

# Wireless Social Communication Network for Department

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**Abstract-** This research paper describes the about of social network for various fields. Social networking is the grouping of individuals into specific groups. Social networking is possible in person, especially in the workplace, universities, and high schools, it is most popular online. When it comes to online social networking, websites are commonly used. Social networking websites function like an online community of internet users. In this social network; it was implemented with many aspects and features of what makes up the majority of today's social networks or online communities. The goal is to implement the creation of a community in a scalable fashion. The objectives of our social network is to build a Social Network for staffs and students with common features such as direct messaging, download link, posting, etc.

**Index Terms-** Microsoft visual studio, Router, Internet Information Services (IIS) management, digital passcode devices, Database

## I. INTRODUCTION

Social networking is all about developing connections between friends and associates. While people have always networked with one another, the Internet has allowed us to do this in a global manner. Some great examples of popular social networks are Myspace, Friendster, LinkedIn, Facebook, and Twitter. There are many related social media sides such as flickr, YouTube Pandora and etc. Most people have heard of these services and many use them on a daily basis. Many people are part of at least one social network, while more often people are members of many different communities. For this reason many people are trying to capitalize on this movement and are in a rush to put up their own social network. Many web applications are being developed and deployed on multi-tier environments involving browser-based clients, web application servers and backend databases.

## II. WIRELESS COMMUNICATION

Wireless communication is the transfer of information between two or more points that are not connected by electrically. Wireless operations permit services, such as long-range communications, that are impossible or impractical to implement with the use of cables. The term is commonly used in the telecommunications industry to refer to telecommunications systems which use some form of energy to transfer information without the use of cables. Information is transferred in this manner over both short and long distances. Wireless networking is used to meet many needs. A wireless transmission technique is a logical choice to network a LAN segment that must frequently

change locations. The following conditions justify the use of wireless technology:

- To span a distance beyond the capabilities of typical cabling,
- To provide a backup communications link in case of normal network failure,
- To link portable or temporary workstations,
- To overcome situations where normal cabling is difficult or financially impractical, or
- To remotely connect mobile users or networks.

Originators need to consider some factors including Wireless RF technology for better developing wireless networks:

- Sub-GHz versus 2.4 GHz frequency trends
- Operating range and battery life
- Sensitivity and data rate
- Network topology and node intelligence

## III. SOCIAL NETWORK

Social networking is the grouping of individuals into specific groups, like small rural communities or a neighborhood subdivision. Although social networking is possible in person, especially in the workplace, universities, and high schools, it is most popular online.

This is because unlike most high schools, colleges, or workplaces, the internet is filled with millions of individuals who are looking to meet other people, to gather and share first-hand information and experiences. The topics and interests are as varied and rich as the story of our universe. When it comes to online social networking, websites are commonly used. These websites are known as social sites. Depending on the website in question, many of these online community members share common interests in hobbies, religion, politics and alternative lifestyles. Once you are granted access to a social networking website you can begin to socialize. This socialization may include reading the profile pages of other members and possibly even contacting them.

### A. Main features of Social Network

Profiles and Friends lists are two vital features on social network. Another is a public commenting feature ('Testimonials', 'Comments', 'The Wall', 'The Post'). This feature permits individuals to comment on their Friends' profiles, photos and status. These comments are displayed obviously and visible for everybody who has admission to that profile.

These three features - profiles, Friends lists, and comments - include the primary configuration of social network sites, even though individual sites arrange for additional features for further arrangement. When social network sites allow visitors to roam

from Friend to Friend and communicate with anybody who has a visible profile, the primary use form is driven by pre-existing friend groups. People take part in social network sites with their friends and use the unlike messaging tools to hang out, share cultural articles and concepts, and communicate with one another.

### B. Potential Benefits of Social Network for Department

Contact with students and staffs can be difficult for controlling. Social networking websites make an opportunity for management to have faster contact with their attendants. If there is a subject that requires immediate attention, a teacher can send a message through social networking websites to students and staffs without time-wasting. Moreover teachers or Head of Department can make announcements and give information to students at one sit-time through over social network.

Social networking websites reduce the amount of time it takes to be completed because they cut down the amount of time it takes for teachers, classmates and staffs to contact each other. Information is easily found through the network. Social networking websites can be one of the fastest ways to obtain information. "Organizations are actively leveraging the influence of social networks to find new teaching and communication opportunities, new groups of like-minded individuals and departments, and new sources of industry specific wisdom, advice and expertise" (Wilson, 2009). Social networking websites allow department to find and share information about different studying strategies and methods.

Among the benefits of social networking in the department presence can be maintained. Social networks can act as an advertising or announcement tool to help the department reach out to both students and customers. Wilson (2009) says "a logical extension of this is to students to spend their entire day maintaining the sanctioned department presence on several social network sites, acting as a department's 'voice'.

