A NEW INTEGRATED DIGITAL WORK PLACE FRAMEWORK

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Integrated Digital Work place is designed in such a way that it gets notifications from different system and displays it to the user. In a current state of, colleges or universities, students should have logged into each and every system separately to view the notifications. This could lead to lot of transaction time and it makes a user to toggle over to different applications to look for the notification. While the user toggling over from one application to other affects the concentration of the user and it is not efficient. Intranets provide a solution for the user to tackle this kind of over toggling situation that arises due to notifications received from diverse applications. There also exist varied tools that exist out of the Intranet domain. To avoid this, we developed the integrated digital work place to get notifications from different systems and display it to the user. This avoids the user to toggle from and to different applications. This unified view of the notification system helps the user to search for the notification easily. The user logged into this system with their assigned username and password. Once the user authenticated by the system, it allows the user to add their account details to this system. Then this system gets notifications from heterogeneous system and shows it in a single environment which improves the readability of user to their notifications.
Keywords: Integrated Digital Work place, Intranets, heterogeneous system

1.   INTRODUCTION

This system was developed to display the notifications from disconnected system of the college/universities in a single portal. It avoids the user to log into different applications for notifications. These systems request the user to register in this portal. Once the User registered successfully, the user should enter the account details of the system. The user can get notification from different system in a single console. The user will get home timeline information from the twitter, updates from the Facebook page, unread mail information from Gmail, show events from Google calendar, alert message from library system, discussions from LinkedIn alumni group. The user should add the RSS URL of the website to be subscribed.

This system display the RSS feed from the subscribed website. The user can search of the people from LinkedIn and Twitter. The user can have more than one account details such as several Gmail accounts, several RSS URL. The users can follow the student or teacher by finding people from twitter search and follow their tweets.

The user can add calendar event in this system. The Facebook page should be administrated by the college to reach the student quickly. The updates from d ifferent disconnected system are retrieved by Oath request from IDWP to the corresponding system.

For the first time, the user should authorize the application to access your account details. The aim ofthe paper is to display all the notifications from disconnected system in a single portal. This avoids the switching of user to different application to see notifications. This reduces the time to find the information. The users can response to the notification at the early time. This reduces the time to find the information. The users can response to the notification at the early time. The various goals are achieved by integration are the users can response faster to the notifications, the users require less time to find the information and avoids toggling of user to different applications.

In the existing system the college / organization uses different application for each system, the user should logged into different application separately to look for the notifications. This type of disconnected system increases the friction, the user toggle over to different application to notice the notification. The response to this system of notification is not fast.

The paper towards an Integrated digital work place proposes the idea of showing notifications from different systems. Users modify the window very often while they work in the system. So to accomplish a single task the user should check across different applications. By toggling across application impacts the productivity significantly.

To solve this, integration of different applications will improve the productivity and also keep the user to focus on work. This reduces the transaction time of locate the notifications. In the current system, the client and the system that manage the document are incoherent. The user switch among these two varied applications and this impairs the productivity levels. One way to reduce theswitching is to make the varied applications treated as a single entity to the knowledge worker. Collaboration of workers is the important thing for the company. But collaboration tools and business tools are not connected to each other. This leads the user to go out of core business tools to collaborate with the colleagues. This increases friction and reduced adoption of collaboration system. By integrating both the collaboration tools and business tools increases the business value. The advantages are shorter time to notification response, increased user satisfaction levels and reduced time to find information.

2. LITERATURE SURVEY

In [1], prediction tools determine the events that are missed during the classification process. Their approach tried to find the authentic and significant events as well. A vital description of

instance, augmenting the job depicted improves precedence and localization of disentangled post that exist in Twitter [2].

The categorization of trending subject in Twitter is the main focus of discussion in the Internet era. The authors in [3] provide strategies for tweets classification in Twitter. They developed two techniques for classifying the tweets based on various topics that the users tweet that are currently in trend. The two techniques focused on bag of words based using naïve baye's algorithm and network oriented algorithm. To retrieve the classification result with good accuracy, the authors suggested methods that involved classifying the tweeted post based on familiar set of topics. Due to rapid increase of tweets day by day, the classification based on topic trending becomes too cumbersome with the limited set of available tools and techniques that are specially designed for this purpose.

