

## ON-LINE SYSTEM FOR A UNIVERSITY STUDENTS' REGISTRATION

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**ABSTRACT.** A content management system based on a database could be use to create websites for manage activities in domain of education. The database incorporates information's about student activities such laboratory and practical projects. This paper presents an on-line system for student management.

### ОН-ЛАЙН СИСТЕМА ЗА РЕГИСТРАЦИЯ НА СТУДЕНТИТЕ

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**РЕЗЮМЕ.** Система за управление, създадена на основата на база данни може да се използва за създаване на уеб-сайт за управление на дейностите в сферата на образованието. Базата данни съдържа информация за студентските дейности като лабораторни упражнения и курсови проекти. Докладът представя он-лайн система за управление на студентите.

## 1. Introduction

The idea was to use the resources each department has and to present a practical solution with keeping security of the data in mind. Due to the constraints regarding the budget on the project allocated until now and the time frame for the project, one of the most suitable solution was to use free open source software's (Apache as a web server, MySQL server as a backend database and php as a server side language). These three programs will be installed on each machine in every department. Considering the complexity of configuring Apache, MySQL and php, the solution is to use XAMPP (<http://www.apachefriends.org/en/xampp.html>).

It is a free packaged preconfigured Apache, MySQL, php bundle, which simply needs to be installed.

Each department communicates to its own local database via a web browser, so they can insert, delete, update and select data via the web browser. At every fixed point they make a dump file of the data that are not updated to the Main database. This action is performed by first creating a duplicate of each table and inserting them with all the data that has not been updated to the Main until that moment. Which is known from a column called copied (Boolean value), if copied 1 else 0. After the creation of new tables and insertion of non updated data, this new table is dumped into file using *mysqldump* command.

```
mysqldump -u %mysqluser% -p%mysqlpassword% node  
student_dump%workdir%student_dump.sql
```

This is done via a batch file, which creates the dump file, zips the file and encrypts it. This data is now ready to be dispatched to the Main.

On the other side, the Main, decrypts the data, unzips it and the data is updated in its database. This action is also performed through a batch file, which recreates these dump table from the dump file.

```
mysql -u %mysqluser% -p%mysqlpassword% departments  
<%workdir%\student_dump.sql
```

The data from the dump file is now inserted into the final table and the dump file is dropped from the Main database.

That way, it avoids the need of a constant internet connection to the central database, complexity of the task is kept to minimum and security of the data is constantly maintained.

## 2. User guide

This application wants to be useful for managing students, through the prism of their participation in overtime laboratory.

The application is also for both the users students, they can get their marks, to upload the laboratory project theme or to choose their semester project, and for assistants to introduce projects, to allocate themes and projects for each student, to give mark for laboratory works and the drafts, indicating a few observations of each student handbook

The application can be find at <http://www.runceanu.ro/adrian/gestiune/index.php>.

The application has two types of users: students and administrator. Only the administrator, in fact the assistant or the teacher who manage the database of projects and students, has passwords for the access on a module in administration. Other users of this software, the students, have access only on the interface specifically intended for them. After login in, a student will be able to upload theme of the project and to view the marks given by a teacher at the laboratory work and projects

ID	Nume	Prenume	An	Grupa
1	Balasoniu	Aurora Camelia	3	137
2	Bokor	Mirabela Elena	3	137
3	Brinzan	Vetuta Ileana	3	137
4	Danescu	Cristina Irina	3	137
5	Dragota	Maria Florina	3	137
6	Draghici	Ruben	3	137
7	Feroiu	Mihaela	3	137
8	Graure	George Sorin	3	137
9	Iliescu	Catalin Gabriel	3	137
10	Ilinca	Alin Florin	3	137
11	Ion	Nicolita	3	137
12	Ivan	Gheorghe Lucian	3	137
13	Lazaroiu	Dumitru Laurentiu	3	137
14	Mihaescu	Valeria Loredana	3	137
15	Nitu	Vasile-Madalina	3	137
16	Obilescu	Ghiorghita Eugen	3	137
17	Pirvulescu	Razvan	3	137
18	Popescu	Cristina Florentina	3	137

## 2.1. Module for students

### 2.1.1. Registration and logging

A student, to have access to the facilities offered by the site, must register. This is done through the button "Student registration" under the menu in the upper right side of the first page.

For registration the student will have to introduce in the form personal data (username, name, year, the group, email, password).

Once registered will be able to login using login box on the first page. Only logged, a student will be able to upload the project or to view the marks obtained by a time.

An unregistered visitor of the site will only be able to see a list of students, and their details.

The menu at the top of the graphical user interface has 3 sections, namely: "Home", "Login Student" and "Student registration".

### 2.1.2. The list of students

After registration, a new student can connect to applications using the button logging students. The menu that appears is comprised of 4 sections: "Home", "Student Page", "Marks" and "Logout".

Using the "Student Page" of the top menu it will be opened a page in which the new student added in the database announced that he has no project allocated.

