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Computer Laboratory Management System for Improving Teaching & Learning Methods

Sejal Utekar[1], Sonali Panda[2], Tejas Khopade[3], Kaustubh Manjarekar[4], Lect. S. S. Patil[5]

[1,2,3,4]*Student, Dept. of Computer Technology, B.V.J.N.I.O.T, Pune, Maharashtra, India.*
[5]*Lecturer, Dept. of Computer Technology, B.V.J.N.I.O.T, Pune, Maharashtra, India.*

Abstract - *Nowadays, many applications use online system to interact with the user. It is because, it has many advantages and helps in effective and efficient manner to interact with the user. In today's world application based study is more important for each and every student, recognizing that requirement the development of this systems idea came into existence which will be helpful for teachers, students and institute.*

The purpose of this system is to develop LAN based control system that can monitor the activities of terminal in computer laboratory. The system will be based on student and teacher module. With the help of proposed system teachers can assign weekly assignments and can maintain the attendance of the students. In student's module, there will be deadline for submissions of assignment that will be given by teachers. Students have to follow the deadline and have to submit their assignments. After submission of assignment teacher updates the attendance of the students in teacher's module. This system will be beneficial for teachers which will minimize their documentation as well as time. It will also help students to concentrate and be more attentive towards practical work and teacher will also able to solve their problems individually.

Key Words: **LAN, Computer Laboratory, Assignments, Attendance**

1. INTRODUCTION

In Today's world, technology is rapidly pervading many fields of human endeavor [4] .Nowadays most educational institutions are equipped with computer Lab to provide training for students that qualify them for their professional life.

At present the Computer Lab becomes a more integral part of education and it became the hub of activity [5]. Every college has a computer Labs which contains number of Computers connected to the LAN, but most of the time there is no client server connectivity present to control the LAN [2].

A single teacher cannot supervise entire Lab and control student's activities each and every time. Monitoring what they are doing during practical sessions. The biggest challenge is allowing students to take advantage of learning technology while keeping the class productive and well managed.

Previous studies show that the difficulties in teaching computer Lab sessions include losing class room control and student attention, difficulties in monitoring of Lab exam, and teaching visually impaired students.

However, most of the college Computer laboratory management methods are outdated and cause heavy work pressure for staff members. This system will be beneficial for teachers which will minimize their documentation work as well as reduce time.

1.1 Aim & Objective

This Project's aim is to manage students activities based on LAN. Analyzing their practical work and marking their attendance and controlling their activities based on following functions

-By sharing the file of practical work between students and faculty of specific semester and subject.

-Analyzing the document shared by students in faculty section.

-Marking attendance of students by faculty only after analyzing is done by individual faculty.

-creating a excel file of attendance.

1.2 Motivation

Existing laboratory has LAN which is not well organised, teacher has to assign task orally to the students. Therefore most of the student attend practical only for attendance instead of gaining knowledge.

Teacher checks practical work by visiting each students system and has to maintain attendance sheet for each practical session. So, we implemented our system to monitor entire lab by assigning daily task, remotely as well as marking attendance.

2. LITERATURE SURVEY

2.1 Related Work

This system provides USB prevention, Auto Shutdown and attendance marking and file sharing but Attendance is marked only by students and no viewing of attendance by faculty. [1]

Viewing clients activities, passing messages to client system, file sharing, prevent use of USB Devices are provided but our system provides particular assigning of a task. [2]

Client Server chat, Screen casting using android app, Event logs here android app is developed but no attendance is managed and no useful for practical work. [5]

It comes with many functions like Online Project Management and Monitoring System, web real time communication, document sharing, Receive Plagiarism report but our system also provides features of attendance and analyzing practical work which is not provided in this. [6]

2.2 Problem Statement

It is observed that during practical session students , instead of completing their practical works students do many other activities /stuff which is not important .Monitoring each and every student during practical is difficult for every teachers and also student have many question to ask teacher about practical. To overcome this problem we are developing **"Computer Laboratory Management system for Improving Teaching & Learning Method"**.

3. PROPOSED SYSTEM

This project Computer Laboratory Management system for Improving Teaching & Learning Method". Is implemented using client and server model. To avoid the drawbacks in the existing system, the proposed system is designed as a computerized one where one machine/PC in the Lab acts as a server and others as a client. The client and server system will interact with each other.

The faculty can access the server system by using their credentials and same students can also access the client system using their own credentials. When the student logs in their subject name, practical lists, will be provided in this module & once they finish with their assigned task they have to upload a file of practical work to faculty's module.

The faculty now can fetch the submitted document file of student and the attendance will be marked by faculty after analyzing the work. After that excel file will be created of attendance for faculty.

