Survey on All in One College Application

Mrs.P.S.Kulkarni[1], Janhavi Kotulkar[2], Rohit Gupta[3], Pawan Kamthe[4], Tejas Gavane[5]

Diploma student, Computer Department, Pimpri - Chinchwad Polytechnic, Pune, India

Abstract: The process of college practical management is tedious. When the practical is created that time all the students gather together around the teacher and teacher tells the concept of practical that is too be performed. This makes students uncomfortable with situations many of the students are not visible, many of them do not get the concept because of disturbance and standing too long, this makes the students to loosen the interest in learning the practical concept. Just to overcome this sort of problem, the proposed application is been developed. By the use of this application i.e. screen sharing the screen of the teacher can be seen on each and every student's computer this will make the students comfortable with the practical session. Each and every student will get the concept clearly. Due to screen sharing function the teaching and learning skills will be improve in the college. After the teacher starts the screen sharing session, students can get connected with the session on the approval from teacher. After the session gets over the teacher can willingly make MCQ Questions for the students and on the bases of this MCQ's the attendance of the students will be marked. If the student has any problem or doubt with the practical session he/she can personally get screen sharing with teacher's computer and clear the doubt. This doubt session will be only within the teacher and the student who has the doubt, it will not affect the other students in the laboratory. The proposed application not only provides the screen sharing facility but it also provides the "Question and Answer Blog", "Events Picture Sharing", different log-in facility for teacher, students and HOD (Head Of Department), etc.

Keywords: Distributed System, Networking, Peer to Peer Networking, Recorder, Server Socket, Client Socket, Screen Sharing

I. INTRODUCTION

The project is basically based upon sharing or broadcasting a single screen to multiple other screens for learning, viewing and teaching point of view. Teachers and student can also communicate with each other using this project. Notes, lecture videos, syllabus, notice, etc can be easily shared to the student by college staff. This project will basically be implemented in colleges especially in Computer Engineering and Information Technology Departments. Screen sharing is the simple and powerful way to collaborate instantly with people across the globe. Screen sharing software allows people from a variety of locations view another computer screen in real time. Screen sharing is an affordable way to get earn the same page with others faster, adding a visual element to any conference call. Instead of each caller looking at their own documents or screens, everyone can come together around the same visual aid, live during the call. Groups can spread information more effectively with screen sharing.

II. RELATED WORK

Screen sharing software works by sending packets of information from a host computer to a remote computer describing what's on the host computer screen at any given time. The encrypted data travels over the internet. Some data arrives as image files (JPEGs and GIFs), while others arise as individual pixels assign to a particular X and Y coordinate. Desktop sharing software is smart enough to only send information updates on the section of the screen that have changed and to compressed the data significantly, minimizing the amount of necessary bandwidth.

Remote Screen sharing for windows is a kind of software that allows to control one computer from another and do screen sharing. To control is almost literal, since it allows full control over the mouse and the keyword as well. This feature of seeing and controlling screens from one computer to another saves time and confusion and is very effective for people who face problems and sharing desktop, application, documents and more. With time and advancement in technology, controlling business overseas is becoming a lot easier. With this facility of windows remote Desktop sharing screen, you can share the contents on your Windows computer.

III. PROPOSED ALGORITHM

1.Registration : In this module users are supposed to enter their respective details during registration in for the first time and the mandatory details of the respective practical.

2.Login: This module includes login and logout functionality. After each session the teacher has to log out and login whenever next session will be conducted. Login facility will be provided for faculty, students and Head Of Department(HOD).

3.Screen sharing: When session is started the screen which is used by the teacher will broadcast or live streamed to all other screen used by students in the practical lab. This model also provides the feature of "Raise Hand" which helps to solve the student's queries.

4.Exam: After the completion of the practical this module provides the feature to understand the student's performance by taking the exams on that respective practical. Due to this feature the attendance of the students will be marked.

IV.   LITERATURE SURVEY

Practical conducted at this moment in the colleges is quite uneasy and inconvenient for students and teachers in some manner. At this moment teacher uses a single computer for teaching practical's to a batch of students. Most of time it is not visible to some students as a mob is created. In some cases, a projector is installed to teach the students but some problem arrives due to the improper lighting of the room, less visibility. Hence to fix this problem occurring in the practical's this project is reliable.

