1 INTRODUCTION

1.1 ABSTRACT

The website will be used to connect the people in very easy, simple and efficient way and one can share their feeling, information, ideas and many more…, the services offered to an individual's choice(s) and availability for making friends among various areas and destinations. A log concerning the registration and requests for friends and various other features by users are also maintained. The website will also provide benefits to verified user(s).

The website, according to the following proposed solution, will ease the connecting people s thereby converging the world into a small system.

One can Register via registration page. They will get confirmation mail on their email id. After they can login.

1.2 OVERVIEW

Social Networking - It's the way the 21st century communicates now. 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.

Social network is the mapping and measuring of relationships and flows between people, groups, organizations, computers, URLs, and other connected information/knowledge entities. The nodes in the network are the people and groups while the links show relationships or flows between the nodes. Social network provides both a visual and a mathematical analysis of human relationships.

Social Networking Website project itself is a huge project comprising various features like profile updating, friend’s list organization and various other application to enhance the overall look and feel of the website. However, in this project I am basically working on two essential feature or module (PROFILE MANAGEMENT & FRIENDS ORGANIZATION).

PROFILE MANAGEMENT module maintains the profile of a user like name, like, dislikes, hobbies, status etc. FRIENDS ORGANIZATION module maintains the friend list, handles request and sends request to the other user.

Profiles and Friends lists are two key features on social network sites. The third is a public commenting feature ('Testimonials', 'Comments', 'The Wall'). This feature allows individuals to comment on their Friends' profiles. These comments are displayed prominently and visible for anyone who has access to that profile.

1.3 OBJECTIVE

The objective of the project is to explain and elaborate the concept of "Social Networking Sites" to the users, hence providing a reliable and efficient Communication online so as to assist users to afford it without much trouble.

- To have attractive and Secure Login page to access
- Make new user account in more user friendly and proper validation of details
- Search People easily on entire network
- Send Friend Request to other users to make friends
- Add friends to your friend box accept request
- Creating a public profile having social, professional and personal information
- Ease of editing of profile anytime
- Chat with Online friends
- Upload and Share Images on network
- Reply directly to incoming user messages
- Post Advertisement of products
- Administration page to keep eye on user operation
- Easily password recovery processing
- Generating Image from given text
- Share videos
- Remove Friends

2 PLATFORM USED

2.1 HARDWARE REQUIREMENT AND SOFTWARE REQUIREMENT

Hardware Requirement

Minimum 2GB RAM

Dual core /p4 processor

Minimum 80GB Hard disk

Windows 95/98/XP/7/8/10 or later, Linux, Ubuntu, Mac

Software Requirement

IIS configured server.

Unlimited/limited bandwidth.

.net framework 4.0 supported.

Unlimited/limited storage.

2.2 DEVELOPMENT PLATFORM SPECIFICATION

Hard Disk 1TB,

Main memory 8GB RAM,

Operating system: - windows 10

Front End Tool: - Microsoft Visual studio 2017

Back End Tool: - Microsoft visual SQL client

Processor: - Intel i5-8250U CPU @ 1.60GHz

System Type: - 64 bit - OS, x-64 based processor

Programming Language: - C# and Asp.net

2.3 TECHNOLOGY

2.3.1 ASP.NET:

- ASP.NET is a set of Web development tools offered by Microsoft.
- Programs like Visual Studio .NET and Visual Web Developer allow Web developers to create dynamic websites using a visual interface Of course, programmers can write their own code and scripts and incorporate it into ASP.NET websites as well.
- Though it often seen as a successor to Microsoft's ASP programming technology, ASP.NET also supports Visual Basic.NET, Script .NET and open-source languages like Python and Perl.
- ASP.NET is built on the .NET framework, which provides an application program interface (API) for software programmers.
- The .NET development tools can be used to create applications for both the Windows operating system and the Web.
- Programs like Visual Studio .NET provide a visual interface for developers to create their applications, which makes .NET a reasonable choice for designing Web-based interfaces as well.
- In order for an ASP.NET website to function correctly, it must be published to a Web server that supports ASP.NET applications. Microsoft's Internet Information Services (IIS) Web server is by far the most common platform for ASP.NET websites
- While there are some open-source options available for Linux-based systems, these alternatives often provide less than full support for ASP.NET applications.
- ASP.NET is much more robust and reliable and deals with memory leaks and freezes efficiently, it automatically handles memory leaks, when a memory leak is detected a new copy of the script is made and execution starts on that copy, the older copy along with the memory leak is deleted once it finishes executing all the takes that were assigned to it previously.
- Previously ASP supported only a few .NET languages which in a way was a big problem for many developers, however ASP.NET now has in-built support for languages like C#, VB, J Script etc.. Best of all ASP.NET code is compatible with all the major browsers i.e. it works on almost all the browsers.

2.3.2 C# LANGUAGE

C# syntax is highly expressive, yet it is also simple and easy to learn. The curly-brace syntax of C# will be instantly recognizable to anyone familiar with C, C++ or Java. Developers who know any of these languages are typically able to begin to work productively in C# within a very short time. C# syntax simplifies many of the complexities of C++ and provides powerful features such as nullable value types, enumerations, delegates, lambda expressions and direct memory access, which are not found in Java. C# supports generic methods and types, which provide increased type safety and performance, and iterators, which enable implementers of collection classes to define custom iteration behaviors that are simple to use by client code. Language-Integrated Query (LINQ) expressions make the strongly-typed query a first-class language construct. As an object-oriented language, C# supports the concepts of encapsulation, inheritance, and polymorphism. All variables and methods, including the Main method, the application's entry point, are encapsulated within class definitions. A class may inherit directly from one parent class, but it may implement any number of interfaces. Methods that override virtual methods in a parent class require the override keyword as a way to avoid accidental redefinition. In C#, a struct is like a lightweight class; it is a stack-allocated type that can implement interfaces but does not support inheritance. In addition to these basic object-oriented principles, C# makes it easy to develop software components through several innovative language constructs, including the following:

- Encapsulated method signatures called delegates, which enable type-safe event notifications.
- Properties, which serve as accessors for private member variables.
- Attributes, which provide declarative metadata about types at run time.
- Inline XML documentation comments.
- Language-Integrated Query (LINQ) which provides built-in query capabilities across a variety of data sources.

If you have to interact with other Windows software such as COM objects or native Win32 DLLs, you can do this in C# through a process called "Interop." Interop enables C# programs to do almost anything that a native C++ application can do. C# even supports pointers and the concept of "unsafe" code for those cases in which direct memory access is absolutely critical. The C# build process is simple compared to C.

2.3.3 MICROSOFT SQL SERVER

- Microsoft SQL Server is a relational database management system developed by Microsoft. As a database, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network.
- There are at least a dozen different editions of Microsoft SQL Server aimed at different audiences and for different workloads (ranging from small applications that store and retrieve data on the same computer, to millions of users and computers that access huge amounts of data from the Internet at the same time).
- Its primary query languages are T-SQL and ANSI SQL.
- SQL CE databases can support ACID-compliance, but do not meet the durability requirement by default because Auto Flush buffers changes in memory therefore committed transaction changes can be lost. To meet the durability.
- Requirement the commit call on the transaction must specify the immediate flag.
- Like Microsoft SQL Server, SQL CE supports transactions, referential integrity constraints, locking as well as multiple connections to the database store.
- However, nested transactions are not supported, even though parallel transactions (on different tables) are.
- The current release does not support stored procedures or native XML data type either.

  It uses a subset of T-SQL for querying and due to lack of XML support, Query is not supported either.

