UDC 004.4'236

PLANNING AND POSSIBILITIES OF THE MODULE "LABORATORY WORKS" OF THE INTEGRATED ENVIRONMENT OF "THE BASICS OF ALGORITMIZATION AND PROGRAMMING"

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In this article will be examine the architecture and advantages of introduction the module" Laboratory works", the environment of distant education "The basics of algoritmization and programming".

Key words: *environment, system, module, reference, table, integration.*

Nowadays, the process of informatization of society gets more importance and scales, that is why, it's no wonder that such form of education as distant was introduced. It gratitudes its existence just the development of informational technologies.

The individualization of teaching and acceleration of student's adoption of material in simultaneous intensification of studying, and the development of algorithmic thinking could be reached as a result of developing and using new teaching technologies, that forecast exact considering of requirements and outlooks of future teaching and productive activity.

Nowadays, almost every student has a computer. It pushes for making the distant system of education that allows to self-prepare for study or to learn the material for different topic and course. This technology gives to every person an opportunity to study singly, without space and time limitation.

The distant system of education allows the student to control the process of getting and checking the knowledge. It provides with different means and control systems, built-in integral systems. In most cases the new material is given in several forms (textual, graphic, schematic, etc.) for better and effective studying the discipline. Because of this, the student can overtake the missed topics, for example, because of the illness. It makes on one's own initiative and aim.

Integral environment of studying the course "The basics of algoritmization and programming" is the system of distant education, aimed for students and teachers of technical, pedagogical, and economic specialties for institutes of higher education for holding lectures, practices, and tests. The main advantages: using for current and total control, opportunity to organize studying the material singly in discipline for students daily, instruction by correspondence and distant form of education. With the help of this program one can easy and effective study the course of basics of algoritmization and programming both students and teachers.

For technical task integral sphere of studying the course" Basics of algoritmization and programming" is a system which contains the next modules:
-   System of personification;
-   Teaching aid;
-   The library of lectures;
-   The sphere of demonstration programs;
-   The library of tasks;
-   The system of current and total knowledge control;
-   The system of editing content;
-   Electronic note-book.

During the work with integral spheres grow the requirement in making a module "Laboratory work", That will realize the integration of teaching aid, the sphere of demonstration programs, current control and electronic note-book.

Its realization went in a such way: at first this model should be added to the list of course modules. Thereby, there was established a link with the courses of system.
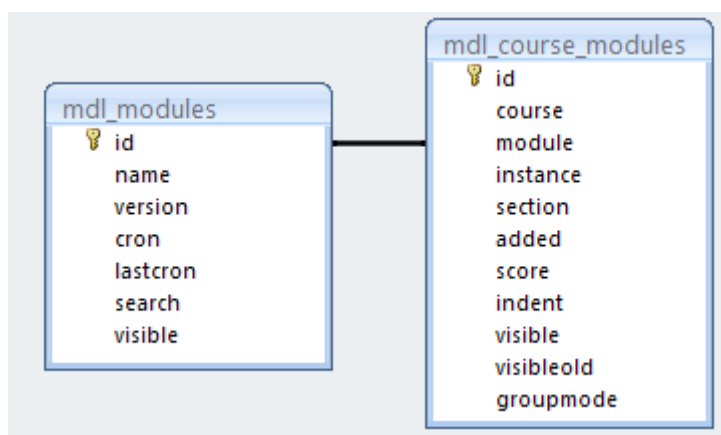
Design 1.The diagram of links of modules system with the modules of appropriate course.

As we see on the scheme, identifier id tables mdl modules connected with the field module table mdl course modules.

For realization additional module "Laboratory works" to the base of background was added 2 new tables: mdl_labs, which save the information about this module and connect it with the course, and mdl_labs_chapters, which contains the content of this work. Laboratory works was worked out according to the work program and contain such parts:
- The name of laboratory work;
- The theme;
- The aim of work;
- Supporting knowledge;
- The list of literature;
- Theoretic knowledge (with making reference on the sections of teaching part of integral sphere)
- The way of work which contains:
- Examples of tasks and its solving (with opportunity to send it to the sphere of demonstration for visual presentation of work);
- Tasks for independent solving (the numbers generate with sending on the sections of task library);
- Tests for checking the knowledge (with sending on the appropriate section of module of current control).