Using the "Marks" from the top menu will open a page in which the new student added in the database is announced that it he has no marks granted any notes on topics of practical laboratory.

### 2.1.3. Viewing the details of a student

Clicking on the link "Student Page" of the table students, it will be opened a page containing all details relating to the student.

In the case of a student to whom the application manager assigned a project task and possibly gave marks to certain laboratory work, in the student page will appear the following information:

- The name of the project;
- The description of the student's project theme

- The marks granted to certain (or all) practical laboratory.

The student may upload the project theme allocated by a professor (assistant) anytime he wants.

## 2.2. The administration

The administrator of this site has access to the module by admin authentication password-based set of application.

Through a management interface the professor (assistant) can control the records of students).

You can set:

- Add, change or delete projects
- Scoring a theme
- Evaluating a project
- You can remove students from the database (in case they graduated IV year or V year).

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7	Feroiu	Mihaela	3	137
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The menu that appears it's consist of 6 sections: "Home", "Remove Student", "Theme Laboratory", "Add Project", "Project Notes" and "Logout". Clicking on the button "Delete Student" it will appear the list of all students from the database, at that time, and they have on right side an erase marker "x", which is used to delete students from the database.

Clicking on the button "Laboratory Theme", it will appear the list of all students from the database, at that time.

For each selected student may be given a mark for a laboratory practice theme paper. The number of laboratory themes is established by the administrator.

Clicking on the button "Add Project" they can be run two activities related to the evidence of students allocated to projects namely:

- Adding a new project;
- Allocating an existing project of a student.

1. The adding of a new project can be done in the first part of the page. You can add the name of the project (which should be different from the names of existing projects) and details of the requirements that need to be accomplished by the project in teacher's (assistant's) vision, who established the theme of the project.

2. Assigning a theme project to a student can be done in the second part of the same page. It may be choose the name of the student who has no project assigned at that time and the name of the project. Both information (student name and the project name) are selected from two unrolled lists.

As an observation, we thought that a student who has received a draft not to appear anymore in the unroll list of all students, to avoid the situation in which a student receives two or more project names.

Also, the names of the projects that have already been allocated to students, disappear from the appropriate unroll list, to avoid the situation where a draft of the same name to be assigned to two or more students.

Clicking on the button "Project Marks" a mark can be give to a student who uploaded earlier the project theme allocated.

The professor (assistant) has the opportunity to download the \*.zip archive file which contain the solution proposed by each student to the project which was allocated and then to give you the considered mark.

## 3. Programmer's guide

The application "on-line registration system for university students" has been implemented by PHP technology, which allows a systematic development of an application with databases. As we used Application Server Apache, the database is MySQL, environment and development has been used Macromedia Dreamweaver 8.0.

The application is a solution to keep the record of students who participate to a laboratory.

### 3.1. Database

In the database we keep all the interfering elements in our application and types of connections between them. So, we created the 4 necessary tables. The tables of the database were created using PhpMyAdmin.

In the next picture are presented the next four tables that make up the database required, as well as connections between them.

#### proiecte

Table comments: denumirile temelor de proiecte

Field	Type	Null	Default	Links to	Comments	MIME
project_id	int(8)	No				
nume	varchar(100)	No				
descriere	text	No				

#### situatie\_note

Table comments: situatia notelor primite la temele de laborator

Field	Type	Null	Default	Links to	Comments	MIME
sn_id	int(8)	No				
student_id	int(8)	No		student -> student_id		
tema_id	int(4)	No				
nota	float	No				

#### situatie\_proiect

Table comments: situatia notelor obtinute la proiect

Field	Type	Null	Default	Links to	Comments	MIME
sn_id	int(8)	No				
student_id	int(8)	No		student -> student_id		
project_id	int(8)	No		proiecte -> proiect_id		
nota	float	No				
comentariu	text	No				
tema	varchar(50)	No				

#### student

Table comments: informatiile despre studentii dintr-o grupa

Field	Type	Null	Default	Links to	Comments	MIME
student_id	int(8)	No				
username	varchar(20)	No				
parola	varchar(35)	No				
email	varchar(50)	No				
nume	varchar(30)	No				
prenume	varchar(30)	No				
grupa	varchar(10)	No				

1. The table "students" contains items that students define a student enrolled at the site, namely: name, password, email and the group.

2. The table "situatie\_note" contains records with the fields: situatie\_note, sn\_id, student\_id, and tema\_id. This table is the association between a student, a sent theme and the mark received by the student. student\_id must exist in table students.

3. The table "situatie\_proiect" is similar, making the connection between a student and chosen project.

4. The table "proiecte" contains records representing projects. The projects are characterized by the following fields: proiect\_id, title, description.

### REFERENCES

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- Apache: <http://www.apache.org/>
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- [www.w3schools.com](http://www.w3schools.com)
- Macromedia Dreamweaver: <http://www.teacherclick.com/dreamweaver8/index.htm>