3 SYSTEM REQUIREMENT ANALYSIS

3.1 REQUIREMENT ANALYSIS

Before Starting Project First of all one had to see Top Social Networking Web Sites Like www.Facebook.com, www. Twitter.com etc. And seen their Facility which they provide.

Then we collected the Information about Top Social Networking Web Sites then we collect information which we want for our Website. We have Seen Facebook's Create Page Facility.

We want following facilities in the website.

- Register /Login
- Make Friends
- View Profile
- Search
- Upload Photo /Video/ Status
- Meme Generator
- Chat
- One to One Message

3.2 FUNCTIONAL REQUIREMENT

This social networking site will be managed two sides.

1. User Side
2. Admin side

User side

1 REGISTER

User need to register for accessing the site. They will get a temporary password in their email which can be change afterwards.

2 WALL

User can share photo, photo with or without status, only status, video to their friends.

3 SEARCH

User can search another user and can view their public profile and send friend request.

4 FRIEND MODULE

One can accept or reject their friend request. Or one can delete friend even after adding as friend.

5 CHAT

User can chat with their friends.

6 EDIT DETAILS

User can edit their information, profile pic and can change password.

7 FORGOT PASSWORD

User can apply for reset password.

8 DEACTIVATE ACCOUNT

User can deactivate their profile.

9 FEEDBACK

User can send feedback to the creators

10 MEME GENERATOR

User can generator meme /Image from Text. Text to Image generator.

Admin side

1 MANAGE USERS

Admin can manage users, view their details and if necessary, they can remove or deactivate their account

2 MANAGE POSTS

Admin can view all posts and if necessary, they can remove particular post.

3 SEND NOTICE

Admin can send notice to user

4 VIEW FEEDBACK

Admin can view all feedback given by users

3.3 NON-FUNCTIONAL REQUIREMENT

SECURITY

Pages of the website must be access in the way they were intended to be accessed. Included files shall not be accessed outside of their parent file.

Administrator can only perform administrative task on pages they are privileged to access. Customers will not be allowed to access the administrator pages.

EFFICIENCY AND MAINTAINABILITY

Page loads should be returned and formatted in a timely fashion depending on the request being made.

Administrators will have the ability to edit the aspects of the order forms, product descriptions, prices and website directly

3.4 FEASIBILITY STUDY

- Once scope has been identified (with the concurrence of the customer), it is reasonable to ask: “Can we build software to meet this scope? Is the project feasible?” All too often, software engineers rush past these questions only to become mired in a project that is doomed from the onset.
- When we are developing the system (software), we must know the proposed system will be feasible or i.e. practically implemented or not it may possible the proposed(candidate) system may not implemented due to many reasons like it may take long time in development than the specified time limit ,cost may increase than proposed one etc.
- Therefore, we must analyze the feasibility of the system.
- Feasibility is the analysis of risks, costs & benefits relating to economics, technology & user operation. There are several types of feasibility depending on the aspect they covers. Some important feasibility is as follows: -

1. Technical Feasibility

2. Operational Feasibility

3. Economic Feasibility

1. Technical Feasibility

- Necessary technology exists to do what is suggested and required by the organization.
- The proposed equipment's have the technical capacity to hold the data required to use the new system.
- The proposed system will provide adequate response to inquiries regardless of the location if users.
- The hardware needed to develop and implement the system is adequate.

2. Operational feasibility

- Operational Feasibility is a measure of how people are able to work with system. This type of feasibility demands if the system will work when developed and installed.
- Since website is very user friendly so users will find it comfortable to work on this site.

3. Economic feasibility

A system that can be developed and that will be used if installed must still be a good investment for the organization. Financial benefits must equal or exceed the costs.

The financial and economic issues raised are as under:

- No extra cost is incurred for developing the system. As required software are already used by the department.

- No extra cost for the modification or addition of software and hardware will require in case of future expansion of the current system.

3.5 RISK IDENTIFICATION AND ANALYSIS

- **Risk Identification**
  - Some roughly predicted risks which may arise in our project development are
- **Project Risk:**
  - Save electricity system is a scientific application. Developers & user must have basic knowledge of functional & technical areas of save electricity system.
- **Technical Risk:**
  - Highly functioned module is used so if minimum hardware requirements are only fulfilled then software may be affected by low execution speed.
  - As the software is been made for scientific purpose I may not get popular in regular market. The user/operator must have some basic knowledge of advance technology.

Risk Analysis:

- It is employed in the broadest sense to include:

- **Risk Communication:**
  - It involves an interactive dialog between stack holders & risk assess and risk managers which actively informs the other process

Risk analysis = risk assessment + risk management + risk communication.

- **Risk Assessment:**
  - It involves identifying source of potential harm, accessing the likelihood that harm will occur and the consequences if harm does occur.

Risk Planning:

- Interviewing: a greater number of items the requirements were gathered & filtered so more refined data was collected so the chances of changes in software would be minimal & risk of the in-regular communication could be avoided.

Here in given project, risk is security and privacy. We need to maintain it first. For that 2-way authentication and every login mail can be a better option.

If it’s industrial deployment project one need to maintain the deployment time

3.6 LIST OF MODULES

Here, we will describe some modules or facilities of the social networking site.

- Search Module
- Post Module
- Friend Module
- Gallery
- Send SMS
- Messages
- Meme Generator
- Account

- **Search Module:** A registered user can search other user by name and send them friend request and view his profile and picture gallery and also send him messages.
- **Post Module:** In this post facility user can share their thoughts to other user via writing a post and users can read and making reply by like post and also share the post in his account using share button. The post is a private shared message which can read by only our friends' network.
- **Friend Module:** A friend module is main base module for all social networking site. we all familiar with this word add friend in social networking world. The same functionality we have developed in our friend module, sending friend request to other user and request would be accepted or rejected by request received user.
- **Gallery Module:** A gallery module allow user to create albums and upload images in album to create picture gallery. The user can also manage the gallery can edit, delete images and albums.
- **Send SMS:** In our system we provide facility to send text messages on mobile using our website. here we have used third party API for sending sms on mobile.
- **Send Messages:** All users can send and receive messages to and from his friends. All user have an inbox to keep the received messages and he can reply and delete message as per his need.
- **Meme Generator:** The meme generator is a concept to write a text on picture. In a meme generator module user can write text message on image and share that image via post or upload image in gallery in our website.
- **User Account:** In Account section user can update his profile detail and change profile picture, change login password.

3.7 PROCEDURE

The pre-requisites required for tender site is the basic understanding between the user and the IT team. For developing the tender portal there is a step wise procedure to be followed.

The following are the steps to be followed:

1 PROCESS FLOW

First, we need to design a process flow of the tender portal, i.e. how to design and in which sequence it should follow, when it is actually implemented.

2 PROTOTYPE

It is a basic outlook of the website or the app, it is required to be user friendly.

3 DATA BASE

A basic information about the data to be entered in the requires blanks and the place where these data would get stored.

4 BUSINESS REQUIREMENT DOCUMENT

This provides a brief information about the designed prototype and helps us to get familiar with the application.

Objectively defining the attributes required for specific role in specific dept. for the approval of the tender as an HOD. Covering all the functional areas by manager i.e. attributes required in Technical (Knowledge/skill), Safety (Knowledge/Skill) and Behavioral skill areas for any functional position in dept. to be defined. Likewise, to be done for all functions and role therein. Based on above attributes, a perfect tender portal is designed.