4. WORKING METHODOLOGY

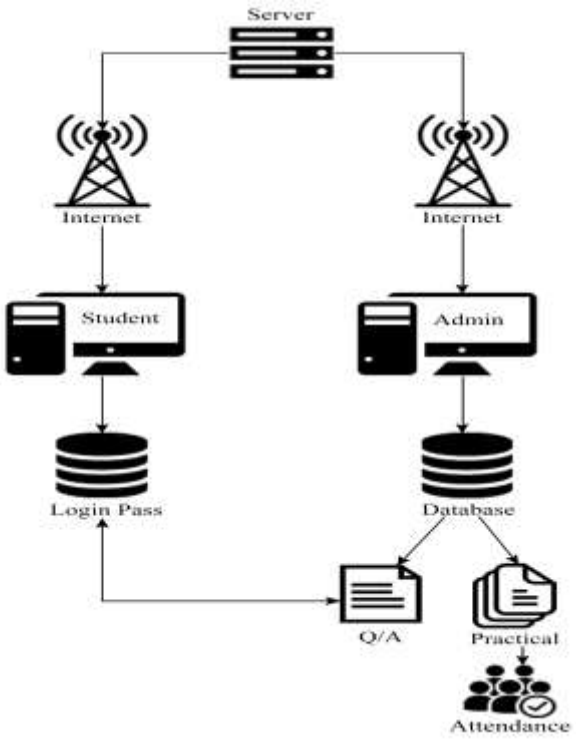

Fig-4.1. Architecture Diagram of proposed system

WORKING METHODOLOGY

4.1 User Login

User Login There will two forms of login that is student and faculty login. In student, students will have their own login credentials that is username and password where they will be able to login to clients system. Like students faculty will also have their own credentials to login the server system where the can monitor students activities.

4.2 Registration

The students who are going to access the system for the first time has to register initially and then they can login to the system.

4.3 Practical Details

After logging in, student will have to select the relevant semester, subject name, and practical name and then click on submit.

4.4 File Transmission

Students after performing their specific task given by the faculty will have to share their file of practical work with faculty which will be allowed to transfer in this file transmission module. The file will be of any format for e.g. .txt, pdf, etc.

4.5 Attendance

After receiving the file from student the faculty will evaluate the file and then mark the attendance of particular student.

