

# Enhancing Cyber Security by Increasing Client Side Privacy for Network Information

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**Abstract** - . Social networked sites are not only to speak or interact with peoples globally, but also one ineffectual way for big business encouragement. A this paper, we examine & study the cyber threats in community networked web-sites. We submit yourself to the gathering times gone by of online social web-sites, pigeonhole their types & also talk about the computer-generated threats suggest the anti-threats strategies & see in your mind's eye the longerest terms trend of such hoppy well-liked Web-sites.

That in a today are of smart-phones & computers the internet hasn't change a idea of announcement. Due the be deficient in of security an assortment of cyber-crimes have emerged in the past decade. Cyber security plays a significant role in the current development of information technology & services. Cyber security is thus an attempt by users to keep their personal and professional information intact from the attacks on the internet. The main function of cyber security is to protect networks, computers, programs from unauthorized access, & loss. The maxi-mum number of users are not aware of the high risks & share their in sequence unintentionally & their lack of knowledge make them defenseless to cyber-attacks. So cyber security is the main apprehension in today's world of compute.

Description : Major & most areas cover in cyber security are:

- i. Network Security
- ii. Disaster recovery
- iii. Information Security
- iv. Application Security

**Key Words:** Privacy, Security, Cyber threats, Social Networking , Network Information.

## 1. INTRODUCTION

Best Social Media Web-Site & Website security encompasses procedures && countermeasures like that are taken for the duration of the happening life-cycle to guard application from intimidation which ware come from beginning to end flaws with-in the application designed development,

deployment upgrade & destruction Some indispensable techniques used for application security are

- ❖ Auditing & logging.
  - ❖ Session management parameter exception management and manipulation
  - ❖ User/Role Authentication & Authorization
  - ❖ Input parameter validation
- Employees while communicating through phone and internet chat.
- Legal Documents sharing was done with Emails and Manual file works.

When Employee needs communicating with another Employee they have two

Option:

- (1) **Phone** :-In phone communicating it connect with telephone to desire Employee.
- (2) **Chat** :-When they are use to internet chat that time it must be read internet.

In sharing of legal document via email employee must be upload a file in email and receiver download a file from email. So, in existing system file sharing task performed by email.

## 2. Material and Methodology

As growing popularity there for community Networking website these became a most important objective in computer-generated -crimes & attacks. Cyber-crime is becoming a widespread & posing a serious threat to the national & economic security. Both public and personal institutions in sectors of public health information & tele-communication defense, banking & finance are in danger. So the organizations should take proper security measures to be cyber - misdemeanor safe & therefore the users should protect their personal information to avoid & fraud or misuse. The

cyberspace is becoming a big area for cyber-crimes & hacker try 2 attack on crucial information. So-there's a requirement of worldwide partnership of countries to figure together to weighing machine sponsor the constantly growing replicated intimidation

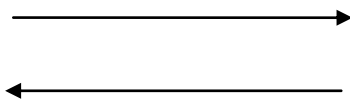
The body of the paper consists of numbered sections that present the main findings. These sections should be organized to best present the material.

**2.1 Data Flow**

- A data flow diagram shows the logical flows of data through a transaction processing system of an organization.
- They are primarily used in the systems development process as a tool for analyzing an existing system.

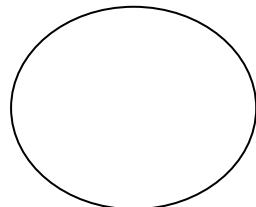
**2.2 Data Flow:-**

- Data move in specific direction from an origin to a destination in the form of a document.



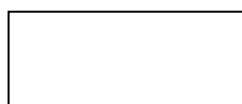
**2.3 Process:-**

- Procedures or devices that use or transform data.



**2.3 Source or Destination of Data:-**

- Source or Destination of data, which may be people, organization or other entities, interact with the system but are outside its boundary.