3.8 PROCESS MODEL

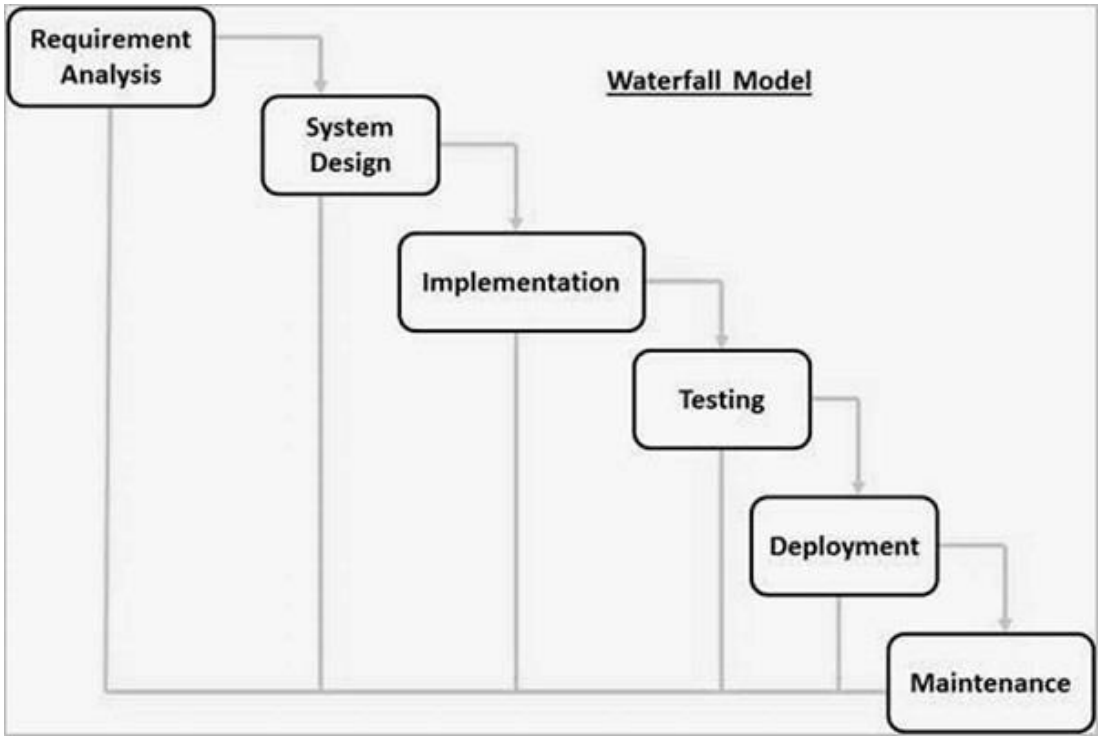
Waterfall Model

The sequential phases in Waterfall model are −

- **Requirement Gathering and analysis** − All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document.
- **System Design** − The requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture.
- **Implementation** − With inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.
- **Integration and Testing** − All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
- **Deployment of system** − Once the functional and non-functional testing is done; the product is deployed in the customer environment or released into the market.
- **Maintenance** − There are some issues which come up in the client environment. To fix those issues, patches are released. Also, to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

All these phases are cascaded to each other in which progress is seen as flowing steadily downwards (like a waterfall) through the phases. The next phase is started only after the defined set of goals are achieved for previous phase and it is signed off, so the name "Waterfall Model". In this model, phases do not overlap.

3.8.1 DIAGRAM OF WATERFALL MODEL:



3.8.2 ADVANTAGES OF WATERFALL MODEL:

- Simple and easy to understand and use
- Easy to manage due to the rigidity of the model. Each phase has specific deliverables and a review process.
- Phases are processed and completed one at a time.
- Works well for smaller projects where requirements are very well understood.
- Clearly defined stages.
- Well understood milestones.
- Easy to arrange tasks.
- Process and results are well documented.

3.8.3 DISADVANTAGES OF WATERFALL MODEL:

- Needs good planning and design.
- Needs a clear and complete definition of the whole system before it can be broken down and built incrementally.
- Total cost is higher than waterfall.

3.8.4 WHEN TO USE THE WATERFALL MODEL:

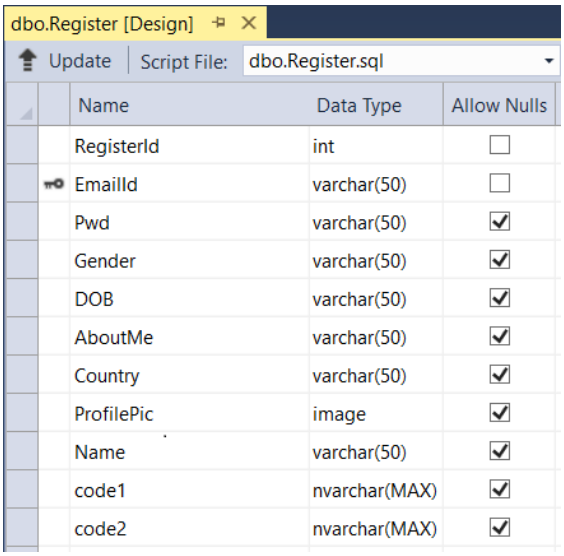
Every software developed is different and requires a suitable SDLC approach to be followed based on the internal and external factors. Some situations where the use of Waterfall model is most appropriate are −

- Requirements are very well documented, clear and fixed.
- Product definition is stable.
- Technology is understood and is not dynamic.
- There are no ambiguous requirements.
- Ample resources with required expertise are available to support the product.
- The project is short.

4 SYSTEM ANALYSIS AND DESIGN

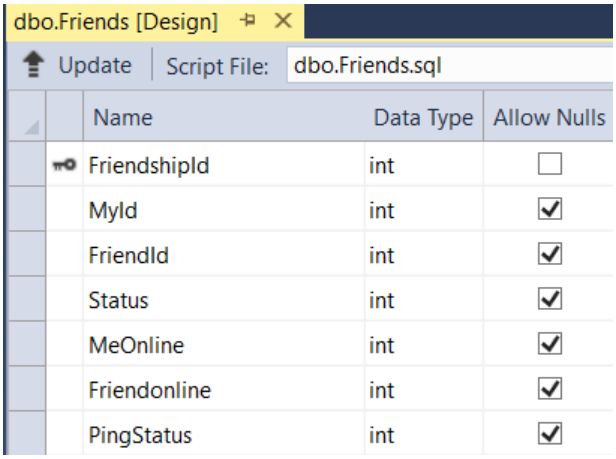
4.1 DATA DICTIONARY

1 REGISTER



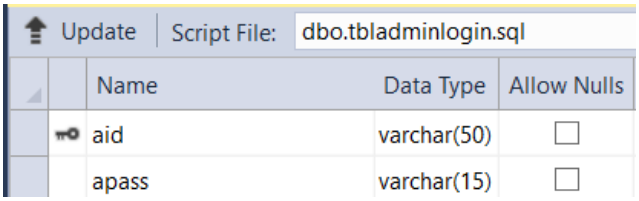
Name	Data Type	Allow Nulls
RegisterId	int	☐
EmailId	varchar(50)	☐
Pwd	varchar(50)	☑
Gender	varchar(50)	☑
DOB	varchar(50)	☑
AboutMe	varchar(50)	☑
Country	varchar(50)	☑
ProfilePic	image	☑
Name	varchar(50)	☑
code1	nvarchar(MAX)	☑
code2	nvarchar(MAX)	☑

2 FRIENDS



Name	Data Type	Allow Nulls
FriendshipId	int	☐
MyId	int	☑
FriendId	int	☑
Status	int	☑
MeOnline	int	☑
Friendonline	int	☑
PingStatus	int	☑

