

SpyScout: Employee Monitoring System by Using Screen Capturing Technique

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Abstract -

Spy scout is an application which is designed to monitor employees of the company where the system captures the screen for scheduled times and the pictures were uploaded to the server, without knowledge of the employee and it can be retrieved from the web so that the employer can monitor the employees activity from anywhere so that the unnecessary activities of the employee can be caught and the necessary action can be taken against the liable.

In this, the jar file could be installed as a system service, a scheduler task or as a startup task, the task will run as the hidden task so that the suspected person doesn't know that they are under surveillance.

Key Words: Employee Monitoring System, Web Application, Screen Shot.

1. INTRODUCTION

This chapter briefly introduce all scope and objective of the SpyScout: Employee Monitoring System by using Screen Capturing Technique. SpyScout is a desktop based web application that will allow the Manager of an organization to monitor the activities of their employees in their PCs without their knowledge. This system is implemented for tracking the daily activity of the users with their PCs. Activities of the employee can be monitored by capturing the screen for the scheduled time and update it to the server this will be maintained by the authorised person of the their organization. This will be able to identify the employee who is violating the policies of their organization. In case they found any one who violates the policies of the company there the needed action can be taken by considering the proof. The application provide the new interface to monitor their employee's activity and they could be able to found who is loyal to them. This monitoring system provides the screen shots of the employees PCs to know what the employees actually do with their PCs.

1.1 Motivation

The goal is to maintain proper track on employee activities which perform by employee in their PCs the system is mainly use to find who is liable to the organization.

1.2 Objectives

- Employers need not to install any application in their employees PC.
- Employers need to set up a start-up task in employees PC which will take a screen Shot and upload it to the server.
- Manager or the authorised person can able to view and manage the system in the web interface.

2. SYSTEM IMPLEMENTATION

Following diagram shows flow of application

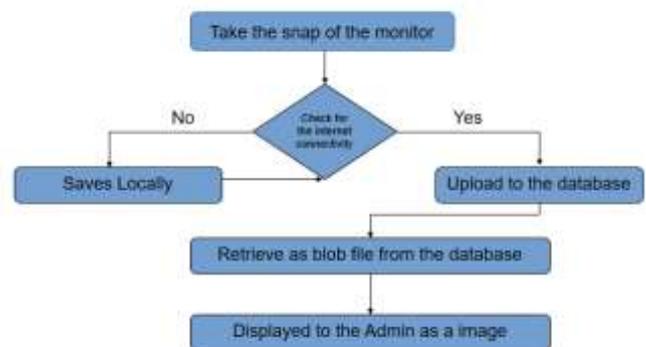


FIG-1: Flow Diagram

A. Client Side Implementation:

A JAR file is installed on the PC as a startup task to take a screen shot and to upload the file to the server. In the client side the system will perform the screen capturing task, if the internet is available in that particular PC it will upload the screenshots to the server and deletes the local copy from the system. If suppose the internet is not available the system saves the screenshots locally and once the internet is connected it will be automatically uploaded to the server.

B. Server Side Implementation:

A Server is implemented to store the data and the screen shots from the system as the screen shots were stored by using the current time stamp so that can be retrieved easily. As the system stores the image as blob file and the data base of the system can be managed. A web application is implemented in server side, the manager or authorized

person of the organization can be able to monitor their employees.

C. Database Implementation:

A remote MySQL database is implemented so that the individual system could be able to communicate with the server by using the JDBC technique.

3. COMMUNICATION INTERFACES

A. Hardware Requirements:

- **Processor:** Pentium P4 or higher version
- **Motherboard :** Genuine Intel
- **RAM :** Min 512MB
- **Hard Disk :** 20 GB HDD and higher
- Monitor
- Mouse and Keyboard as Input Devices

B. Software Requirements:

- **Operating system:** Windows Operating System
- **Technology Used:** Java and Web Technologies
- **IDE:** Netbeans IDE 8.2
- **Tools used:** Visual Studio Code
- Cloud as a storage

4. MODULES OF THE PROJECT

1. Screen Capture Module

When the system or PC starts the module should be initiated as a startup task and take a screenshots for the scheduled times as a background task.

2. Upload screenshot Module

If the screenshot is take by the system the upload module checks for the internet connectivity if it is available the module uploads the images to the server, if internet is not available the module will saves the images locally and frequently checks for the connectivity once the module identifies the PC is connected with active internet it will uploads the images.

3. Delete Module

Once the image is uploaded to the server the delete module deletes the images permanently from the local disk.

4. Blob File Retrieval Module

The images that were uploaded are stored as a blob file in the database so that it has to be retrieved from the database in an image format. The module decodes the blob file with the base 64 and it will retrieve the image file and displayed to the manager or the authorized person of the organization.

5. CONCLUSION

SpyScout is a system by which the employers or managers or authorized persons could able to record the PCs which is provided by the organization and it is also able to know the one who is liable to the organization and the action can be taken by considering the proofs.

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