V.   SCOPE OF THE PROJECT

➢   A teacher will log in from a respective computer and whatever content is been displayed on the teachers screen will be live streamed to every students computers respectively
➢   A exam session will be conducted at the end of every practical for the measuring the performance of each student and afterwards their attendance will be marked as well.
➢   HOD, staff and students will have separate login screen.
➢   Student can post there queries and they will get replay from staff.
➢   Any notice given by teachers can be broadcasted.
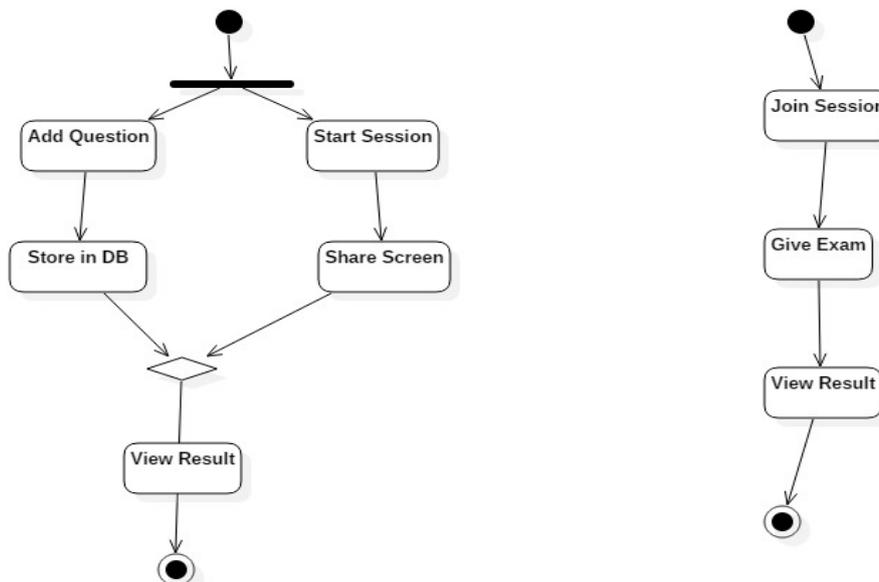
VI.   ARCHITECTURAL MODEL

Fig (a): Pedagogue side   Fig (b): Pupil side

The above fig(a) and fig(b) explains the working of project at the faculty side and Students side respectively. The Pedagogue can start the session by using screen sharing, and allow the pupils to join the session. After the session gets over the teacher can give some MCQ questions for the test and can mark the attendance of the student. After the approval of the teacher students can get connected with the session and practical. If a student have personal doubt while

performing the practical he/she can request the teacher to get in screen sharing. The teacher can get in a session of screen sharing with the only student who has the doubt. This doubt session will not affect the other students practical. The teacher can also explain the concept in practical by using figures with the help of paint function available in the application itself.

VII.   TECHNICAL REQUIREMENT

Software Requirements (Recommended)

- Operating System:
  1. Windows: Windows is the collection of programs know as an Operating System (OS) that controls a PC. 'Windows 10' will be used for developing the project

- Technology:
  1. Java: Java is a High Level programming language by Sun Microsystems. Java   produces software for multiple platforms.

  2. J2EE: J2EE is a platform independent, Java- centric environment from Sun of developing, building and developing Web based enterprise application online. J2EE platform consist of a set of services, APIs, and protocols that provide the functionality for developing multitiered, Web based applications.

- Web Technologies:
HTML: Hypertext Markup Language, a standardized system for tagging text files to achieve font, colour, graphic, an hyperlink effect on World Wide Web pages.

JSP: Java Server Page(JSP) is a technology that helps software developers create dynamically generated web pages based on HTML, XML, or other document types.

JavaScript: JavaScript is a programming language commonly used in Web development. JavaScript is a client-side scripting language, which means the source code is processed by the client's.

CSS: Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the Wold Wide Web, alongside HTML and JavaScript.

Servlet: A Servlet is a small program that runs on a server. The term was coined in the context of the java applet, a small program that is sent as a separate file along with a Web (HTML) page.

- Web Server:
Apache Tomcat: Apache Tomcate is a open source web server that is developed by Apache software foundation. It basically make our java web application to run on host and server based system and it is configured on local host port 8080. It generally runs JSP, Servlet, etc.