3 TBLADMINLOGIN



Name	Data Type	Allow Nulls
aid	varchar(50)	☐
apass	varchar(15)	☐

4 POSTS

dbo.Posts [Design]

Update | Script File: dbo.Posts.sql

Name	Data Type	Allow Nulls
PostId	int	☐
FromId	int	☑
ToId	int	☑
Post	varchar(MAX)	☑
PostDate	varchar(50)	☑
photo	nvarchar(MAX)	☑

5 VIDEOS

dbo.Videos [Design]

Update | Script File: dbo.Videos.sql

Name	Data Type	Allow Nulls
Id	int	☐
Video	varbinary(MAX)	☑
Video_Name	nvarchar(50)	☑
Video_Size	bigint	☑
FromId	int	☑
PostDate	varchar(50)	☑
		☐

6 CHATBOX

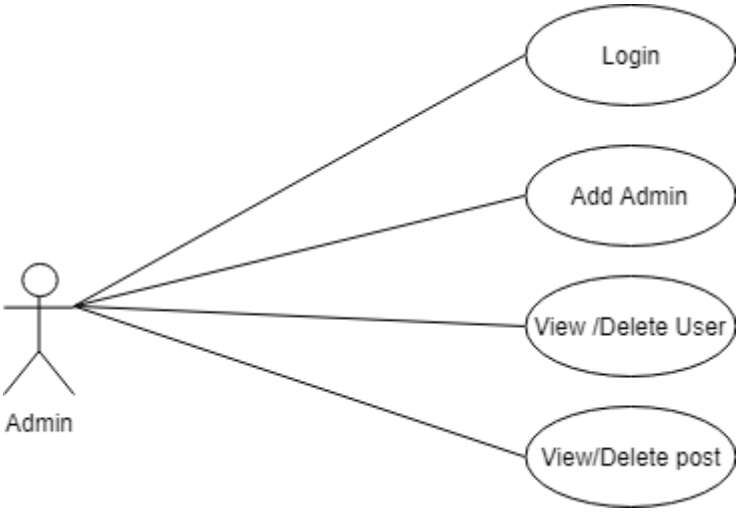
dbo.Chatbox [Design]

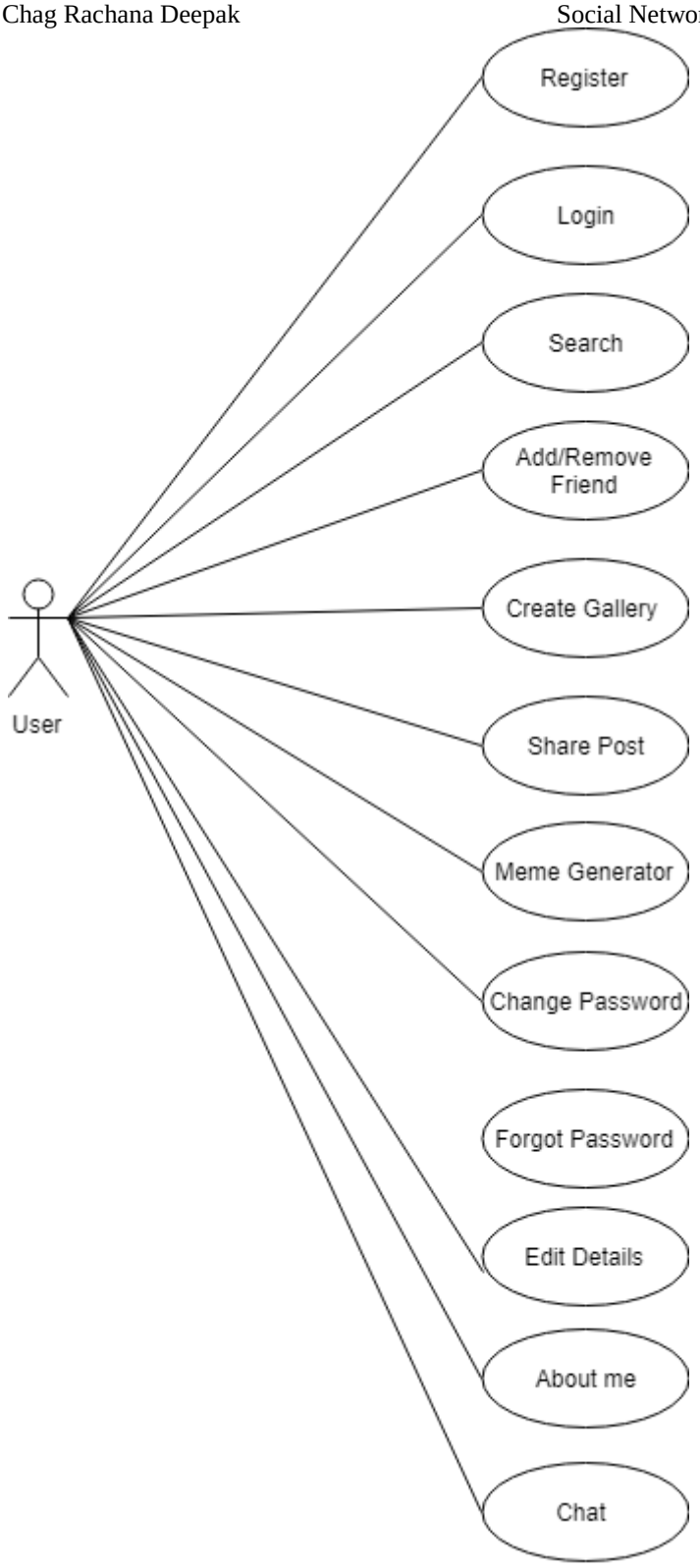
Update | Script File: dbo.Chatbox.sql

Name	Data Type	Allow Nulls
ID	int	☐
Sender	varchar(50)	☐
Reciever	varchar(50)	☐
Message	varchar(MAX)	☐
Date	date	☐
Time	time(7)	☐
Image	nvarchar(MAX)	☑