**2.4 System Design**

- Context Diagram For Remote

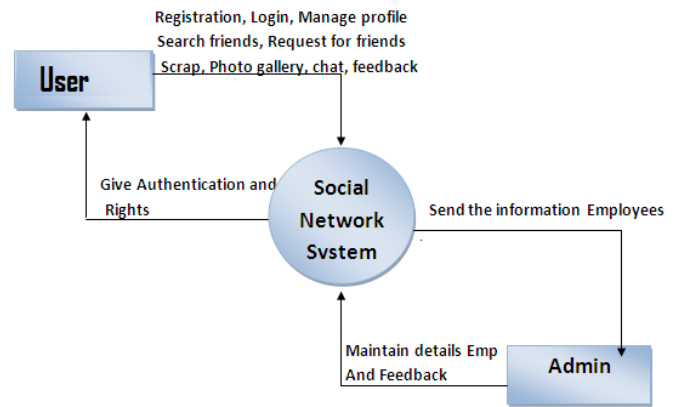


Fig -1: Figure

- The diagram documents the entities and relationship involved in the employee information and payroll system.
- It depicts the fundamental relations like recording personnel information, paying salary and getting a loan.
- The E-R Diagram for a Employee Payroll system can

**2.5 E-R Diagram**

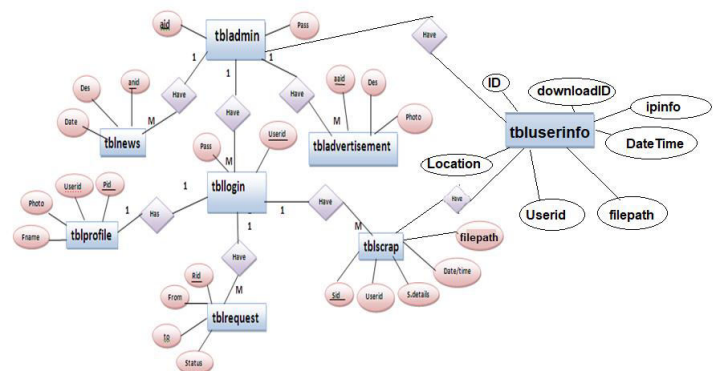


Fig -2: Figure

**2.6 Data Dictionary**

Table Known	Table Name
Tbllogin	Registration(Login)
tblprofile1	Profile
Tblrequest	Request friends
Tblscrap	Scrap
Tblphoto	Photo gallery
Tblfeedback	Feedback
Tbladmin	Admin Login
Tbladd	Advertisement
Tblnews	News
tbluserinfo	Ipinfo, downloaderid,userid,location info

## 2.7 Algorithm

Steps 1 Check Database connection

Steps 2 Check data type

Steps 3 Get network information and location

Steps 4 Check column files and input data

Steps 5 Insert data in database

Steps 6 return successful message

### Algorithm

#### Insert\_Information\_Database

1. Start - load Info
2. Open Connection = Y then next step or = N  
Return(X);
3. Check All DATY = Y Then Next Step or  
Return(X);
4. Get NT data NT = Y go to next step or  
NT = N ;  
Return (X);
5. Data Type and NT true  
DT and NT = Y;  
Return (X);
6. Insert Data in Database  
Message Data, all Colum data with  
NT = Data;  
UserId = Data; and Filepath = Data;
7. Return (sf) ;
8. Exit

**Comments:** Open connection start load information, Y = Yes or True , N = No or False ,DATY = Datatype , X = goto home page,DT=Data Type , NT= network information , sf = successful message .

## 2.8 Get IP and Network Information

Firstly find the hostname using the Dns.GetHostName() method

```
String hostName = string.Empty;
hostName = Dns.GetHostName();
Console.WriteLine("Hostname:
"+hostName);
```

Now, use the `IPHostEntry.AddressList` Property to get IP Address and location

```
IPHostEntry myIP =
Dns.GetHostEntry(hostName);
IPAddress[] address =
myIP.AddressList;
```

### Example

Try the following code to display IP address and location

```
using System;
using System.Net;
class Program {
    static void Main() {
        String hostName =
string.Empty;

        hostName = Dns.GetHostName();

        IPHostEntry myIP =
Dns.GetHostEntry(hostName);

        IPAddress[] address =
myIP.AddressList;

        for (int i = 0; i <
address.Length; i++) {

            Console.WriteLine("IP
Address {1} :
",address[i].ToString());

        }

        Console.ReadLine();

    }
}
```