### C. Local information sharing

Online social networks (OSNs) represent an unlimited technique to share information, but the very impermanent nature of the information in OSNs is such that if should somebody would like to share data on the long term, he has to place it on his account and periodically makes notifications aiming the new point. In addition, when data is meant to be shared among biologically close people, in reach of a local area network (LAN) for instance, there is no reason for that data to be uploaded to the Internet (at the often low WAN bandwidth), to be then downloaded once more locally. This would rely on the Internet infrastructure while the LAN infrastructure is perfectly adapted and sufficient here.

## IV. DEPARTMENT SOCIAL NETWORK

Department Social Network is an offline social networking service. It was built on C# language, ASP.NET and SQL server combined with IIS management. It can help the students and teachers get to know one another and also department administrations. It has affected the social life and activity of students and staff in various ways. With its availability on many mobile devices, laptops, tablets and other passcode devices that

allow users to continuously stay in touch with each other as long as there is access to the social network.

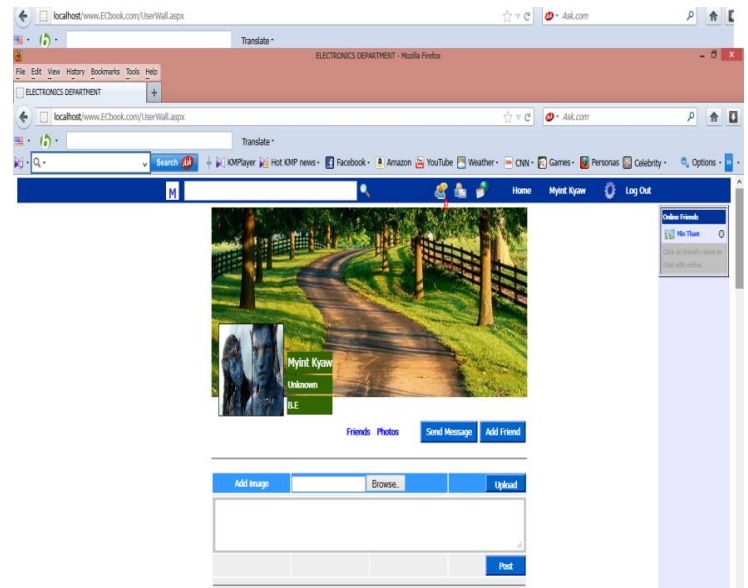


Figure 1.1 Main Page of Department Social Network

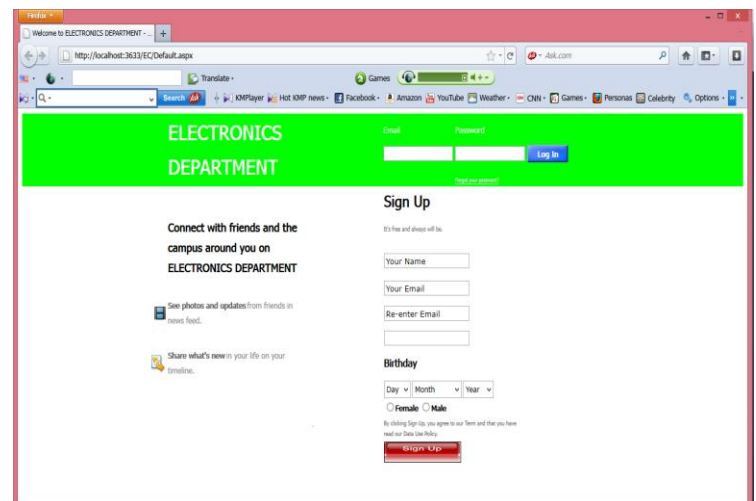


Figure 1.2 Registration Page of Department Social Network

### A. Registration

Users must register before using the site, after which they may create a personal profile, add other users as friends, exchange messages, and receive automatic notifications.

### B. Create Profile

Users can create profiles with photos, lists of personal interests, contact information, and other personal information.

### C. Messaging

Users can directly communicate with each other using several different methods (including a special email address, text messaging, or through the website or mobile app).

#### D. Privacy

Users can choose their own privacy settings and choose who can see specific parts of their profile. Privacy is one of the first matter that arises up to mind when introducing any new idea in the region. The concept of offline social network, because of the fact that there is no connection with the Internet, offers possibly better guarantees than online social networks with esteem to privacy. However, Offline Social Networks need to account for such agreements while being designed.

#### E. Trust and Security

Outside privacy, a main for approval and achievement of an application is the trust that users can set on the service provider. When trust obviously relies on adjustable metrics, even feelings from one user to another, being able to deliver a provable means that privacy and security are respected and that the server follows the initial pronouncement is definitely an advantage for a wide adoption. Open source approaches clearly provide this advantage over closed and registered software that code can be checked out by anyone, and that privacy breaks can be detected

and fixed earlier, due to the potential amount of people attracted in a specified project.