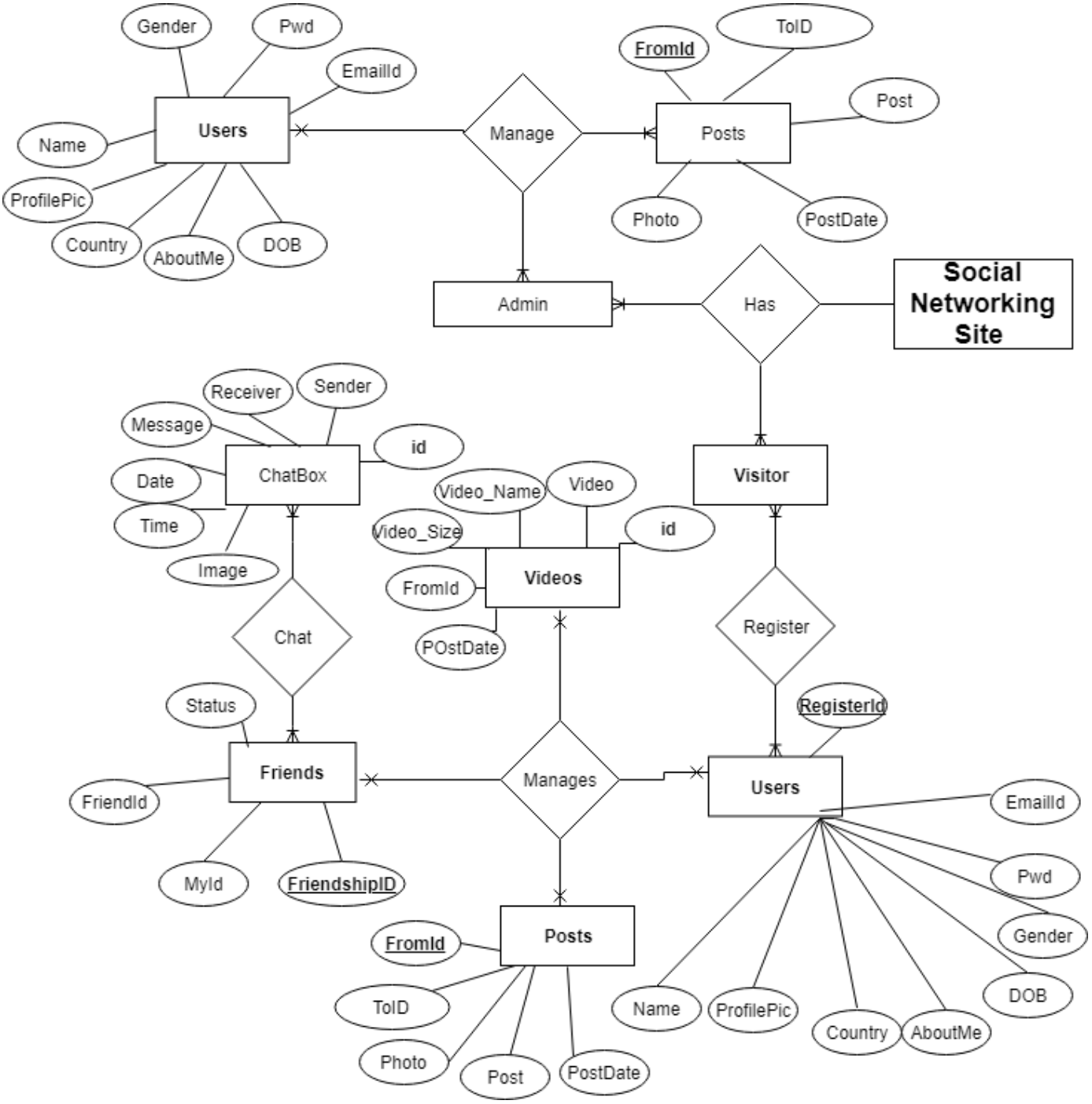
4.2 DATA MODELING

4.2.1 USE CASE DIAGRAM

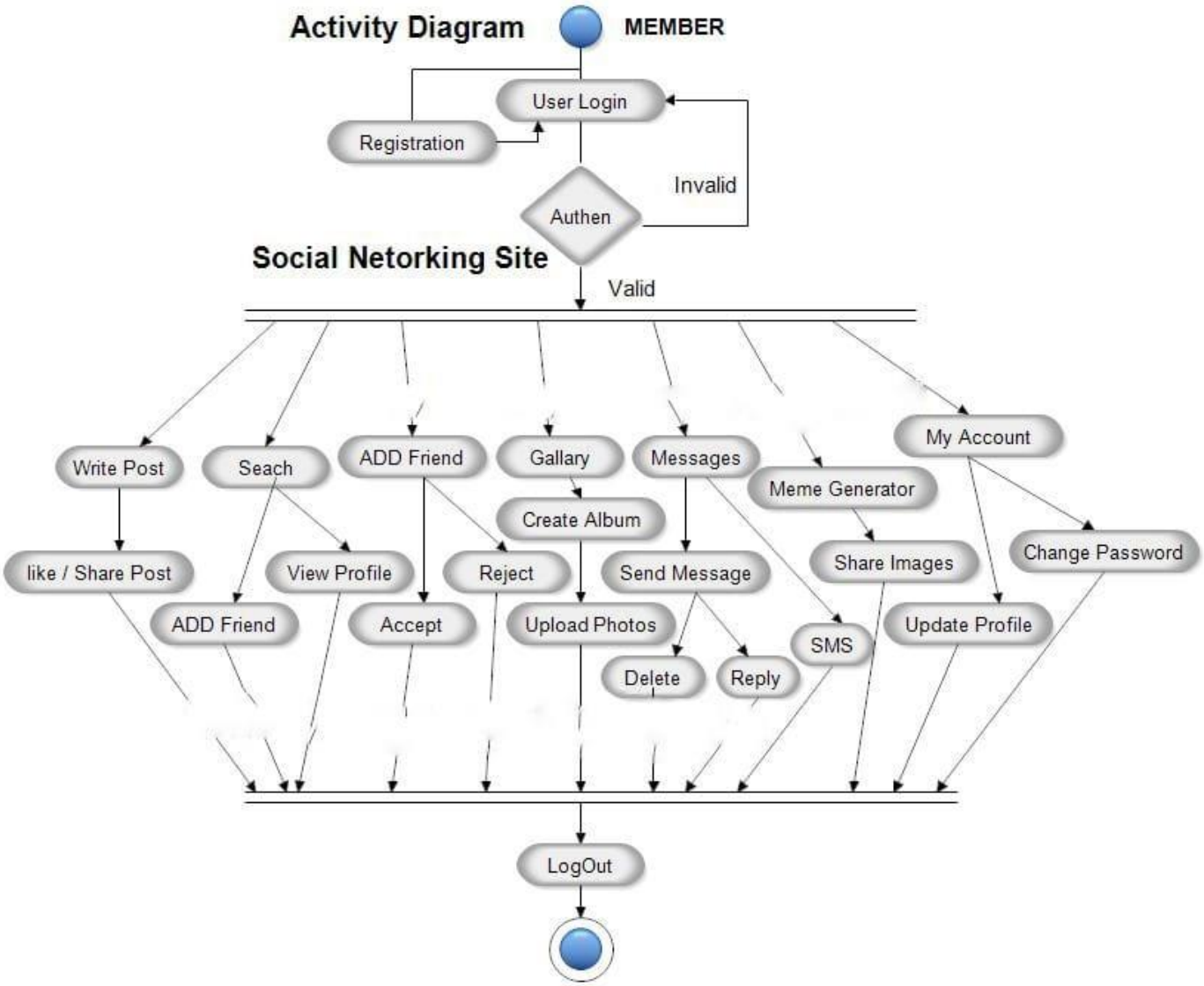



Register
Login
Search
Add/Remove Friend
Create Gallery
Share Post
Meme Generator
Change Password
Forgot Password
Edit Details
About me
Chat
User

