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Monitoring and Managing Network PC's

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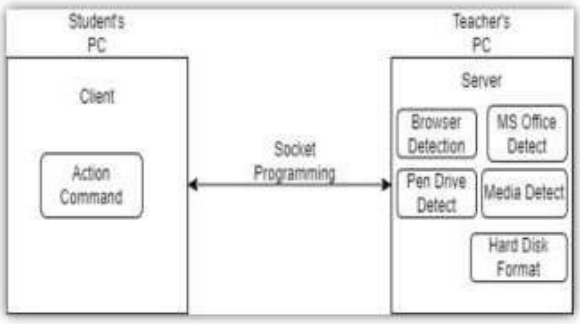
Abstract: *Computer labs are usually networked through LAN, but not all labs have client server connectivity. Monitoring systems are developed to address issues related to computer laboratory conduction. Educational institutes focus onconducting cheating-free exams, but students find new ways to carry out copying activities. Exam monitoring systems provide services to avoid cheating, such as accessing the internet to search answers, accessing Lan for files, and copying with USB. Remote access is widelyused by computer manufacturers and businessesfor technical troubleshooting. PC Monitoring Server software sends notifications to a DesktopApplication for moderator action. It is accomplished through a common client/server model.*

Keywords: Terminals, Monitoring, PC, Internet, Application, Notification

I. INTRODUCTION

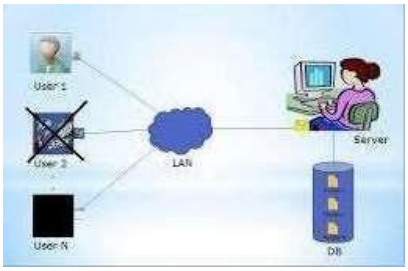
The Network PC Monitoring and Control is a network application for managing client systems connected with servers. It aims to make system handling easier for students and lab operators. The project uses socket programming to connect multiple clients with a single server system. It performs various functions like USB detection, remote monitoring, and more. Students access more functions/software than required for practical performance. It is difficult for faculty to supervise students all the time.



Block Diagram

II. EXISTING SYSTEM

Lab monitoring systems are primarily designed for corporate environments, lacking options for educational institutions. These systems primarily monitor employee activities and restrict access to websites, applications, and files. However, they lack the ability to control student PC usage in a lab environment. Existing systems consist of software and hardwarecomponents.



Existing System Diagram

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III. LITERATURE SURVEY

Lab Monitoring System:

Lab monitoring systems are primarily designed for corporate environments, lacking options for educational institutions. They monitoremployee activities and restrict access to websites, applications, and files, but lack control over student PC usage.

Remote Lab Monitoring:

The project aims to improve remote lab monitoring by implementing Client Server Protocol to manage computer networks orLANs. It allows for monitoring activities,message passing, file sharing, USB device prevention, and remote aborting operations. Users' attendance is automatically stored andconnected students' desktops are shown to teachers, enabling efficient management of the computer lab.

IV. ADVANTAGES

- The Lab Monitoring System ProvidesReal-time Monitoring Of Lab MachinesAnd Processes, Making It Easier ForAdmins To Manage The Lab Environment.
- The System Restricts User Access To Unauthorized Applications, Improving Security And Ensuring That Lab Machines Are Used Only For Their Intended Purposes.
- The System Allows Admins To Remotely Shut Down, Restart, And Sleep Client Machines, Reducing Power ConsumptionAnd Increasing System Lifespan.

V. DISADVANTAGES

- The System May Face Compatibility Issues With Certain Hardware And Network Configurations, Leading To Decreased Functionality And Usability.
- The System May Require Significant Resources, Including Processing Power And Memory, To Run Effectively, Limiting Scalability.
- When the pc shut down then we can start the pc in every time to connect server pc with client pc

VI. OUTPUT

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VII. CONCLUSION

The Lab Monitoring System is a Java-baseddesktop application that provides real-timemonitoring and operation of lab machines and processes. It has a user-friendly interface, restricts access to unauthorized operations, and allows administrators to shut down, renew, and sleep client machines, reducing power consumption and increasing system lifespan. However, it has limitations, includingcompatibility issues with network configurations, resource conditions, and securityissues.

Future Scope:

- Users suggest that future research could potentially enhance the current project.
- Future research could potentially introduce additional features to enhancethe system's capabilities.
- Future research may develop a mobile application for iOS or Android to enhance accessibility and support for users using various mobile platforms.
- The result will provide increased security.

REFERENCES

[1]. Jordi Castella-Roca, Jordi Herrera- Joancomarti, Aleix Dorca- Josa,"A Secure E-Exam ManagementSystem" International conference of vacuity, trustability and security, march 2006.

[2]. F . Liping Chen, AlexX. Liu, StephenD.H. Hsu, Xiaoming Liu, " Automated Online test Proctoring "Ieee Transaction On Multimedia, Dec 30, 2015.

[3]. Mr.Vipul Shaha, Mr.Amit Arabhavi, Mr. Chetan Barage, Mr.Suraj Chavan, Mr.Yogesh Karande, Mrs.Bhagyashri Kelkar, "Remote Lab Monitoring ", International Research Journal of Engineering and Technology .2016

[4]. Prof. H. B. Sale1,Bhavika Bhagyawant2,Nikita Walunj3, "Lab Monitoring System", International Research Journal of Engineering andTechnology(IRJET),2019