

# User Navigation Tracking and Analysis on Single Page Application

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## Abstract:

This paper explores the analysis of users data based upon navigation clicks made by user on the application interface is used to analyze user behavior on Single Page Application. The approach behind developing navigation tracking it can be useful for particular organization in order to monitor employee activities based upon navigation clicks of the Single Page Application ERP Platform. The performance of employee in the organization on the particular platform such as an ERP platform can get analyzed through the clickstream activities made by employee on the working module of application. Navigation tracking can be helpful for making future prediction based on captured data. So it can be helpful further decision making of the organization. The prediction and analysis of user clickstream activities can be not only for particular organization or specific application on the platform but also for helpful in general purpose application and other ERP based platforms. The approach behind the development of the proposed system includes some business analytics techniques such as data mining. The tracked activities can be shown to the administrator in the form of the graphs such as the bar graph, pie chart, histogram in the month wise day wise and hour wise manner. And the prediction can be done by using the tracked data that the user or the employee is doing wrong activities or the fraud activities.

**Keywords —ERP Platform, Single page application, clickstream, data mining**

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## I. INTRODUCTION

Navigation tracking helps in recording each employees time spent on module, login time logout time as well as clicks made by employee on menu options. So to analyse user performance in terms of total action performed by him during his working module is done by analysis of tracked records. It helps the organization in future decision making. The system is also helpful for general way also. In order to track

and monitor the activity of employee the clickstream records are tracked. users clickstream data is nothing but the tracking of every single “click” across the application To measure overall user behaviour and to analyse efficiency of employee clickstream analyse is used. Clickstream analysis is the process of collecting analysing and reporting aggregate data about the path which visitors takes through website. Along with clickstream analysis data mining is used to better record and analyse this

data. The performance of employee is displayed in forms of report generated. The reports are based upon the analysis made on tracking data. For future decision making for organization.

## **II. LITERATURE SURVEY**

In Single Page Application , an any application is fully loaded at once on the window and the logic business land is transferred from server to client .This results in client heavy applications .we will assess the challenges and advantages of the web as an application platform .we will present the current web technologies and the trends in development of single page application .The study shows that single page architecture greatly simplifies that the creation of application like user interfaces,which results in enhanced user experiences .we also found that HTML and web browser semantics hinder the development of web application . The study of frameworks showed that the Single Page Application is suitable to mobile ,tablet and desktop platform.

The range of technologies that are potentially useful for managing the wood supply chain with the particular emphasis on tracking log for their point of origin in the forest to the facilities where there are processed into the facilities where there are processed into primary wood product.The aim of the reporting is to provide the information which is useful for the individuals and organizations responsible for developing ,implementing and maintaining chain of custody system for wood.

In the Web tracking necessities of several complementary approach features passive and active finger printing, persistence of the tracking identifiers masking techniques and the efficient web tracking can be developed although powerful new web browser features may be offer an additional opportunity for the tracking , the variety of the implementations and lack of consistently supported features set may limit effectiveness.

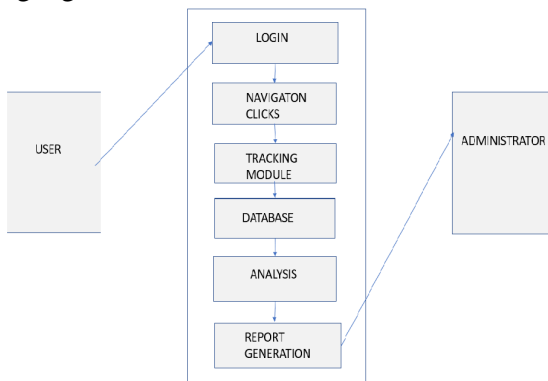
A click stream is defined as the series of mouse clicks made by the user on the a website is the click stream. For websites, the click stream is serve as a

the source of the highly valuable information. In particular, it tells the website owners about their users, and what they are interacting with on the website. This information helps in aiding the decisions of marketing and it help in providing a the personalized experience. While the information contained in click stream data is beyond dispute,it comes with them any challenges. These challenges stem are mostly from the fact that click stream data displays all aspects of big data . Namely , clickstream data is high in the volume and the velocity, with one days worth of such data amount to a many tensor hundreds of gigabytes for any major website. Further, the clickstream data is large in variety and is inherently heterogeneous. We see the two advantages of the seone can have customizable levels of inter activity,and the second is they can be viewed on a browser, making them easier for viewing .

## **IV.METHODOLOGY**

The main purpose of the system to track the activities of the employee on the Single page application or the general purpose application .In this firstly the single application is designed .The purpose of the SPA is for providing the user interface or the application for the tracking of the activities of the employee. This will be the dummy application for testing the tracking code .In this SPA the different modules are generated as on the ERP platform or like the ERP Based on the Single Page Application In this the System defines the approach of taking input from user or employee in form of clicks made by user on User Interface of module . The tracking of click-streams of user is performed and it will pass to make analysis and generation of different reports. The generated reports get analysed by administrator. The reference based on Internet tracking and web monitoring for all browsers. Track web activity like file upload and download. Classify productive/un-productive websites. Monitor application and console commands. Measure employee time spend on the module of the application, activity level and idle time. Generate reports for employee login time,

logout time, click stream data And shows this analytical data in graphical form to the administrator of the system and the owner of the organization. The big data in the database can be analysed by using algorithms.



The fig explains the work flow of the system. User logs into the system based application. After logging into application user performs activities on user interface. All the activities of navigation clicking get captured and stored in the database. The data stored in database are further transferred for further analysis process. The report generated based on analysis can be viewed to the system administrator.

The development of Report generation system which provides insight of performance of employee. And analyse efficiency of Employee. Easy Report generation and interpretation of user activity. For showing the analysis report the separate view is given to the administrator for displaying the report in the month wise manner in the day wise manner.

The options will be given to administrator for the graph generation from the analysis of the data

which is stored in the database after tracking the activities.

And also the prediction will be one on the basis of the graphs generated by tracked activities of the employee. Which shows that the employee activities are in the favour of the organization or the employee will be the fraud or the working time of the employee and the platform.

## V. CONCLUSIONS

In this paper, we describe the tracking of a clickstream and the other activities such as login ,logout of the employee on ERP platform or the General purpose applications of the organization. And showing the analysis of the tracked activities such as clickstream activities and the login and logout time in the form of the graph in the month wise and the day wise manner to the administrator of the system and the owner of the organization. And it will also shows the administrator that chances of the fraud of the employee in the organization and also shows the reports such as working time of the employee on the working application.

## VI. REFERENCES

- Klaus Nygard "Single Page Architecture as basis for web application Author "Year 2015.
- Magrath William B. "Web Tracking System" Year 2015
- Bjorkman per "Implementing Web Tracking " Year- 2016
- Rajat kateja "Viz clickvisualizing clickstream Data". Year 2016
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