Machine learning algorithms play an important role in the sentiment analysis. Diverse algorithms based on machine learning exist in the classification and information retrieval based on tweets posted in the Internet. The authors in [4] propose machine learning based algorithms for sentiment analysis.

The topics of current trending tweets classification is of utmost research in the field of Sentiment analysis. The topics usually are of different genre, making the non-availability of one particular specific tool that can identify the topic being used in the current trending tweet. The authors in [5] made available the diverse groups that the topic may be grouped and classified the tweets for better analysis of the information being posted.

There is always a wrong notion of shared information being misinterpreted and wrongly projected in the public domain. So there exists need for the public users to maintain a personal information ethics while sharing their information in public sources. The proper handling of tweets is to be done properly without affecting the privacy of the users and without causing distrust among users. The tweets and blogs in the public domain must not be handled in the wrong way and there should enforce methods for the security of information being shared [6, 7]. No tangential statistics were involved for the topic classification [8]. Reviewing movies is one of the important application of sentiment analysis and many works have dealt in-depth about this using many machine learning and deep learning method. [9,10]

3.   METHODOLOGY

In our proposed system the notifications from different disconnected system are integrated and displayed in a single portal. This reduces the time to find the information and reduces the friction. This improves the user satisfaction level. Integrating e-mail and different system eliminate the search of information across different system.

The design of this product is to eliminate the students to toggle over to different applications to look at notifications. By establishing all the notifications in single notification panel will improve user readability. In an existing system, college has several system such as library management system, transport system, Administration system etc. The overall architecture is shown in figure 1. The user logged into application for each system separately .Our proposed system will overwhelm this position and also eliminate manual works required such as getting form from office.

The product functions of this proposed system are the user can able to get unread mail information from mail service such as Gmail. This system can get the event information from Google calendar and display it in our system. The user can subscribe to RSS feed of any website and this system able to get feeds from it and display in the Integrated console. The user will get information from the group which is meant for alumni students of the college in LinkedIn.
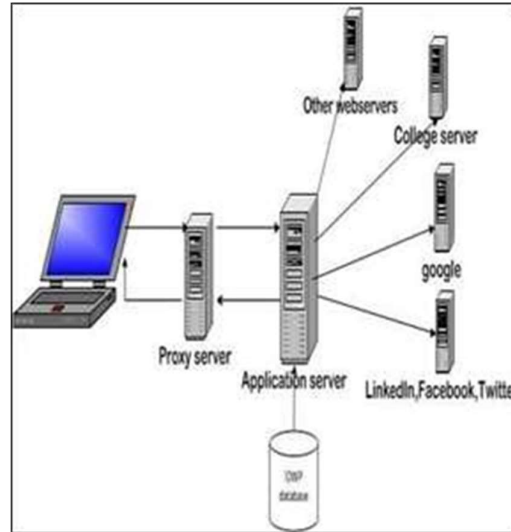

Figure 1: Overall architecture

4.   RESULTS AND DISCUSSION

This system allows the user to find and follow the peoples in TWITTER. The user can get information from FACEBOOK page which is administrated by the college for circulars and updates from the college. The user can get alert message from library management system if the due date of the taken books expired.

The student logs into this system and access information up to their access level. The administrator is provided with all right permissions so that the administrator can add new users.

The user can login with the login credentials that they have created at the beginning of user registration. New Registration is the utility used to create new user in the IDWP system. The Notification is the utility that is used to display notification from all the systems. The SearchPeople utility is used to search for people in LINKEDIN and TWITTER. The administrator has full access to the student's databases. The Students are not authorized to access the student's databases. This system is a multi user environment. The system provides the front end with java servlets and back end with apache Derby. By displaying all the updates from different systems provides better accessibility. It improves the access to resource. This system has the program running to get access token from various web services. With that access token the System able to get information from the various web services. Integrated digital workplace combines data from multiple Web services even if the data's among systems themselves are incompatible. The responses from the web services are in JSON. This system parses the JSON format using java and displays it in the console. Secure communication has to be carried out between systems involved. Secured authentication and authorization are carried out using OAuth services implemented using java functions. Data involved in authentication are mainly user name and password which are invariably secured and hidden

from the application users by using OAuth services. Authorization involves app key and app secret key using which access token to be obtained. Access token forms the major role in connecting with the corresponding web service.