#### V. SETUP PROCEDURE

For wireless connection, social network implemented a Router inside the sever engine by utilizing the facility in server's federated functionality. Router can transmit and receive data from server PC and other devices. And database tables were built into the Server PC to produce and store database input/output. It combined with the IIS Server to get nicknames and passwords for clients and other digital code devices. After making setups social network was tested with mobiles, laptops, tablets and so on for wireless communication.

For wired connection, social network connected PC which used as server with Rj45 cable to other PCs or clients by the help of switch. And set the Static IP on server (example 192.168.0.x). To gain wire connection, established one of static IP on the gateway box of sever that must not conflict server IP. After being these steps, network can be used as wireless or wired social communication network.

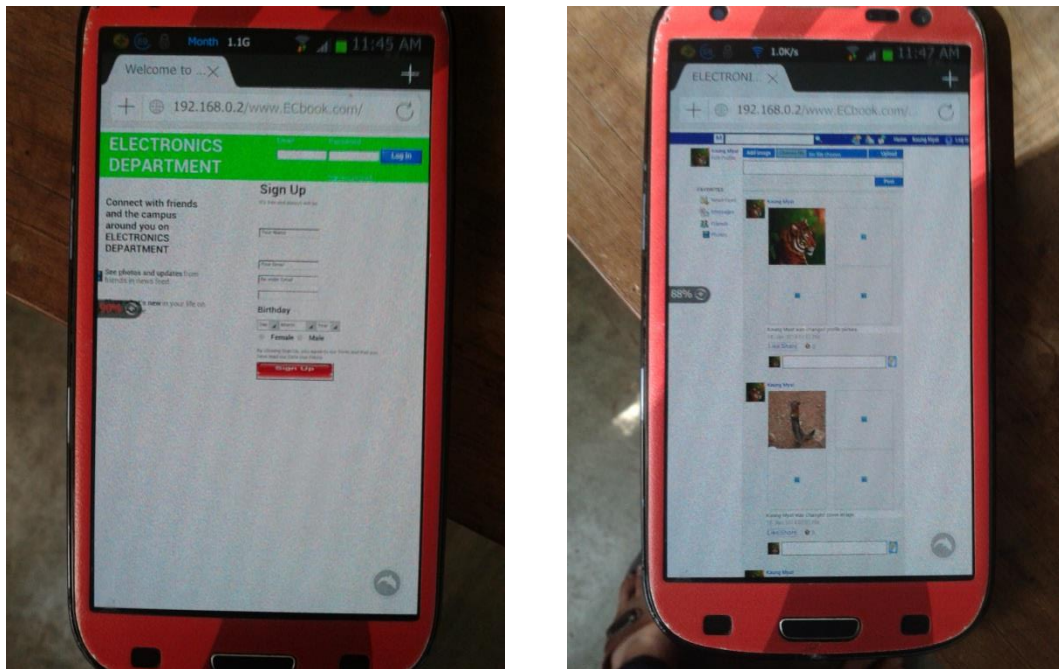


Figure 1.3 Form of Department Social Network on mobile

#### A. Implementing the Database

In this system the database is implementing by using the following tables.

Column Name	Data Type	Allow Nulls
UserID	bigint	<input type="checkbox"/>
UserName	nvarchar(50)	<input type="checkbox"/>
PrimaryEmail	nvarchar(50)	<input type="checkbox"/>
LoginPassword	nchar(10)	<input checked="" type="checkbox"/>
ProfileImage	nvarchar(50)	<input checked="" type="checkbox"/>
CoverImage	nvarchar(50)	<input checked="" type="checkbox"/>
Gender	nvarchar(50)	<input checked="" type="checkbox"/>
Birthday	datetime	<input checked="" type="checkbox"/>
Education	nvarchar(50)	<input checked="" type="checkbox"/>
Mobile	nvarchar(50)	<input checked="" type="checkbox"/>
Status	char(10)	<input checked="" type="checkbox"/>

**Table 2.1: User Profiles Table**

Column Name	Data Type	Allow Nulls
CommentID	bigint	<input type="checkbox"/>
PostID	bigint	<input checked="" type="checkbox"/>
UserID	bigint	<input checked="" type="checkbox"/>
CommentDate	datetime	<input checked="" type="checkbox"/>
UserComment	text	<input checked="" type="checkbox"/>