4.2.2 E-R (ENTITY-RELATIONSHIP) DIAGRAM

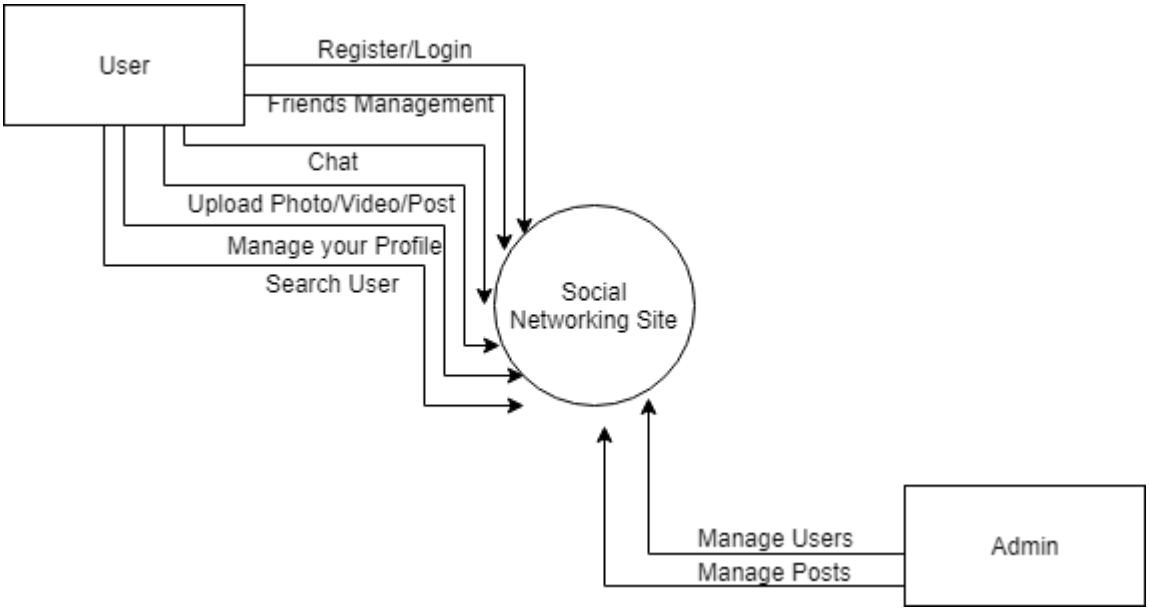


4.3 ACTIVITY DIAGRAM

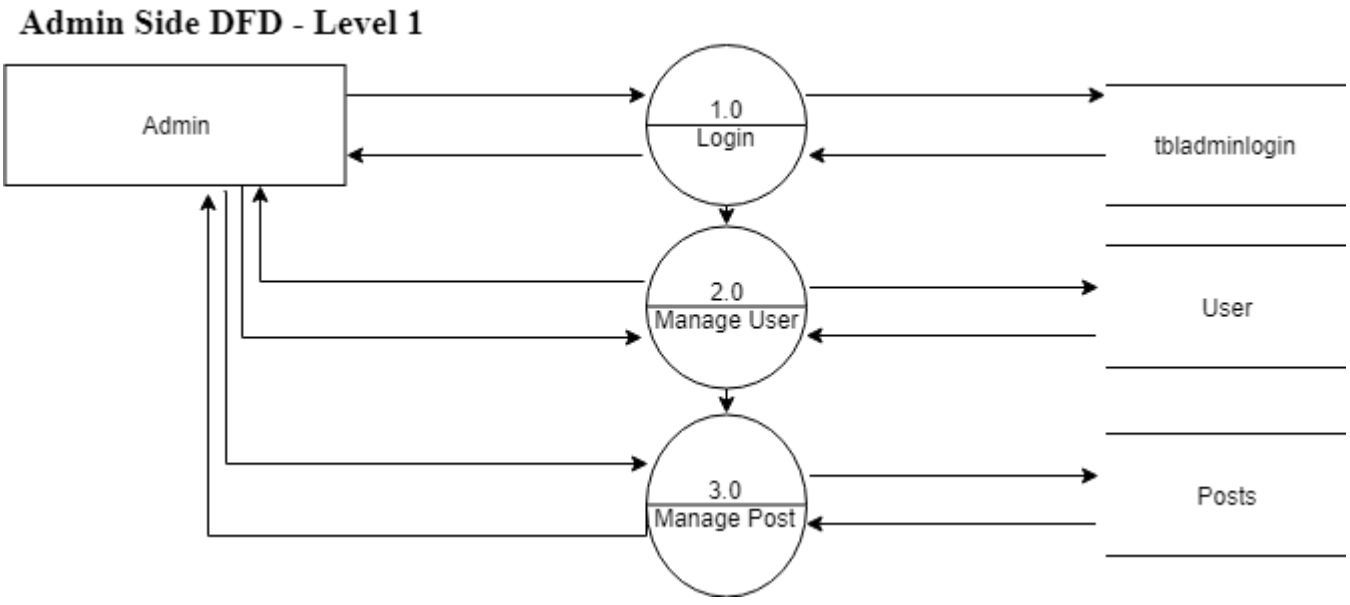


4.4 DATA FLOW DIAGRAM

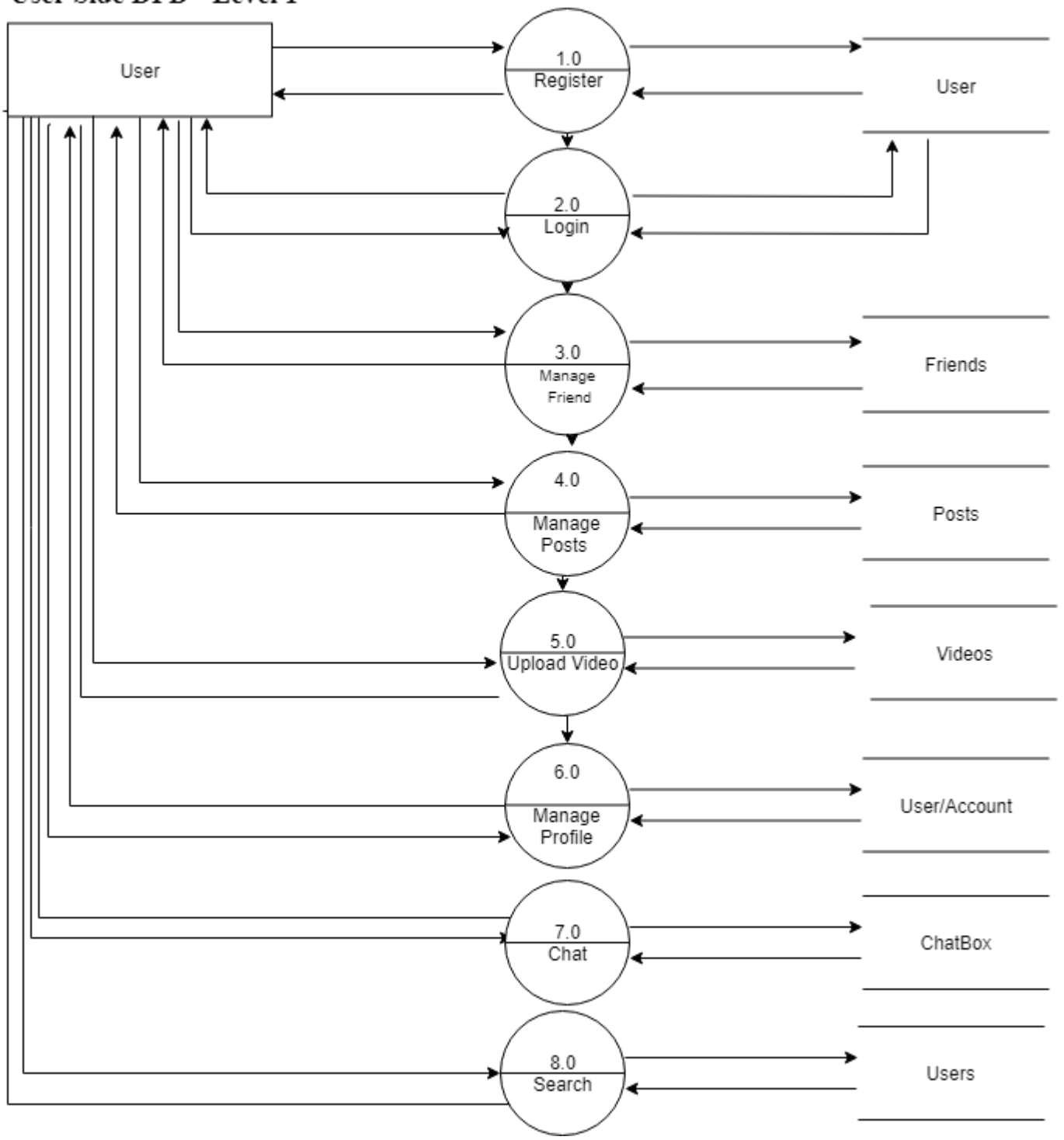
4.4.1 CONTEXT LEVEL DIAGRAM (LEVEL 0)