For working transitions and sending correct, one use a link in a table given below, namely id with mdl_labs corresponds labid with mdl_chapters.
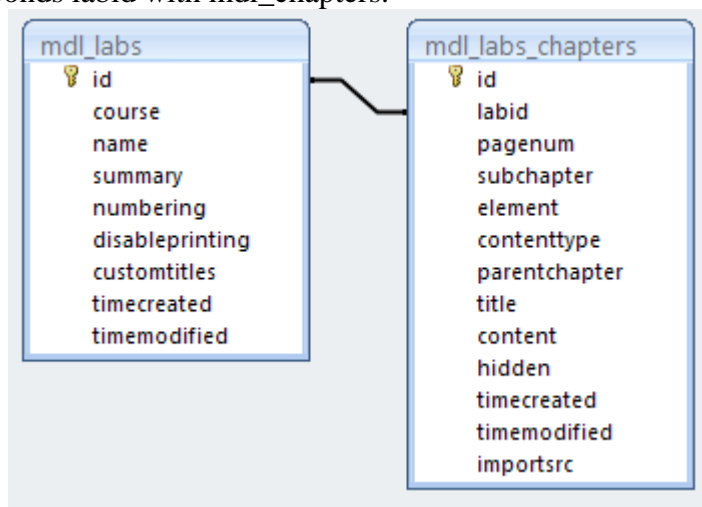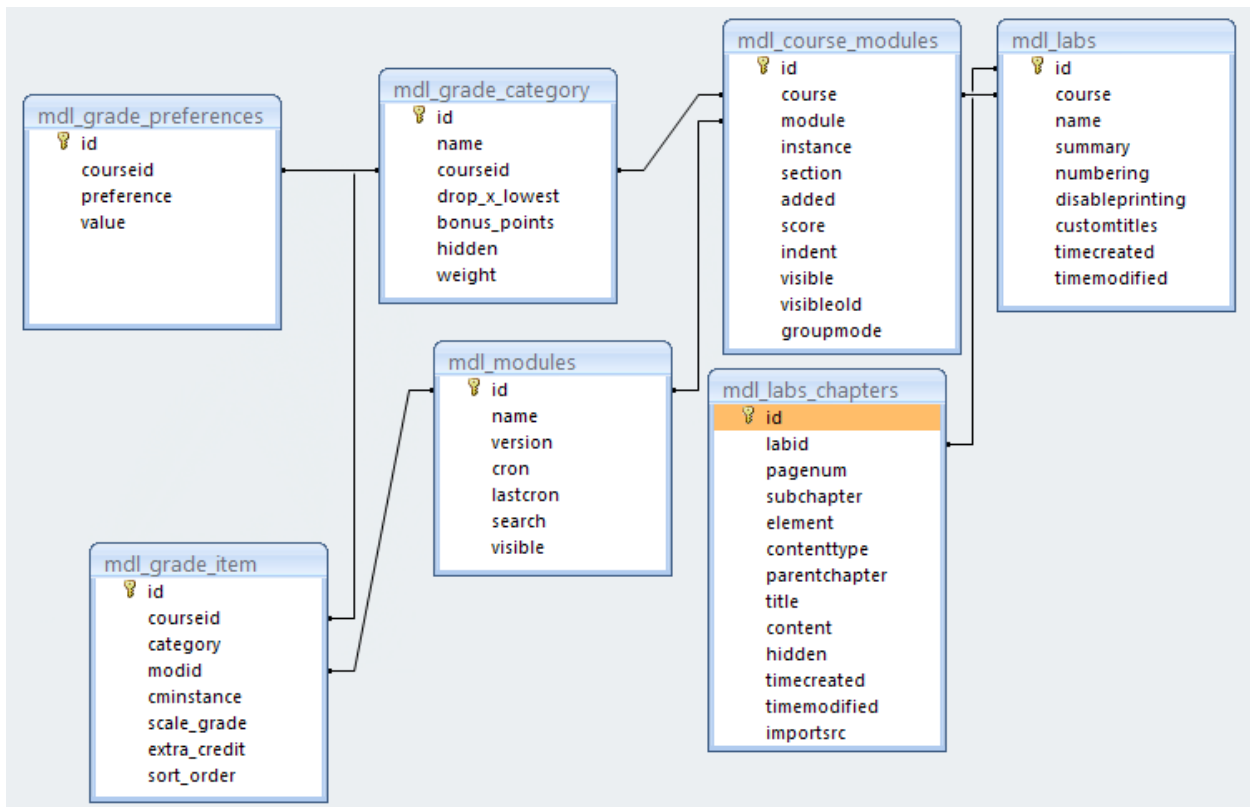

Design 2.The diagram of link module laboratory works with its sections.

