**TrackMee: An online Resource Management System**

**A M Touhidul Karim Drubo**

**Minhaz Khondokar Zunaed**

**Kafi Mannan**

**Jahid Hassan**

**Abstract**

Everything is based on computer now days. It is now part of our life. computer provides a way to accomplish our daily tasks more easily and smoothly. Besides, it can perform tasks more accurately. These are old things now. It has improved its services much more. We can now even take it outside with us putting in our pockets for example smartphones. We can now do our office related tasks sitting home or while travelling through bus or train. This is all possible because of computers (e.g. PC, laptop, smartphone, tabs). However, in office to accomplish our daily works we are given a computer or laptop by the organization so that the tasks are done faster and accurately. Now while giving it to us they restrict the use of the computer or laptop only for official use. But many of employees use it for personal use during office time which is illegal. To manage such activity strictly, we are proposing a system that will help employers to manage their employees through the use of computer or laptop. Our system will track activities done through the device every 5 minutes and push them into server. From server a daily performance report based on computer or laptop use, will be sent to the employer. A monthly report will also be sent to the employee so that he can improve his performance next time. We surveyed on 20 such organization who provides pc, laptops or smartphone to their employees to make work fast. But they have faced the problem described above. So, they need an application that will help them in monitoring their employees’ activities on such devices.

**Introduction**

Contribution of computer in both business and personal life can’t be ignored. Organizations now provide their employees smartphones or laptops to take the maximum output from them. And employees should use these things during office hour only for official works. But many of them use them for watching movies or doing their personal works during office times. It may be possible for employer to control their employees during office hour in an office of 5 or 6 employees but more the number of employees increase the more chaos it become to monitor them and also it is a time-consuming process to monitor them manually. It also hampers the freedom of working of the employees. If employer gets a daily report based on the device usage by employees and also a monthly report for employees, it will be of tremendous benefits for business organizations. Our proposed system will provide this facility.

**Literature Review**

A software named ActivTrack let analyze and understand commonly unmeasured metrics that keep a business is running at full speed. And the same task is also provided by TrackMee. [https://activtrak.com]. ActivTrack captures and record activity logs and screenshots from monitored work station. It also uses image redaction which protects sensitive information. But TrackMee don’t provide screenshot and image redaction. [https://activtrak.com]. ActivTrack block malicious websites, create alarms to capture suspicious activity, monitor web and app traffic and usage to know who’s doing what so manager can safeguard his organization. But in TrackMee only employ data is generated. [3].

A research paper named “Employee Monitoring and Management System Using GPS and Android”. In this paper they proposed an android based platform where organization can trace the employee activities not only the office but also outside of the office. But in our TrackMee system we only trace employee data during office time. And our system is python based. [1]

A research paper on “STUDY OF EMPLOYEE’S PERFORMANCE MANAGEMENT SYSTEM”, researcher focused on how to improve the performance of the employee. And this is the same as TrackMee software. [2]

A patent named “United States Patent [Patent No: US 9,819,754 B2]” describes a system where the activity data is captured over time, and the activity data is quantifiable by a plurality of metrics. The method includes storing the activity data in storage of the device and, from time to time, connecting the device with a computing device over a wireless communication link. TrackMee also capture the activity data of an employee and store in a database for a period of time through a wireless network.

There are also some commercial systems that are being currently used to monitor the employees in an organization such as Veriato, NetVisor, PearlSoft etc. Among those our software is more efficient and high performance. Fewer software has the intention to detect insider attacks and keep company’s data safe and prevent leaking of the companies’ secure data. But TrackMee only focused on performance measurement of a organization.

**Methodology**

**Data retrieve**

There are several methods for retrieving data. One is to use a built in cheap in the computer. We don’t have to do any work here, chip will do all the work. It will track all the activity and store them temporarily in the computer, and after we pull it from server it will remove the file. We will use an API provided by the chip builders. It is quite easy, but problem is that business organization who will use our software will have to buy special phones to give their employees. They cannot buy other phones as they will not have the chip. If they buy those devices cannot be tracked by our system. Which will obviously reduce usability of our software. So, we will not use this method.

Another solution is to use android application, but it also has restriction, that is we can track only smartphones but most of the work is done in either laptop or pc in office although smartphones are also used but not as much as pc or laptop. So, if we use this solution it will also reduce usability of our system.

Another solution is to use router, but for this router must have a memory to store the packets transferred as packets represents what has been browsed or done in that network from which pc. But most of the routers does not contain memory. And also, we can track what has been done through the internet. Now if we use this solution most of the organizations will not be able to use our system. So, we cannot use this solution.

A better solution we can use is to track the process running in the computer. As browser itself is a process to track its activity we have to track the thread running in that process. We can do this using python. We can track all the running processes and thread in the process in this way. Now next concern is there are some background process running and also some startup process that start when computer is turned on, so we have to first distinguish the foreground processes from all the process and then from foreground process we have to extract that are not startup process. Then we have to find out for how long that process has been running. From that we can track the activity. Each of such process is an activity and their start and end time represents their duration. To determine end time of a process we will track running process each 5 second. Then after we store them in a text file and pull this file from server.

**Future task**

We can’t directly send the log data to Company owner. We will analyze it and then generate report based on that. Now because of less time we could not completed this task now. It will be done in the future. Also generating different type of reports based on this analysis will be done in future.

**Reference**

[1] Prashant Dhotre, Ganesh Rasal, Mamta Jha, Nihal Pawar. Employee Monitoring and Management System Using GPS and Android. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056 Volume: 04 Issue: 03 | Mar -2017 www.irjet.net p-ISSN: 2395-0072.

[2] DB Bagul. A RESEARCH PAPER ON “STUDY OF EMPLOYEE’S PERFORMANCE MANAGEMENT SYSTEM. oaji.net.

[3] https://activtrak.com.