- Database:
 MySQL: MySQL is an Oracle-backed open source Relational Database Management System (RDBMS) based on Structured Query Language (SQL). Original conceived by the Swedish company MySQL AB, MySQL was acquired by Sun Microsystem in 2008. And then by oracle when it brought sun in 2010.

Hardware Requirements (Recommended)

- Hardware   - Pentium IV and Above
- Speed   -   1.8Ghz
- RAM   -   2GB
- Hard Disk   -   30 GB
- LAN Cable   -   4

CONCLUSION

This project is overall a better way of conducting practical's as it will turn the practical's more interesting and visible in a better view. The login process for the teacher makes it easy to manage practical. The security feature provided will help in avoiding misuse of it and the exam module will help in performance improvements of the students. The students will be comfortable with the practical session and willingly attend and perform the practical. All the doubts on the students side will be cleared out within the practical session itself.

REFERENCES

[1]. Anjum Asma and Gihan Nagib,'Energy Efficient Routing Algorithms for Mobile Ad Hoc Networks–A Survey', International Journal of Emerging Trends & Technology in computer Science, Vol.3, Issue 1, pp. 218-223, 2012.

[2]. Hong-ryeol Gil1, Joon Yoo1 and Jong-won Lee2 ,'An On-demand Energy-efficient Routing Algorithm for Wireless Ad hoc Networks', Proceedings of the 2nd International Conference on Human. Society and Internet HSI'03, pp. 302-311, 2003.

[3]. S.K. Dhurandher, S. Misra, M.S. Obaidat, V. Basal, P. Singh and V. Punia,'An Energy-Efficient On Demand Routing algorithm for Mobile Ad-Hoc Networks', 15 th International conference on Electronics, Circuits and Systems, pp. 958-9618, 2008.

[4]. DilipKumar S. M. and Vijaya Kumar B. P. ,'Energy-Aware Multicast Routing in MANETs: A Genetic Algorithm Approach', International Journal of Computer Science and Information Security (IJCSIS), Vol. 2, 2009.

[5]. AlGabri Malek, Chunlin LI, Z. Yang, Naji Hasan.A.H and X.Zhang ,' Improved the Energy of Ad hoc On- Demand Distance Vector Routing Protocol', International Conference on Future Computer Supported Education, Published by Elsevier, IERI, pp. 355-361, 2012.

[6]. D.Shama and A.kush,'GPS Enabled E Energy Efficient Routing for Manet', International Journal of Computer Networks (IJCN), Vol.3, Issue 3, pp. 159-166, 2011.

[7]. Shilpa jain and Sourabh jain ,'Energy Efficient Maximum Lifetime Ad-Hoc Routing (EEMLAR)', international Journal of Computer Networks and Wireless Communications, Vol.2, Issue 4, pp. 450-455, 2012.

[8]. Vadivel, R and V. Murali Bhaskaran,'Energy Efficient with Secured Reliable Routing Protocol (EESRRP) for Mobile Ad-Hoc Networks', Procedia Technology 4,pp. 703- 707, 2012.

[9]. Nobuo Ezaki, Marius Bulacu Lambert , Schomaker , "Text Detection from Natural Scene Images: Towards a System for Visually Impaired Persons" , Proc. of 17th Int. Conf. on Pattern Recognition (ICPR), IEEE Computer Society, pp. 683-686, vol. II, 2004

[10]. Mr. Rajesh H. Davda1, Mr. Noor Mohammed, " Text Detection, Removal and Region Filling Using Image Inpainting", International Journal of Futuristic Science Engineering and Technology, vol. 1 Issue 2, ISSN 2320 – 4486, 2013

[11]. Uday Modha, Preeti Dave, " Image Inpainting-Automatic Detection and Removal of Text From Images", International Journal of Engineering Research and Applications (IJERA), ISSN: 2248-9622 Vol. 2, Issue 2, 2012.

[12]. Muthukumar S, Dr.Krishnan .N, Pasupathi.P, Deepa. S, "Analysis of Image Inpainting Techniques with Exemplar, Poisson, Successive Elimination and 8 Pixel Neighborhood Methods", International Journal of Computer Applications (0975 – 8887), Volume 9, No.11, 2010