Speed factor determines the efficiency of almost every web services. Bandwidth limits and speed of the internet connection too determines the efficiency of this system Notifications from various systems are shown in activity stream so that students can easily access and thus

readability is improved. The system should be reliable so that the system doesn't lose the important information regarding the student. It is Important for the organization to maintain the information over time. This system is designed in such a way that it will support lot of users and more information. The performance is not degraded by increased number of users. This system is designed to be more flexible and it can use along with other web services. The system is very useful for the student by showing all the notification to the student in a single panel. This system ensures safety and security of information stored in the database using authentication of users. Only administrator has full privileged to do all actions in the system.

This system allows the user to log into portal using username and password. New user can register in this to acquire the account. The user should add Gmail account details and URL for website to be subscribed for RSS feeds. The user can able to add and remove account details. The user can check and uncheck for the updates from the different systems. The user must authorize this portal to get information from other web servers like Facebook, LinkedIn, Google and Twitter. Successful authorization from other system allows this system to access your information. The response from the other web services is in JSON format. This System parses this JSON format and displays it in a way that the human can read. This module request for resources using Oauth 1.0 &2.0.The updates are shown to the user. This system allows the user to search for the people needed to connect with them. The search is done by the Twitter and LinkedIn and results are shown to the user. The user can follow student/teacher to look for their updates.

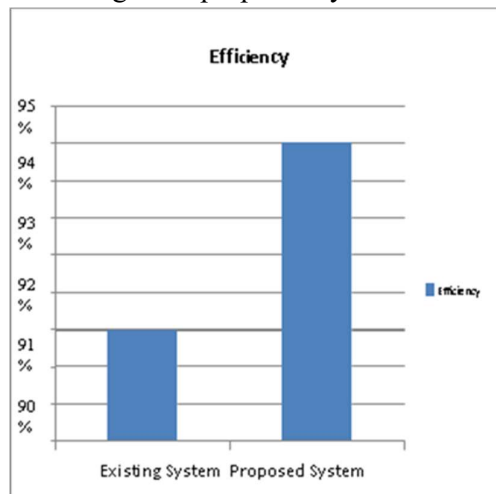The comparison between existing and proposed system is shown in figure 2.

Figure 2: Performance of proposed system

The figure 2 shows that the efficiency of the proposed system is high. It shows that the Integrated Digital Work place framework is better than the existing system without any integrated approach.

Figure 3 shows the login page of our proposed system. Each user and register for a unique user name and password. Using the login credentials the user can use the IDWP system.
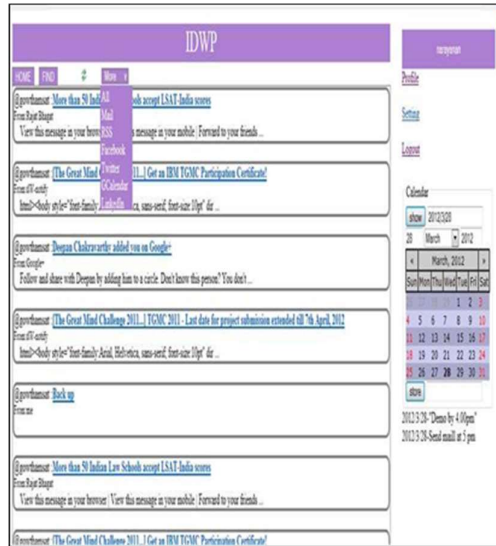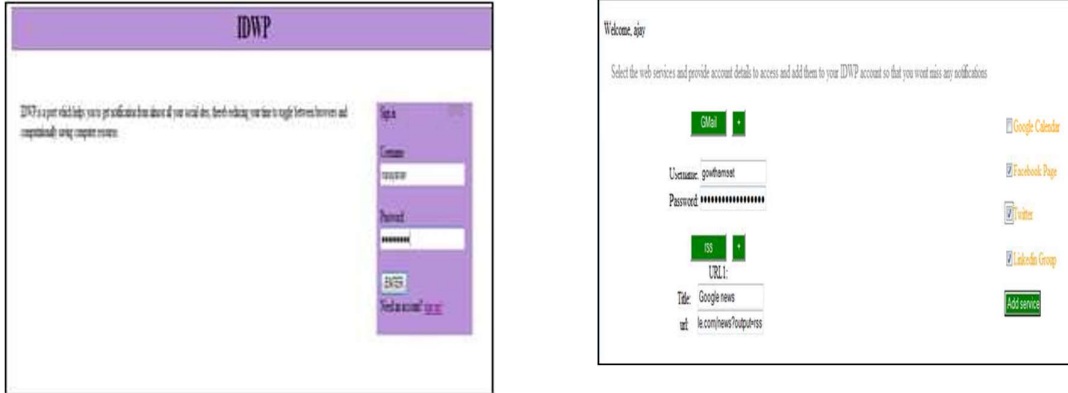

