



An Automated Approach to Supervising and Controlling of Computer Laboratory overLAN

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Outline

Abstract

Introduction

Literature Survey

Existing System

Proposed System

Design

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- System software which provides the best view and easy interactive graphical layout where the teacher can perfectly manage and monitor all students' activities performing on their computer in the lab.
- Students will efficiently learn the subject and can give their full focus during lab sessions.
- This system software leads to maintain the security of the lab.

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- Proposed application software will benefits teachers in the computer laboratory to deliver enhanced quality of teaching while taking lab sessions.
- Remotely control students directly from their computer and will also provide best view supervision on student's activity in the lab.
- Show live streaming of each computer's screen in the network and will also allows to control and command those computers.

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SmartLab LAN Based Application for Effective Lab Supervision

- Smart Lab application provides the related system which focuses on lab supervision.
- It provides an interface to teachers in the computer lab to handle the class and monitor students by providing live streaming of activities running on each student's computer.
- Student's attention can be grabbed by showing a blank screen.

Network Monitoring System Design under LAN

- Study and Application of Key Technologies of LAN Remote Control
- It provides intelligent, real-time remote controlling management system.
- It offers zero communication cost.

Computer Lab Monitoring System

- Helpful in supplying entire knowledge of Java API's which are required to implement screen monitoring module.
- Completely explained the process of screen monitoring where server machine requires capturing screen resolution of client machine which is provided by the classes in the built-in library of java.

A Novel Method For Remote Monitoring Of Instant chat In LAN

- LAN Chat Messenger (LCM) using Java Programming with Voice over Internet Protocol gave an idea of implementing instant sharing of files and messages over LAN.
- LCM is a standalone application developed using JAVA programming language implementing client/server communication using TCP/IP.
- The socket programming used, offer smoother and fast sharing of messages over the LAN
- As the transfer occur on machine specific static IP address and port number it establish a faster connection between the sender and receiver.

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Existing System

- Most of the student attend practical only for attendance instead of gaining knowledge.
- Teachers checks practical work by visiting each students system and has to maintain attendance sheet for each practical session.
- implemented our system to monitor entire lab by assigning daily task,remotely as well as making attendance.

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Desktop Monitoring

- Implemented desktop monitoring with the help of remote method invocation (RMI) and we used socket communication.
- Implemented the teacher's computer as a client requesting image object that are screenshots of the student's computer screen acting as multiple servers
- Screenshots are sent sequentially to the teacher's machine which is stored in the buffer.
- Series of images appear to be the frame of videos which shows the live streaming of students desktop screen.

Remote Control

- Teachers are given full control to access the student's computer
- Implemented each event of the mouse click, mouse press and mouse release, key events like a key press and key release.
- Teachers can access applications and even install a new application on students PC.

Message and File Transfer

- Allows the teacher to broadcast messages or files to every student's computer.
- Able to send messages and file to particular computer separately.
- Students can also interact with the teacher by sending attachments and messages.

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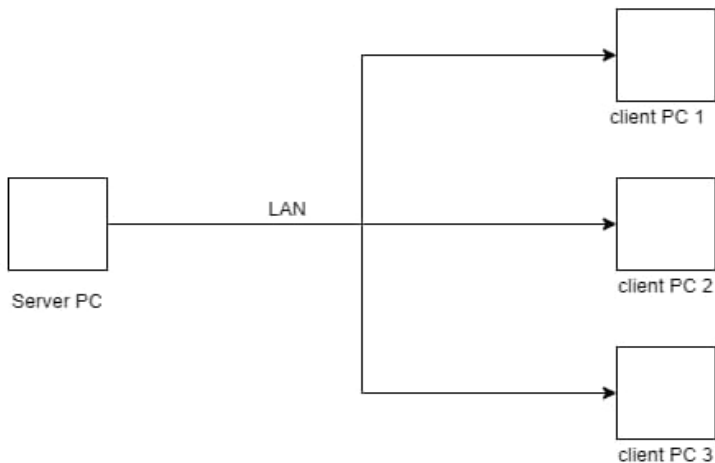
Existing System

Proposed System

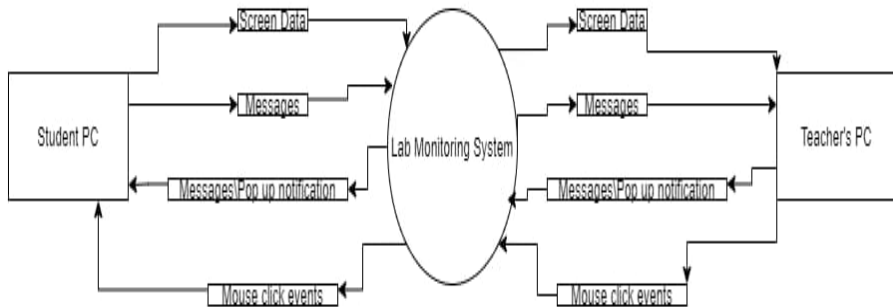
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Architecture of the proposed system

