should be no dominance of the symbolic system over the surrounding space. The use of color in interior decoration should be through the elements of walls, ceilings, inserts on the floor, in the decoration of furniture, lamps, etc.

Fig. 1. An example of using color to increase concentration on the necessary symbols

- Design typical information desks, signs, signs, maps and diagrams in one style solution. It is allowed to use different materials and slightly change the configuration of the sections, while not changing the color scheme and single characters selected for this project.

Fig. 2. An example of variations of graphic means in the interior of a public building

- It is mandatory to develop a navigation stele to obtain the necessary information. And also take into account its correct location in the lobby next to the entrance group.

- To provide for the placement of an information tactile mnemonic diagram of the wall-mounted type of mounting for people with visual impairments.

The mnemonic diagram is a complex tactile layout of rooms (layout plan of cabinets in the room, entrances and exits from the building, symbols), designed to inform, safety and orientation in the space of people with visual impairments. All information is provided in the form of flat-convex elements and inscriptions made in Braille.

Fig. 3. Examples of wall graphics

- Use of pictograms, including tactile ones, to indicate specific rooms in the building (sanitary-hygienic, office, public premises) to inform all users of the facility about the purpose of the premises.

It is also mandatory to use pointers with the location of the tactile font and the braille dot font.

Fig. 4. Hygiene room icon

Thus, we can come to the following conclusions in what is needed:

- Use a single system of symbols and color combinations for the designed object, both in the interior and in the exterior.

- Apply various types of signs, signs, information stela, a variety of plates to provide users with space necessary information about the object.

- Take into account the characteristic features of a particular designed space.

List of used literature:

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