4.4.2 DFD – LEVEL 1

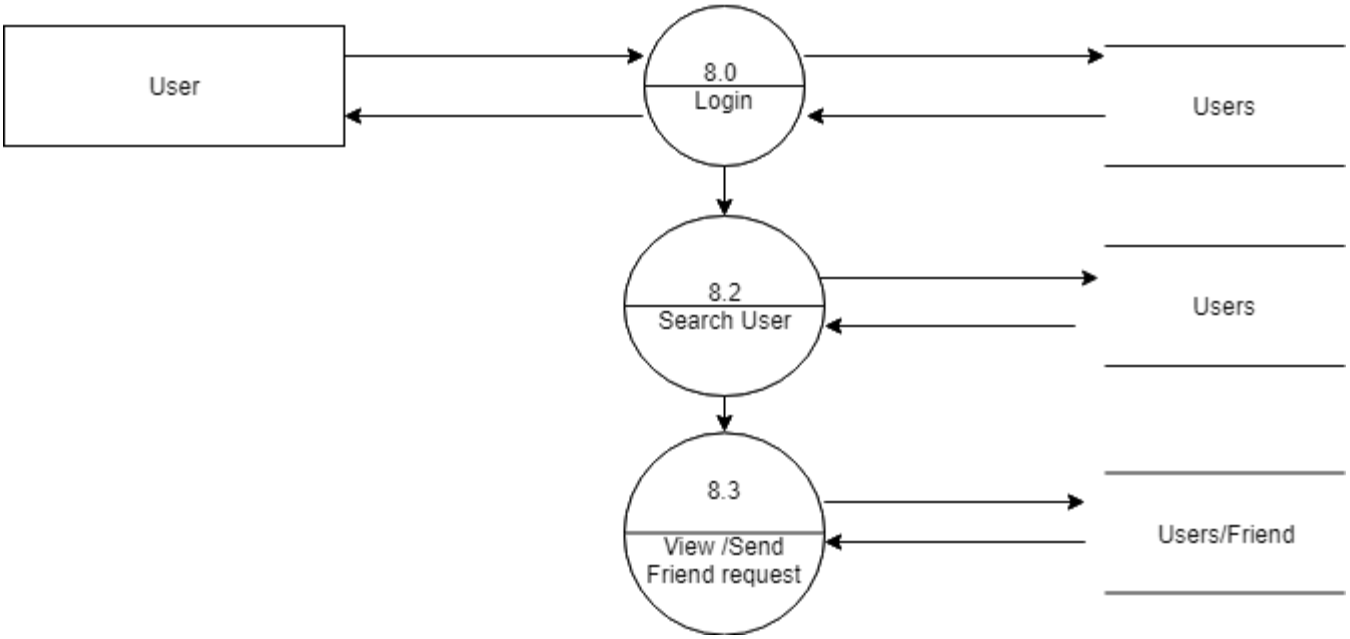


User Side DFD - Level 1

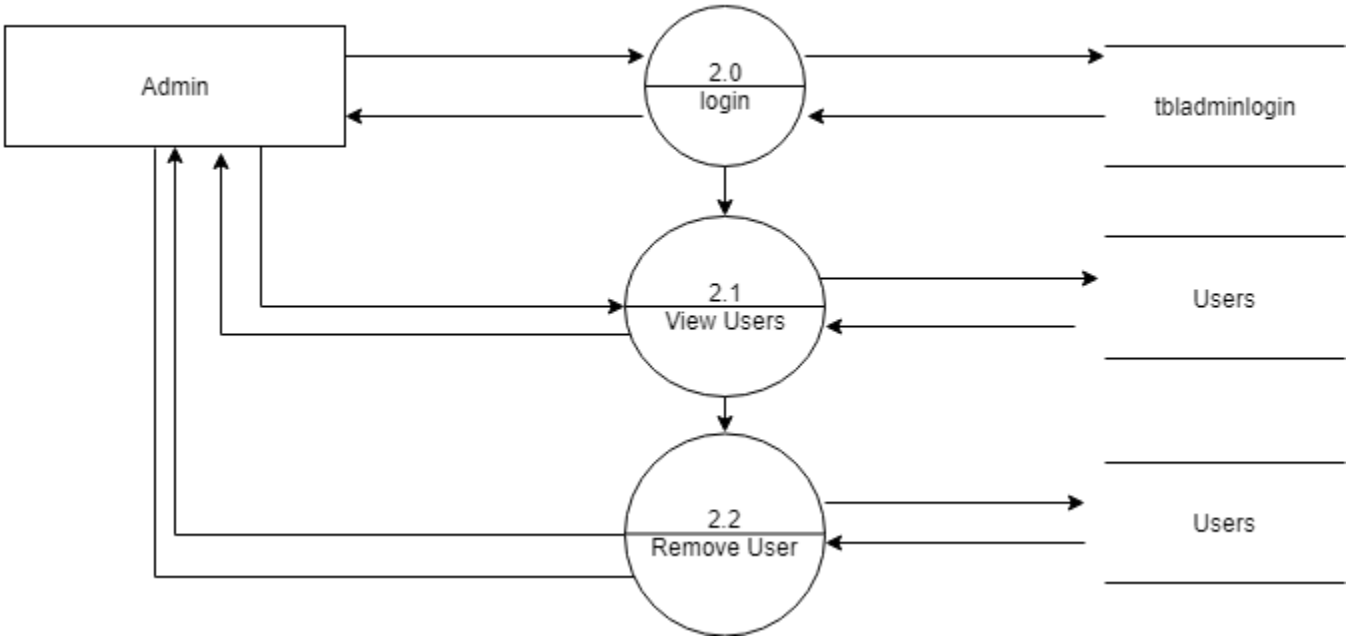


4.4.3 DFD – LEVEL 2

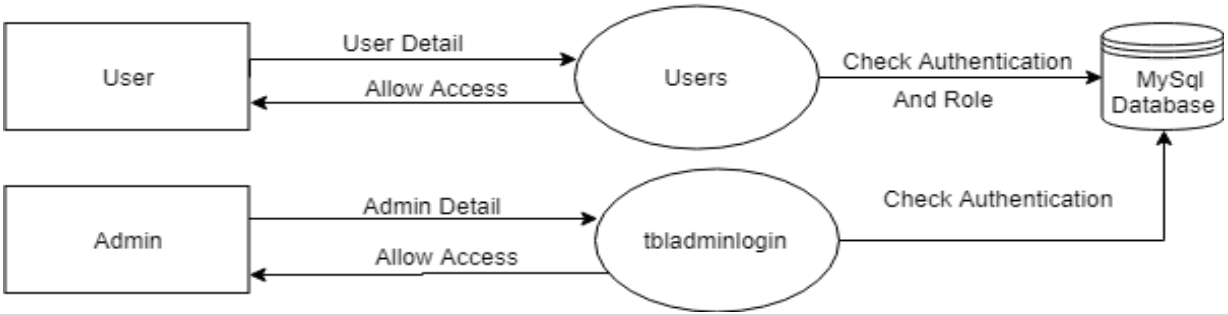
User Side DFD - Level 2 (8.0)