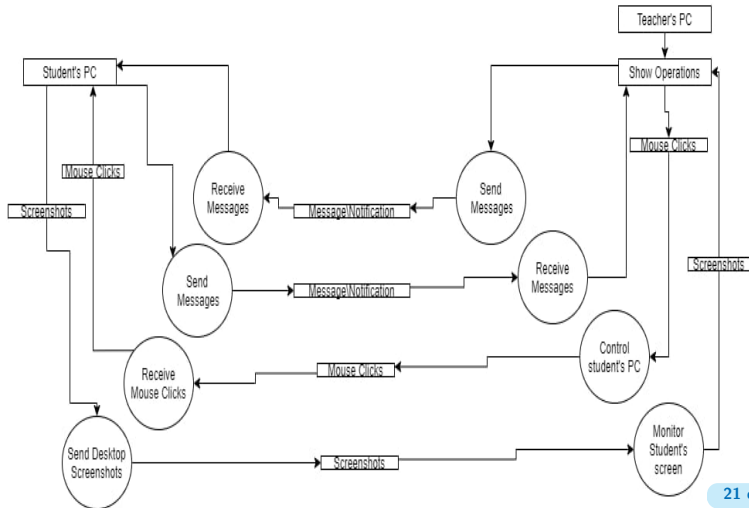


Data Flow Diagram(Level 1)

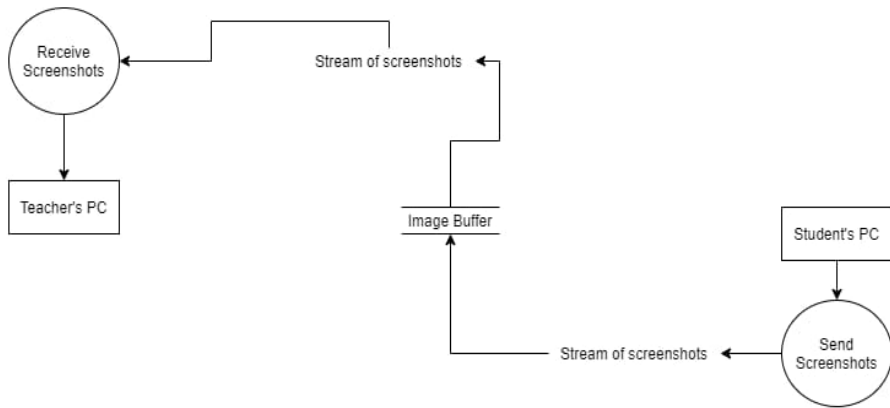


Data Flow Diagram Level 1

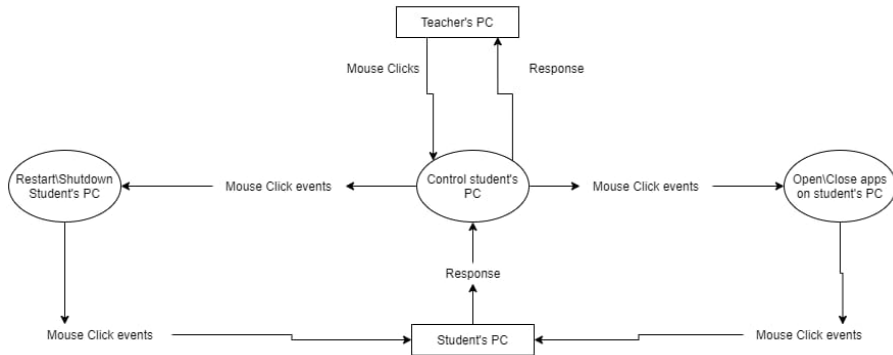
Data Flow Diagram(Level 2)



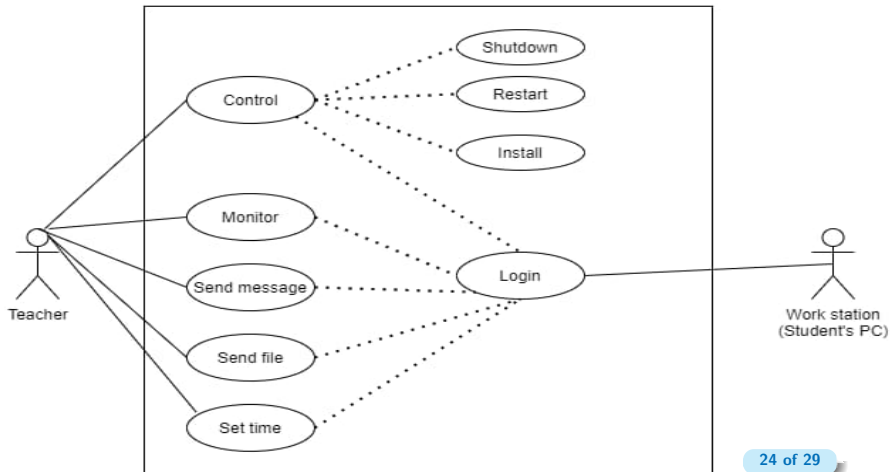
Data Flow Diagram(Level 2.1)



Data Flow Diagram(Level 2.2)



Use Case Diagram



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- Will lead to an increase in the student's focus on their lab session and also maintain the security of the laboratory.
- Students learning can be improved by providing an interactive platform to them. .
- this application is freely available,they can customize the code according to their own need.

References

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