Thereby, it realizes the opportunity of work with the content of each laboratory work. It can be removed on one or several levels, depending on the need of presenting the material, sub-edit, delete and add new parts with new functionality. The next design presents this opportunity.


Design 3. Functionality in works with the content of laboratory works.

Besides, the module "Laboratory works" should be connected with the electronic note-book for realization an opportunity to put the scores and marks while making laboratory work and solving tasks or making a test. The next scheme of background and diagram shows how will realize this functionality in the sphere of distance education "Basics of algoritmization and programming"

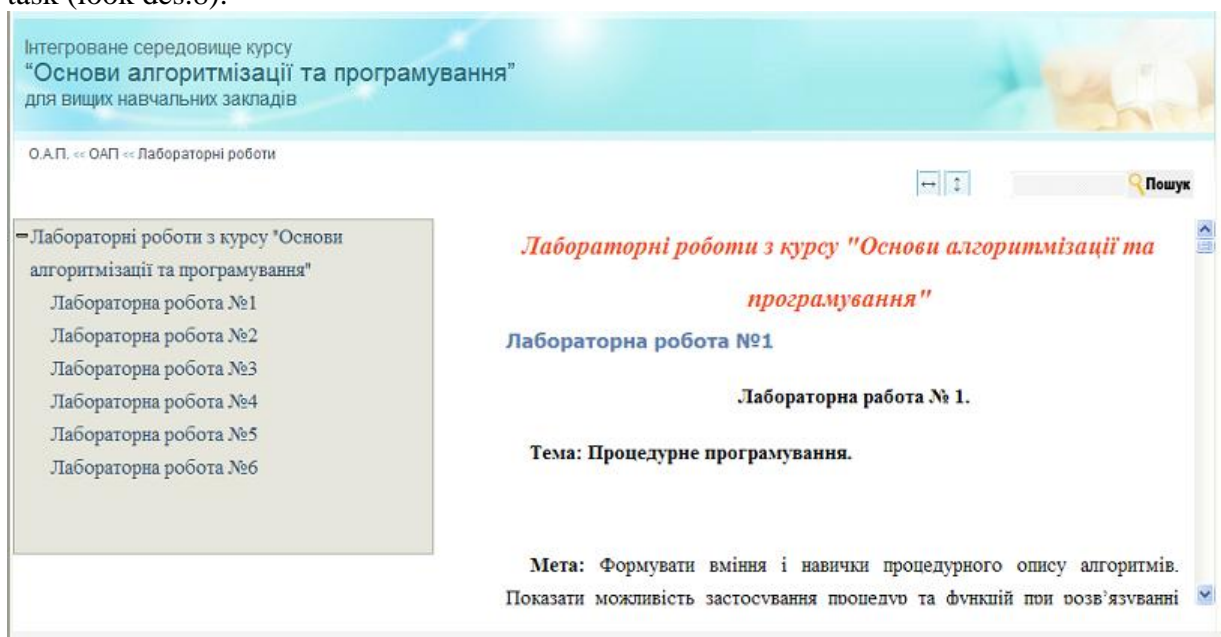*Design 4.The scheme of background's link of electronic note-book with the module of laboratory work*
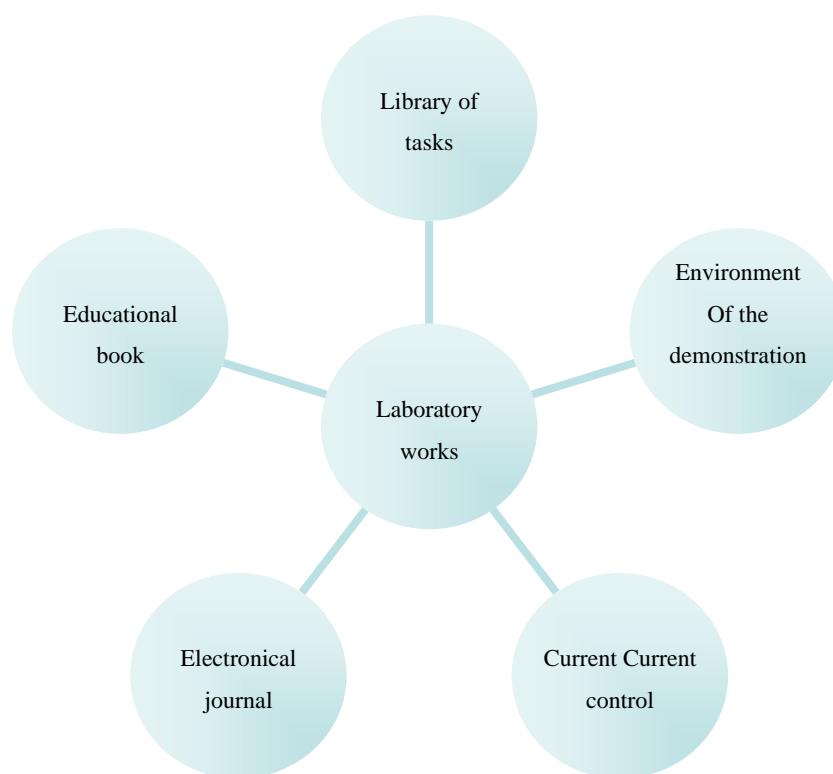
Design 5.The diagram of integration of modules the system of distant education" The basics of algoritmization and programming" with the help of module "Laboratory works"