Social media cyber security This method will help to prevent the privacy of anyone who crimes on social media or violates the privacy of others

I have created my profile on social media, including Facebook Twitter LinkedIn Instagram and other social media sites. My aim is that anyone can download photos from their profile or download videos, so that they can be captured easily. And by editing and uploading videos, it can be captured easily and I can also know who downloaded my photos and videos. Has done this information to help cybercrime too, this will benefit in cybercrime and social media privacy.

In my social media, posts in my room, which can contain photos and videos, if someone downloads the photos and videos, then a notification will come to me that your photos and videos have been downloaded through this account for the exam. I will know the account name and information.

And if the person who downloaded it uses the proxy, then the details of the proxy will come to me as soon as the proxy will use it, the proxy details will be received and its real IP address can be obtained in network details and other types of details. So that its location can be easily detected.

Suppose if anyone uploads my videos and photos. On social media, I can tell that the person with this account has downloaded from my social media. And if I go to a cyber cell and give my report or information that it has been done to me, then the cyber cell owner can easily catch the problem. With this, through which videos of cyber cells are uploaded very easily and which proxy is used, along with the proxy, you will get real network information so that the criminal can be captured very easily.

I will create a social media platform in it, in which I will put all this data for demo and present it in complete process so that in the coming time, the privacy of the people can be better protected and the criminal activities can be easily stopped.

### 2.9 Apparatus and materials:-

Minimum system requirements

### 2.9.1. Hardware requirements

- a. Window system (OS)
- b. 360 Giga byte hard disk drive
- c. 2 Gig Random Access Memory (size)
- d. keyboard
- e. color monitor
- f. Mouse
- g. Internet

### 2.9.2. Software requirements

- a. Domain Name/Sub Domain Name
- b. Windows Hosting (Framework 4.0 to 4.+ )
- c. Asp.net,C#,Mssql,Html,Html5,Css,Css3,Js
- d. Visual Studio
- e. .Net framework

## 2.10 Testing

### Importance of software Testing

The importance of software testing and its impact on software cannot be underestimated. Software testing is a fundamental component of software quality assurance and represents a review of specification, design and coding. The greater visibility of software system and the code associated with software failure are motivating factors for planning, through testing. It is not uncommon for a software organization to spent 40% of its efforts on testing.

### 2.10.1. Software Testing Fundamentals

During testing the software engineering produces a series of test cases that are used to “rip apart” the software they have produced. Testing is the one step in the software process that can be seen by the developer as destructive instead of constructive. Software engineers are typically constructive people and testing requires them to overcome preconceived concepts of correctness and deal with conflicts when errors are identified.

### 2.10.2 Black Box Testing

Black box testing relates to the tests that are performed at the software interface. Although they are designed identify errors, black box tests are used to demonstrate that software function are operational; that inputs are correctly accepted and the output is correctly produced. A black box test considers elements of the system with little interest in the internal logical arrangement of the software. White box testing of the testing involve closer examination of procedural detail. Logical paths through the software are considered by providing test cases that exercise particular sets of conditions and / or loops. The status of the system can be identified at diverse points to establish if the expected status matches the actual status.

Black box testing tries to find errors in the following categories:

1. Incorrect or missing functions,
2. Interface errors,
3. Errors in data structures or external database access,
4. Performance errors, and
5. Initialization and termination errors.

### 2.10.3 White Box Testing

White box testing is a test case design approach that employees the control architecture of the procedural design to

produce test cases. Using white box test approaches, the software engineering can produce test cases

1. Guarantee that all independent paths in a module have been exercised at least once.
2. Exercise all logical decisions.
3. Execute all loops at their boundaries and in their operational bounds. Exercise internal data structures to maintain their validity.