Figure 3 login page to IDWP

Figure 4: showing settings and more options

Figure 4 shows the setting and more options available in the IDWP system. Using the settings, the user can set his preferable setting mode. The more options have the features of calendar, notes, alarm reminder etc.
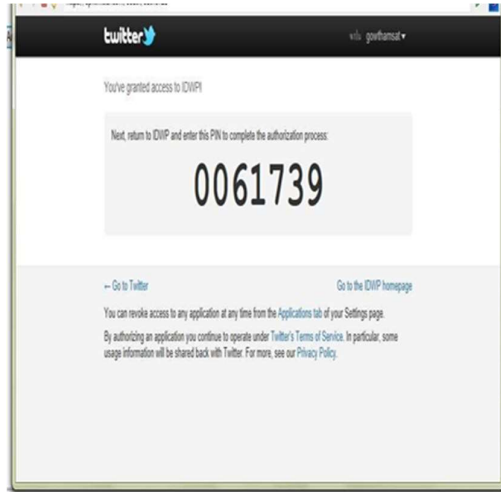
Figure 5: select service

Figure 5 shows the screen shot of selecting a service for example, the twitter App Efficiency is determined based on the work done within the stipulated time. Due to the integrated approach the proposed system gives better efficiency than the existing system [2]. The proposed system was able to give better efficiency due to the fact that different applications can be used simultaneously by the user.

Figure 6: Twitter Authorization
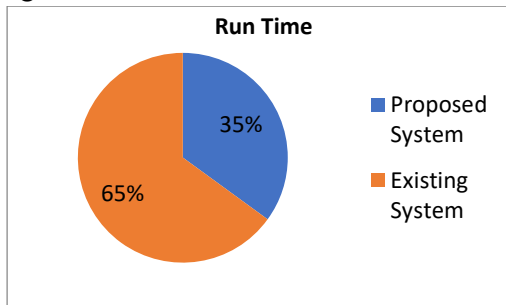Figure 6 shows the screen shot for twitter authorization.

Figure 7: Runtime Comparison
Figure 7 shows the runtime involved in the proposed system and existing system. The run time was much lower for the proposed system than the existing system.
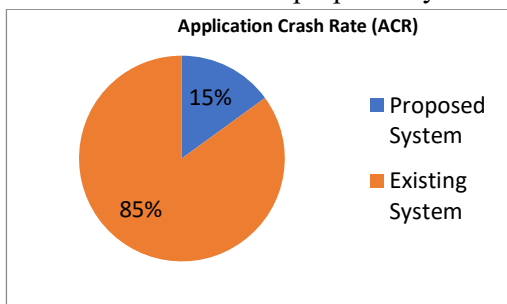

Figure 8: Application crash rate Comparison

Figure 8 shows the Application crash rate(ACR) of the proposed and the existing system. The Application crash rate is determined based on the amount of time the application has failed divided by the amount of times the application has been effectively used. The proposed system produced very negligible Application crash rate.

5. CONCLUSION

This proposed system helps to get all the notifications by the user. But we can add more systems to this System. As a current state, the users are restricted only to get the notifications from Twitter and LinkedIn. But we can also add the features such as posting from this portal to Twitter and LinkedIn. This system can also be designed to send mail from this portal to your friends. The System can be designed to set the event in the Google calendar from this portal. In future, the user can tweet from this portal, can post updates to Facebook, LinkedIn. You can add other systems like administration system, transport system such that it helps the students to get all the information in this portal.

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