**Table 2.2: Comment Table**

Column Name	Data Type	Allow Nulls
PostID	bigint	<input type="checkbox"/>
UserID	bigint	<input checked="" type="checkbox"/>
PostDate	datetime	<input checked="" type="checkbox"/>
PostText	nvarchar(MAX)	<input checked="" type="checkbox"/>
PostImage1	nvarchar(MAX)	<input checked="" type="checkbox"/>
PostImage2	nvarchar(MAX)	<input checked="" type="checkbox"/>
PostImage3	nvarchar(MAX)	<input checked="" type="checkbox"/>
PostImage4	nvarchar(MAX)	<input checked="" type="checkbox"/>
Privity	nvarchar(10)	<input checked="" type="checkbox"/>
OriginalPostID	bigint	<input checked="" type="checkbox"/>

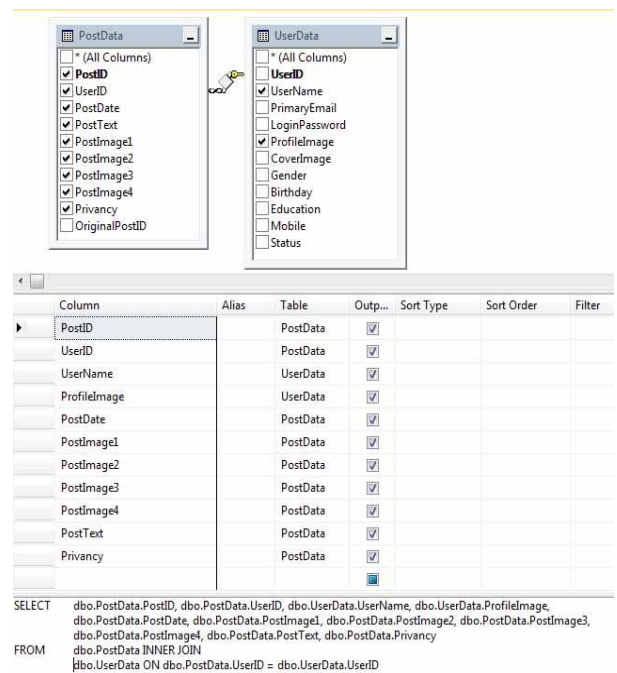
**Table 2.3: Post Table**

Column Name	Data Type	Allow Nulls
MessageID	bigint	<input type="checkbox"/>
FromUserID	bigint	<input checked="" type="checkbox"/>
ToUserID	bigint	<input checked="" type="checkbox"/>
MessageText	nvarchar(MAX)	<input checked="" type="checkbox"/>
MessageDate	datetime	<input checked="" type="checkbox"/>
Status	nvarchar(10)	<input checked="" type="checkbox"/>

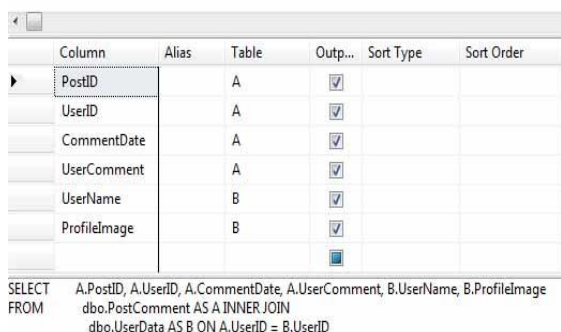
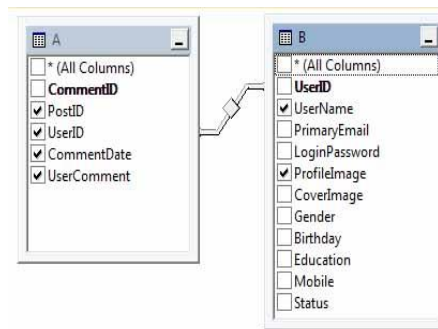
**Table 2.4: Message Table**

**VI. CREATING THE RELATIONSHIPS**

Once all the tables are completed, create all the relationships. For this set of tables, have relationships between the following tables as shown in Figures.



**Figure 1.3 Relationship between server Profiles Table and Post Table**



**Figure 1.4 Relationship between User Profiles Table and Comment Table**

**VII. CONCLUSION**

Social networking has become a driving force on the Internet. Many people are part of at least one social network, while more often people are members of many different communities. For this reason many business people are trying to capitalize on this movement and are in a rush to put their own social network.

As the growth of social networks, have started to see more and more niche communities popping up all over in favor of the larger, all-encompassing networks in an attempt to capture a sliver of the market. In this Department Social Network, it included the many aspects and features of the majority of today's social networks. It can also provide opportunities for new relationships as well as strengthening existing relationships. It can be used by teachers to communicate with students or for out-of-classroom discussions. By making connections with other people who have the same interest, students can learn and exchange knowledge with others they may not have had the opportunity to interact with. By collaborating with other students and teachers through social networking, students and teachers are able to build stronger Department communities.

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