### 3. CONCLUSIONS

Social media cyber security This method will help to prevent the privacy of anyone who crimes on social media or violates the privacy of others

I have created my profile at socialmedia together with Facebook-Twitter LinkedIn-Instagram & other social-media(SM) sites. My aim is that anyone can download photos from their profile or download videos, so that they can be captured easily. & by editing and uploading videos, it can be captured easily and I can also know who downloaded my photos and videos. Has done this information to help cybercrime too, this will benefit in cybercrime and social media privacy.

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### ACKNOWLEDGEMENT

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### REFERENCES

- [1] Cyber Security for Social Networking Sites: Issues, Challenges and Solutions Ritupama Das, Mavank Patel, April 2017
- [2] Eric Conrad, Joshua Feldman, in Eleventh Hour CISSP® (Third Edition), 2017
- [3] Security Engineering (Engineering and Management of Security) Eric Conrad, Joshua Feldman, in CISSP Study Guide (Third Edition), 2016
- [4] Cyber security requirements engineering for low-voltage distribution smart grid architectures using threat modeling. Stefan Marksteiner Nov 2019
- [5] <http://www.ic3.gov/> "Internet Crime Report 2015"
- [6] Most number of cyber crime reports. Available: <https://factly.in/cyber-crimes-in-india-which-state-tops-the-chart/>
- [7] National Cyber Security Policy 2013. Available: [https://en.wikipedia.org/wiki/National\\_Cyber\\_Security\\_Policy\\_2013](https://en.wikipedia.org/wiki/National_Cyber_Security_Policy_2013)
- [8] Security, Privacy and Trust in Social Networking Sites. Richa Garg, Ravi Shankar Veerubhotla, Ashutosh Saxena. CSI Communications ISSN 0970-647X| Volume No. 39| Issue No. 2| May 2015.
- [9] Exploiting Vulnerability to secure user Privacy on a social networking site. Pritam Gunecha, Geoffrey Barbier, Huan Lui. ACM, SIGKDD International conference on knowledge Discovery and Data Mining, August 2011.
- [10] Latest inphishing 2016. Available: <https://info.wombatsecurity.com/blog/the-latest-in-phishing-first-of-2016>
- [11] Malware statistics. Available: <https://www.av-test.org/en/statistics/malware/>
- [12] Dolvara Gunatilaka "ASurvey of Privacy and Security Issues in SocialNetworks" [www.cse.wustl.edu/~jain/cse571-11/ftp/social/index](http://www.cse.wustl.edu/~jain/cse571-11/ftp/social/index).
- [13] "Facebook Privacy Basics", [Online]. Available : <https://www.facebook.com/about/basics>.

- [14] BrowserSecuritySettings. Available:  
<http://its.ucsc.edu/software/release/browser-secure.html>
- [15] <http://www.onlineschools.org/blog/history-of-social-networking/>
- [16] Social networking sites search engine,  
<http://findasocialnetwork.com/search.php>
- [17] B. Stone, Is Facebook growing up too fast, The New York Times, March 29, 2009
- [18] "Using Facebook to Social Engineer Your Way Around Security", <http://www.e-week.com/c/a/Security/Social-Engineering-Your-Way-Around-Security-With-Facebook-277803/> 05.20.2010
- [19] [www.securelist.com](http://www.securelist.com), «"Instant" threats», Denis Maslennikov, Boris Yampolskiy, 27.05.2008.
- [20] Won Kim, Ok-Ran Jeong, Sang-Won Lee, "On Social Websites", Information Systems 35 (2010), 215-236.
- [21] Kaven William, Andrew Boyd, Scott Densten, Ron Chin, Diana Diamond, Chris Morgenthaler, "Social Networking Privacy Behaviors and Risks", Seidenberg School of CSIS, Pace University, White Plains, NY 10606, USA.
- [22] Abdullah Al Hasib, "Intimidation of Online Social Networks", IJCSNS, Vol. , No 11, November 2009.
- [23] Anchises M. G. de Paula, "Security Aspects and Prospect Tendency of Social Networks", IJoFCS (2010), 1, 60-79.
- [24] D. Boyd, N. Ellison, Social set of connections sites: definition, olden times, and fellowship, Journal of Computer-Mediated Communication 13 (1) (2007) article 11