It is inner realization. And now we'll see how it looks from the user's side. After personification the course "The basics of algoritmization and programming" we see that in the section "The head-lines of the themes" appeared "Laboratory works". Besides, to this section one can get from the inset "Elements of the course" (second from the left), where is the reference to it.
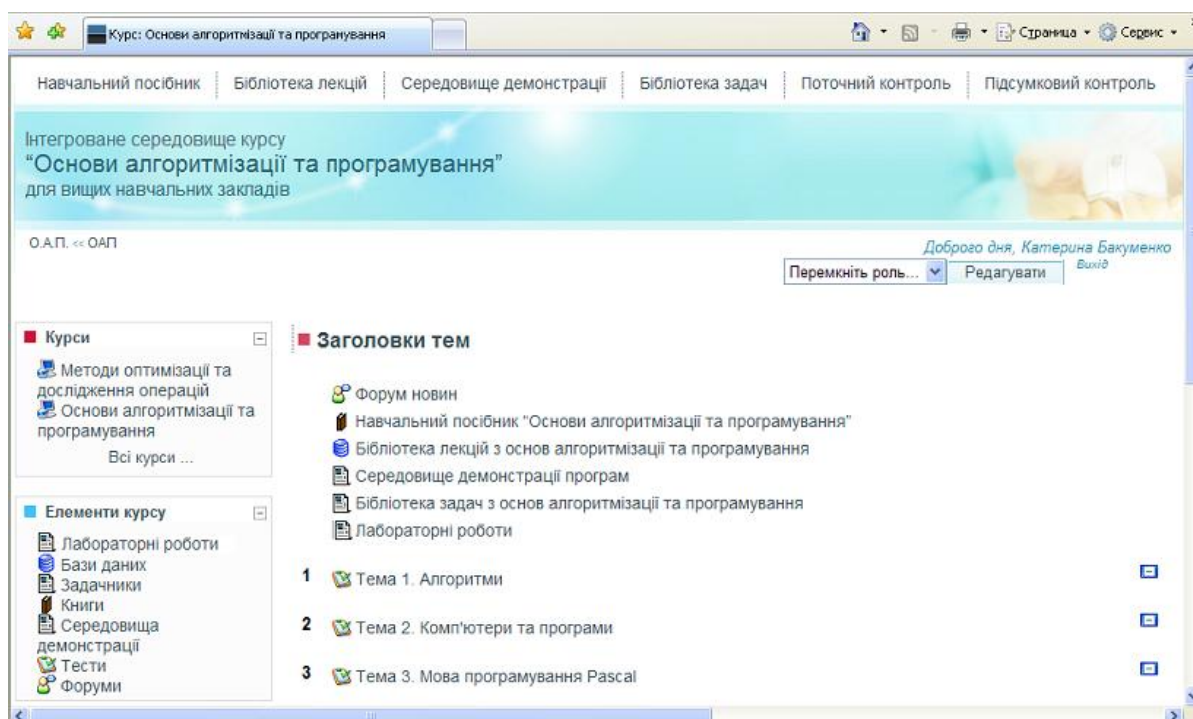
Design 6.The page of the course" The basics of algoritmization and programming" with reference to the model "Laboratory works"

After the transition to the section, we choose appropriate, interesting for us laboratory work and in the right part of the screen we see its text (look des.7). If we meet a reference, we could go to appropriate module of the system of education and look through the material or make appropriate task (look des.8).

Design7. The reflection of the contest of the laboratory №1

Design8. Reference from the laboratory to appropriate theme of teaching aid of integral sphere.

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