

MASTER'S RESEARCH REPORT

MASTER STUDENT: TIMABAY ZHANDOS

HEAD LEADER: DAUSHEYEVA N.N

GOAL OF RESEARCH

The purpose of the research practice – is to acquire the skills of analyzing existing programs in the field of study, in particular, programs aimed at increasing the efficiency of the head of the department at the university. It is necessary to develop an algorithm and its software implementation to solve the problems of the designed subsystem, to solve this problems in this research we should analyze existing software, structural design and implement software



MAIN TASKS

- **Analytic review of existing software**
- **Structural design of the system the academic process at the university**
- **Finally! Software implementation of tasks of the “Academpro”**

AUTOMATED WORKPLACE AALTO

The automated workplace of the teachers made from Aalto University in Finland is a professionally oriented complex of software

The screenshot displays the MyCourses interface for a course titled "00-clear_49". The interface is organized into several key sections:

- Header (A):** Contains navigation elements such as "A? MyCourses", "SCHOOLS", "SERVICE LINKS", "ENGLISH (EN)", and "MY OWN COURSES". It also includes a search bar (B), a user profile for "Outi Rautakoura" (C), and a settings gear icon (D).
- Left Sidebar (E):** A navigation menu with options: "Participants", "Grades", "Course home page", "Materials", "Assignments", and "For Aalto users". Below this are sections for "Dashboard", "Site home", and "Site administration".
- Main Content Area (H):** Displays the "Course home page" for "00-clear_49". It includes a breadcrumb trail: "Dashboard / Courses / Sandbox / Admin / 00-clear_49". The page features two announcement links: "Announcements" and "General discussion". A "Materials" link with a right-pointing arrow is also visible.
- Right Sidebar (F, G):** Contains administrative and informational widgets. At the top is a "Turn editing on" button (F) and a "Course overview" link. Below are three informational blocks: "COMPLETION PROGRESS" (stating no activities are selected), "LATEST ANNOUNCEMENTS" (stating no announcements have been posted), and "UPCOMING EVENTS" (stating no upcoming events).

PROS AND CONS

Advantages of this automated workplace:

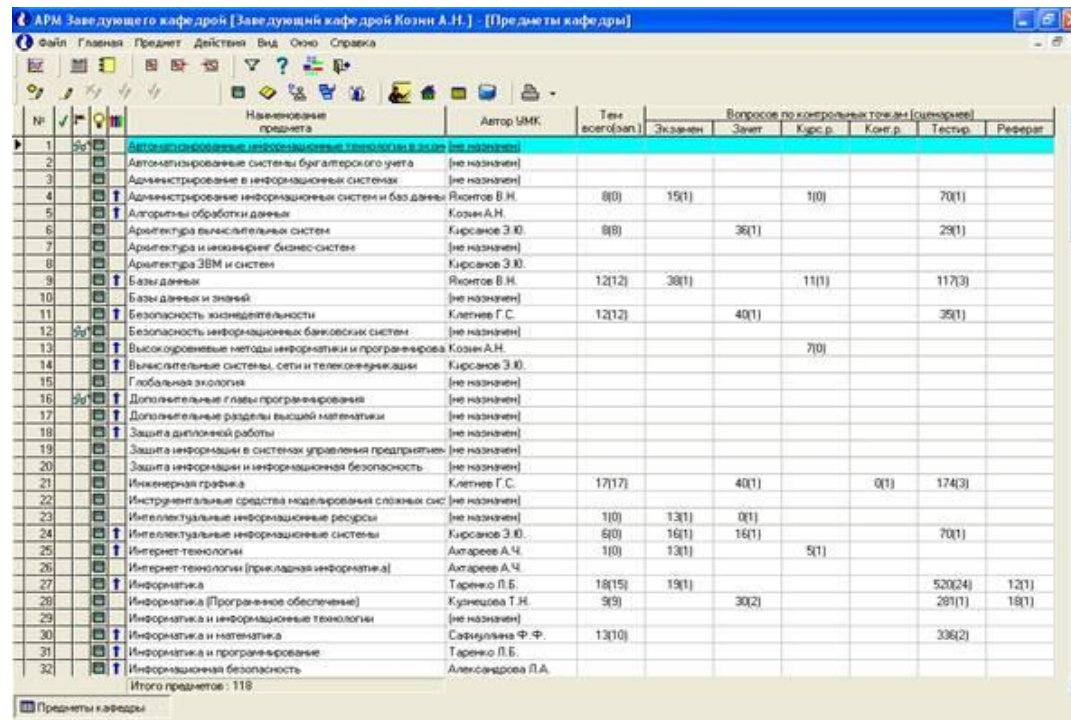
- the organization of training not only in the class-lesson form, but also in after-hours and distance form;
- creation and accumulation of information resources;
- creation of conditions for the active use of ICT and digital educational resources by all participants in the educational process;
- convenience and speed of access to information;
- increase the professionalism of teachers;
- improving the quality of educational activities of students, the formation of information activity of students;
- use of workstations in the preparation and conduct of extra-curricular activities

Disadvantages of automated workplace:

- is lack of "live" communication;
- deterioration of health (eye overload, spinal strain)

ORIENTMIX

Automated workplace of the head of the department from blogger OrientMix from Pandia.ru.



