Twibook – A systematic approach towards twitter & Facebook

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Abstract— Social networking is a platform where people can interact with the people of their age groups and of their professions. There are many social networking platforms in the market which provide endless features to the users. Twitter provides the facility of posting the status as tweets which the followers can see and retweet as a reply to the status. Twitter has about 316 million users. Facebook is another effective social networking applications which also provides the facility of posting the status and pictures and making friends of different groups. Facebook has about 1490 million users. There are many users which are using both platforms to increase their socialism. Many people proposed the idea of combining these powerful platforms and some of them developed a few applications like tumblr, Instagram and social networking all in one. These applications only provide the facility of posting on different platforms at the same time but people cannot view the posts of others. We proposed the idea of “Twibook” which facilitates the user with posting and users can view the posts of their friends and followers on the same screen. We used the GRAPH API for extracting Facebook’s data and REST API for extracting twitter’s data of specific user on the same screen.

Keywords—Timeline, Facebook, Twitter, Twibook, Access Token, OAuth, Graph API, Twitter API, Social Network Service (SNS).

I. INTRODUCTION

A social application is a service which is designed for building social relation among different people from different areas of world. Such applications help people to share interests, political views, educational stuff, news or activities. These applications also group people according to their common interests, same hometowns or other resemblances. Marketers also use such applications for advertising their products as social websites are getting more popularity than electronic media. Nowadays around 40% of the world population has an internet connection [4]. During the last decade, Social Network Services (SNSs) such as Facebook, Twitter, LinkedIn, and Instagram have been established their position as major social hubs and become a part of people’s everyday life at an astonishing speed [1]. Facebook is the most active social medium with about 9 billion active users and twitter with 310 million active users [5]. And twitter is prominently competing with Facebook [8]. Social Networking is more common than Electronic Media today. Nowadays, young generation knows the current affairs of the world from social networking sites instead of news channels. Many celebrities have their accounts on these sites where they can remain in touch with their fans and followers.

Facebook and Twitter differ from each other in many ways. The most prominent feature of Facebook is the news feeds which contains friends’ birthdays, event details, the changes that user do with his profile and some other changes done by Facebook buddies. User can maintain a list called ‘Friend List’ where he can add people for social networking and sharing. It includes the virtual space where contents from Facebook are shown. This virtual space is called as the user’s timeline. It also includes liking, commenting and sharing of a picture & video. Facebook also manages groups, pages and messages. On the other hand, Twitter is an application which allows its users to send short length messages to friends and to other followed people. Users can also read and send other users’ messages. These statuses cannot be more than 139 characters. There is no Friends list and many other features like Facebook [3]. Most of the people have accounts on Twitter and Facebook. Mostly they share same picture or status on both sites. For this purpose, they have to login on both sites and have to visit different tabs. This is time consuming and annoying. For this problem statement we are going to develop a platform named as ‘twibook’ where user can post status and share pictures from our platform and that picture or status will post on both sites simultaneously.

II. PREVIOUS WORK

Previously, there are some applications in market which are related to our work in some way. But these applications don’t describe our work completely and have some drawback too. Some applications related to our work are

a) Instagram
b) Tumblr
c) Social Networking all in one

A. Instagram:

Instagram is a very spectacular mobile application which is also used for communication purpose. People who are registered on Instagram can share their memories as pictures. Different but unique filters also beautify the memories. Instagram was announced for public in late October 2010. Now we can see a lot of user and data traffic on Instagram [11]. This is a platform where users can post their pictures over the Facebook, twitter and some other sites. According to the
researchers, more than 1.5 billion users are registered on Instagram so far and they posted about 16 billion photos using their accounts [11]. But on Instagram, user can’t see the timeline of the related sites and not be able to like, comment or share pictures already present in related sites timeline.

**B. Tumblr:**
Tumblr was launched in 2007. Tumblr is an application which consists of blogs of different disciplines. Tumblr had 555 million monthly visitors. Due to heavy images and videos in the background, its processing is very slow. It only allow sharing status or picture on the facebook and twitter but doesn’t show timelines of facebook and twitter because of its own timeline.