5. MODULE IMPLEMENTATION

5.1 Student Module

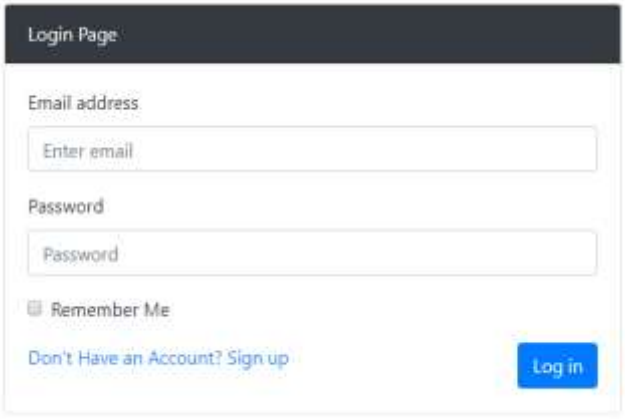

Fig 5.1 Login Page

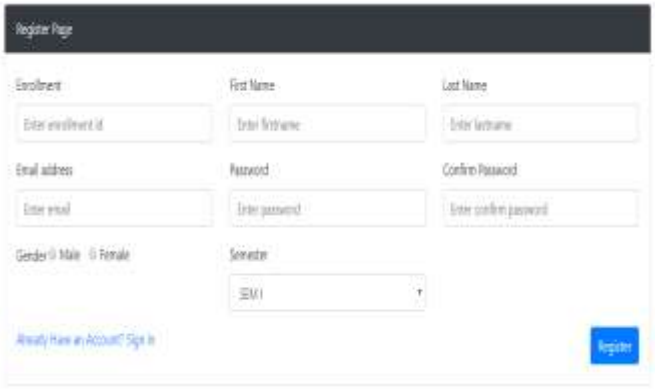

Fig 5.2 Registration Page

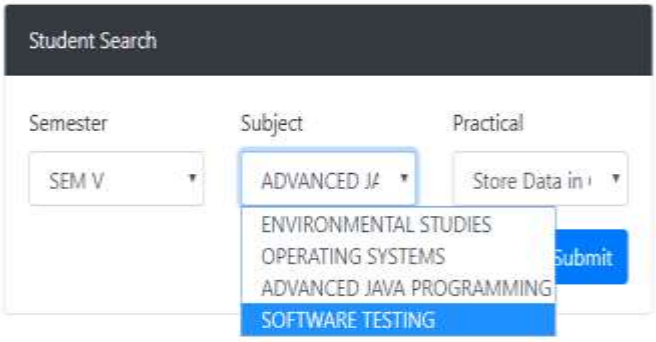

Fig 5.3 Practical Details

Fig 5.4 Assignment Submission

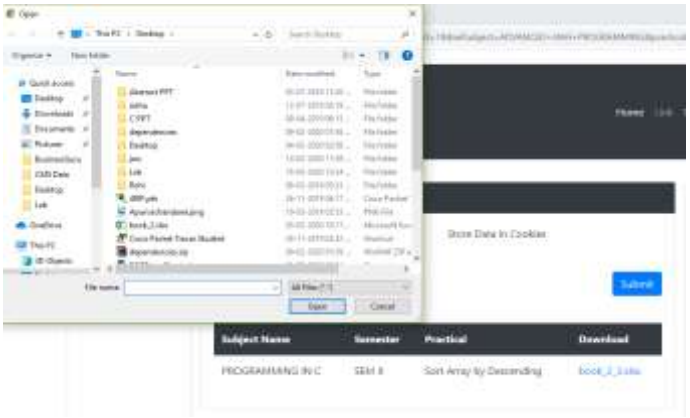

Fig 5.5 Upload File

Fig 5.6 Submitted Assignments

5.2 Faculty Module

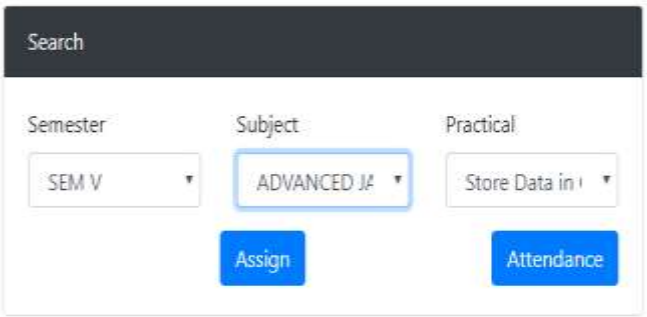

Fig 5.7 Practical details for Faculty

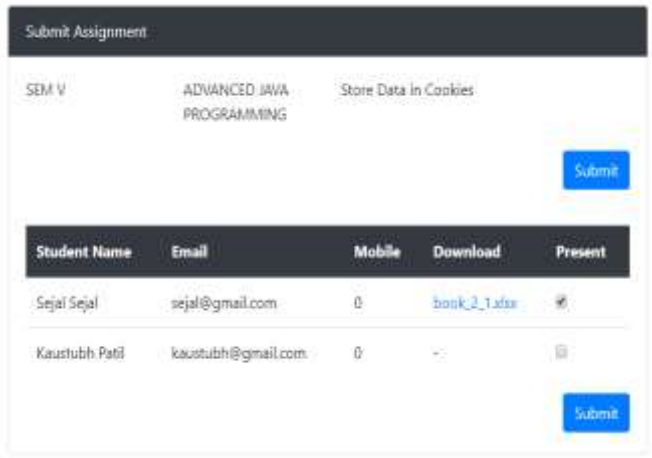

Fig 5.8 Attendance List

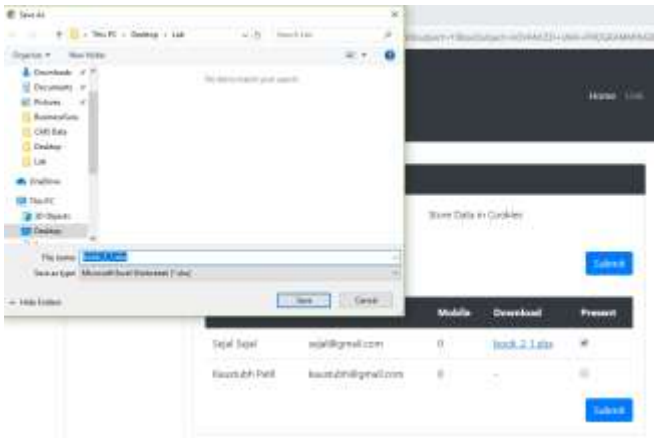

Fig 5.9 Downloading File

6. FUTURE SCOPE

-The system can only be useful to the students of computer department.

-Faculty cannot access their system remotely, they only have to be connected in LAN this problem can be resolved using mobile application.

- The main drawback of our system is students can submit blank/fake documents.

7. CONCLUSION

This paper explains the concept of Computer Laboratory Management System which is helpful for monitoring computer labs during practical sessions .Students machines are monitored by the server computer and which will be handled by the faculty on the server machine. And the faculty will mark the attendance on the server machine once the given task is successfully perform .It performs remote operations to control student machine.

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BIOGRAPHIES

Student- Ms. Sejal Utekar, Dept. of Computer Technology, B.V.J.N.I.O.T, Pune.

Student- Ms., Sonali Panda, Dept. of Computer Technology, B.V.J.N.I.O.T, Pune.

Student- Mr. Tejas Khopade, Dept. of Computer Technology, B.V.J.N.I.O.T, Pune.

Student- Mr. Kaustubh Manjarekar, Dept. of Computer Technology, B.V.J.N.I.O.T, Pune.

Lecturer – Mrs. Sheetal Patil, Dept. of Computer Technology, B.V.J.N.I.O.T, Pune.