ARМ Заведующего кафедрой [Заведующий кафедрой Козин А.Н.] - [Предметы кафедры]

Файл Главная Предмет Действия Вид Окно Справка

№	Наименование предмета	Автор УМК	Тем. всего(зан)	Вопрос по контрольным томам (сценарие)						
				Зачет	Зачет	Курс.р.	Конт.р.	Тестир.	Реферат	
1	Автоматизированные информационные технологии в учете	(не назначен)								
2	Автоматизированные системы бухгалтерского учета	(не назначен)								
3	Администрирование информационных систем	(не назначен)								
4	Администрирование информационных систем и баз данных	Яковлев В.Н.	0(0)	15(1)			1(0)			70(1)
5	Алгоритмы обработки данных	Козин А.Н.								
6	Архитектура вычислительных систем	Кирсанов З.Ю.	0(0)							29(1)
7	Архитектура и инженерия бизнес-систем	(не назначен)								
8	Архитектура ЭВМ и систем	Кирсанов З.Ю.								
9	Базы данных	Яковлев В.Н.	12(12)	30(1)			11(1)			117(3)
10	Базы данных и знаний	(не назначен)								
11	Безопасность жизнедеятельности	Клетнев Г.С.	12(12)							35(1)
12	Безопасность информационных банковских систем	(не назначен)								
13	Высокоскоростные методы информатики и программирования	Козин А.Н.					7(0)			
14	Вычислительные системы, сети и телекоммуникации	Кирсанов З.Ю.								
15	Глобальная экология	(не назначен)								
16	Дополнительные главы программирования	(не назначен)								
17	Дополнительные разделы высшей математики	(не назначен)								
18	Защита дипломной работы	(не назначен)								
19	Защита информации в системах управления предприятием	(не назначен)								
20	Защита информации и информационная безопасность	(не назначен)								
21	Инженерная графика	Клетнев Г.С.	17(17)					0(1)		174(3)
22	Инструментальные средства моделирования сложных систем	(не назначен)								
23	Интеллектуальные информационные ресурсы	(не назначен)	1(0)	13(1)			0(1)			
24	Интеллектуальные информационные системы	Кирсанов З.Ю.	6(0)	16(1)			16(1)			70(1)
25	Интернет-технологии	Ахтарев А.Ч.	1(0)	13(1)			5(1)			
26	Интернет-технологии (прикладная информатика)	Ахтарев А.Ч.								
27	Информатика	Таренко Л.Б.	18(15)	19(1)						520(24) 12(1)
28	Информатика (Программное обеспечение)	Курицкова Т.Н.	9(9)				30(2)			281(1) 18(1)
29	Информатика и информационные технологии	(не назначен)								
30	Информатика и математика	Саргульева Ф.Ф.								336(2)
31	Информатика и программирование	Таренко Л.Б.	13(10)							
32	Информационная безопасность	Александрова Л.А.								

Итого предметов : 118

Предметы кафедры

PROS AND CONS

Advantages of this automated workplace:

- abundance of functionality

Disadvantages of automated workplace

- inconvenient interface
- decentralized system
- no output forms

STRUCTURAL DESIGN

The main functions of the AWP subsystems are as follows:

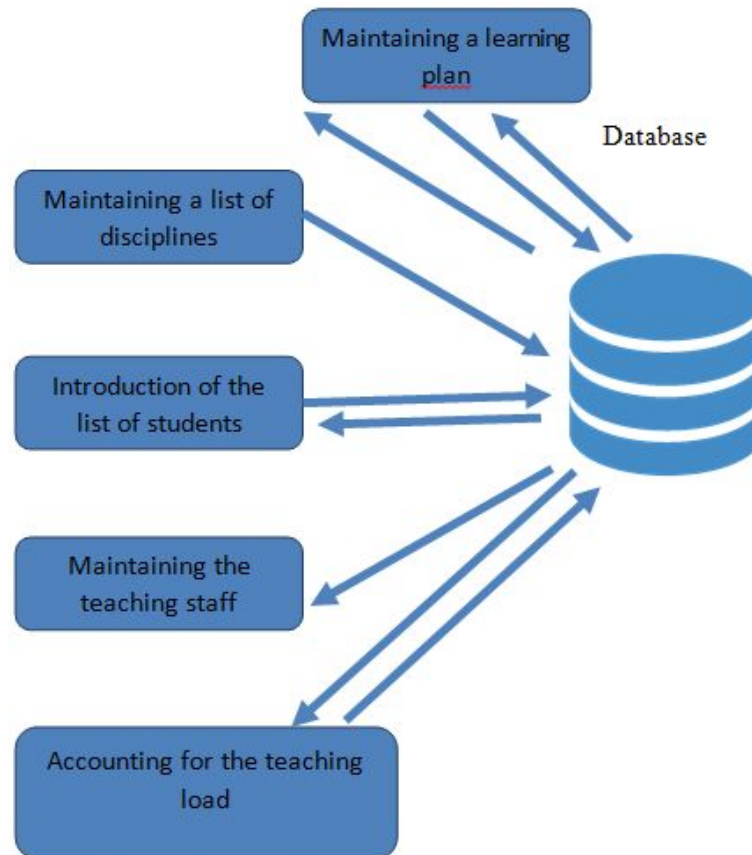
- Developing a work plan;
- Maintenance of the teacher's database.
- Maintaining of discipline's database;
- Maintain a student's database;
- Distribution of teaching load
- Creation of reports in MS Excel format.

TASKS

Subsystems of workstations are divided into the following tasks:

- Development of a mechanism for automatic coding of disciplines;
- Development of a component for accounting for discipline cycles
- Development of forms for choosing the language of teaching
- Development of the form of the components of the differential test, term paper / term project
- Development of components for the distribution of the volume of teaching hours of the teacher

COMMUNICATION STRUCTURE



CHOSEN TECHNOLOGIES

YII2 – PHP framework



Bootstrap 4 – CSS framework

Bootstrap 4



MySQL – database management system



IMPLEMENTATION

Lets show in action!