**C. Social Networking all in one:**
Social Networking all in one is an application which integrates facebook, twitter and some other popular sites. User can use all these social sites one by one. For example, if user is using facebook and wants to use twitter, he should close facebook and then open twitter separately. He cannot view facebook and twitter simultaneously.

**III. METHODOLOGY**

The main purpose of twibook is to facilitate the users of both Facebook and twitter. We have used APIs of facebook (Graph API version 2.5) and twitter. User can sign up for the very first time. After successful sign up, user links twitter and facebook accounts respectively and the OAuth tokens from both accounts are stored into the database so that they do not have to link the respective accounts again and again [2]. One more thing to mention is that we cannot log in to user’s facebook and twitter accounts by their access tokens. The next time user log in to twibook, will redirect to twibook home page directly without linking their facebook and twitter accounts.

OAuth is globally used authorization method. This method allows an internet user to log into its third party social website using accounts from other social network websites like Facebook, Google, etc even without getting the user’s password. Currently facebook uses OAuth 2.0. OAuth is trusted standard for authentication process [6].

When twibook users link their twitter and facebook accounts, they actually send request to OAuth to access services of facebook and twitter securely. The user request an access token by presenting its own identity. If the identity is authenticated, the OAuth issued an access token to the user. By this method, user of twibook uses the services of twitter and facebook without exposing their passwords.
A) GRAPH API (Facebook) & REST API (Twitter)

Graph API and Rest API are open source APIs provided by the Facebook and Twitter respectively. These APIs are used to integrate its features in the custom application. These APIs require OAuth authentication to allow its features to use in other applications. These features include personal data of user and the details of posts on user’s timeline/wall and details of friends and followers. We used these APIs to integrate the both platforms in ‘Twibook’. These APIs also provide the users to post/tweet and like/comment into the platforms using twibook or any other custom application. These APIs also help to communicate with each other’s personal data.

B) Register Twibook to Facebook and Twitter

Facebook and Twitter has introduced its APIs for public use. Because these APIs are free so, many developers are working on different third party applications. Now more than 57K such applications have been developed by about 2 lacs of developers from the world using facebook’s API which is named as Graph API [13]. When we use the services of facebook and twitter, we have to register our application to twitter and facebook. By logging to developers.facebook.com, you have to register your application so that you can use services of facebook.

Now register your application to twitter by logging to apps.twitter.com. In order to get permissions of posting and view timeline from facebook, you submit your app to facebook [10]. Facebook review team will review your app and give response in 5 working days. If your app is according to their standards, then facebook will grant permissions. Otherwise they can reject your request. Facebook is too much strict about their permissions as compared to twitter [7].

C) OAuth Working

1. Twibook requests an access token from facebook and twitter authorization server.
2. Facebook and twitter authorization server identifies/authenticates the user. Users have to log in to facebook and twitter [12].
3. Now user sends the request to facebook and twitter to use their data for twibook.
4. Facebook and twitter authorization server respond back to twibook with an access token.
5. Twibook calls the facebook and twitter API with access token.
6. Facebook and Twitter resource server returns your desired data if the access token is valid [9].

Using different tabs, sometimes it is very irritating for the user and time taking too. So to counter this problem, we developed a platform from where user can post pictures on his facebook and twitter account simultaneously. He can also check the site if he wants to share his picture only on one site. He will also be able to see the timeline of both sites on our platform. He can see pictures, videos and status shared by friends/followers. He can also like, comment and share pictures present in timeline of
Facebook. The twitter side of twibook will also enable users to reply and retweet posts present in timeline timeline. Twibook will also show all tweets, a specific user has marked as favorites.

IV. RESULT AND CONCLUSION

The study indicated that majority of people using facebook and twitter used their accounts for sharing their moments. That’s why we provide a platform for twitter and Facebook users from where they can post their photos, videos or share their status on a single click to Facebook and twitter or both on a single click.

Our platform also provides the facility of viewing the timeline/wall of users from both Facebook and Twitter which was a lacking features in the other applications. We are successful in integrating timeline from Facebook and Twitter in our application using their Open Source APIs.

REFERENCES