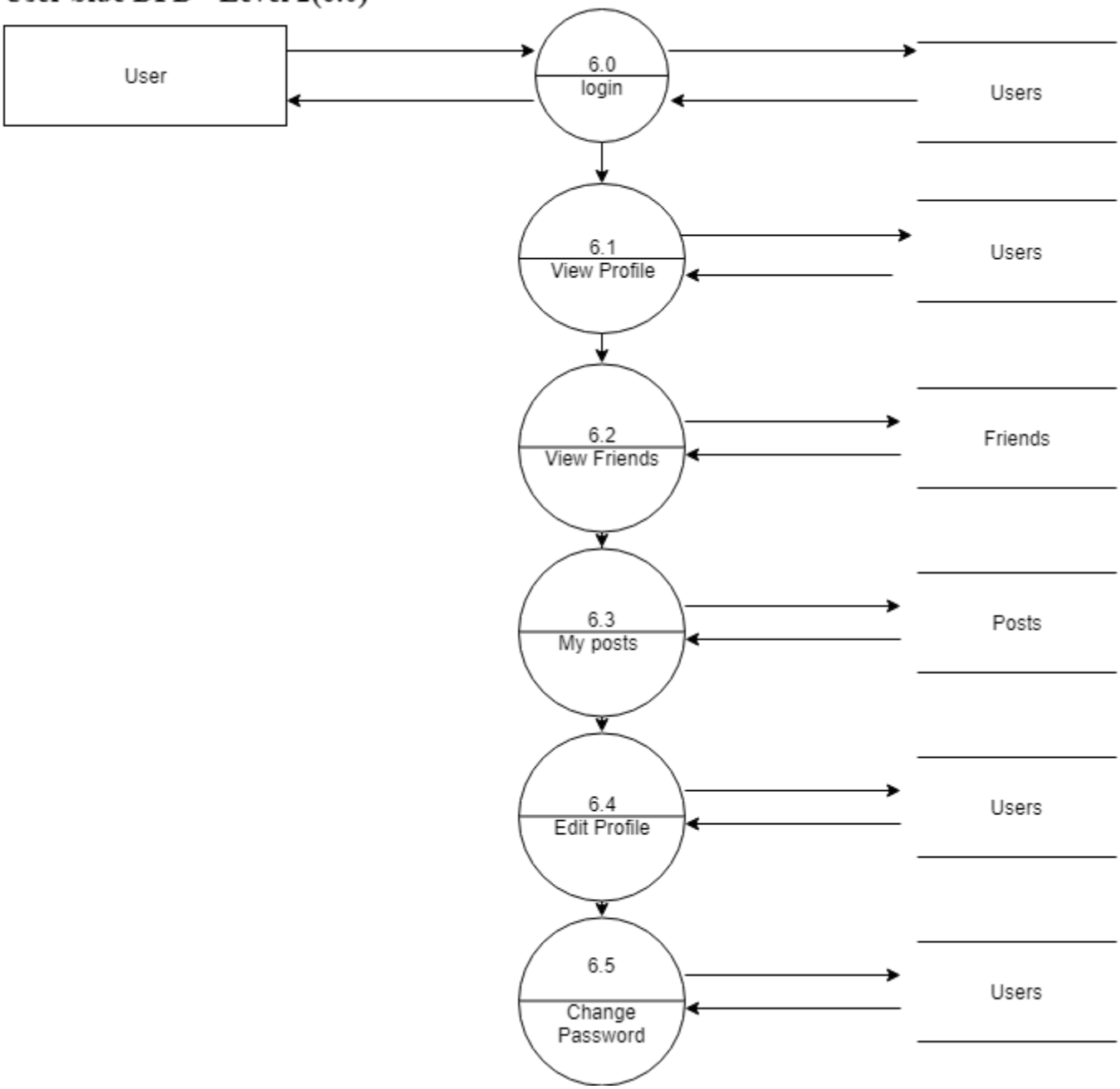
Admin Side DFD - Level 2 (3.0)



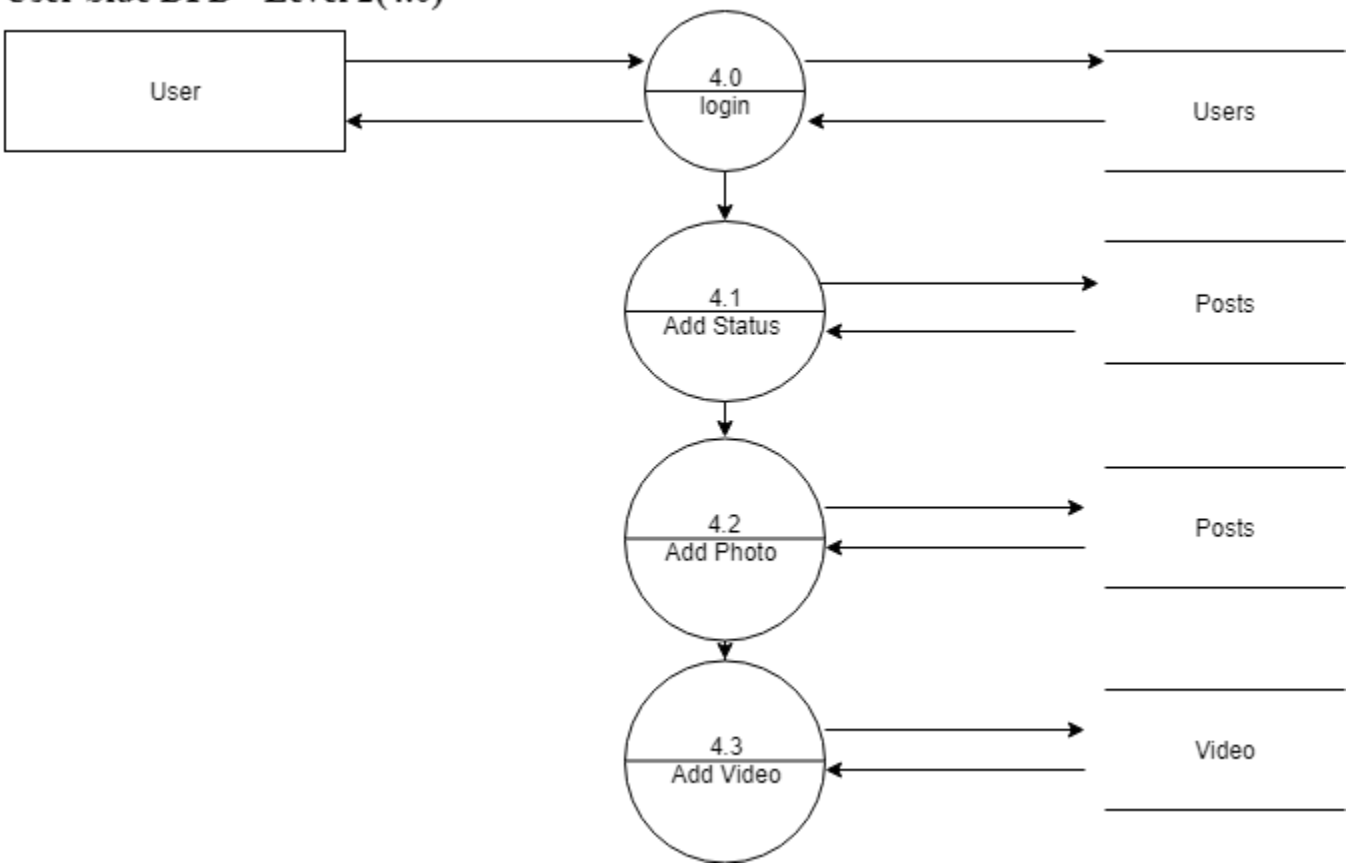
DFD - Level 2 (Login)



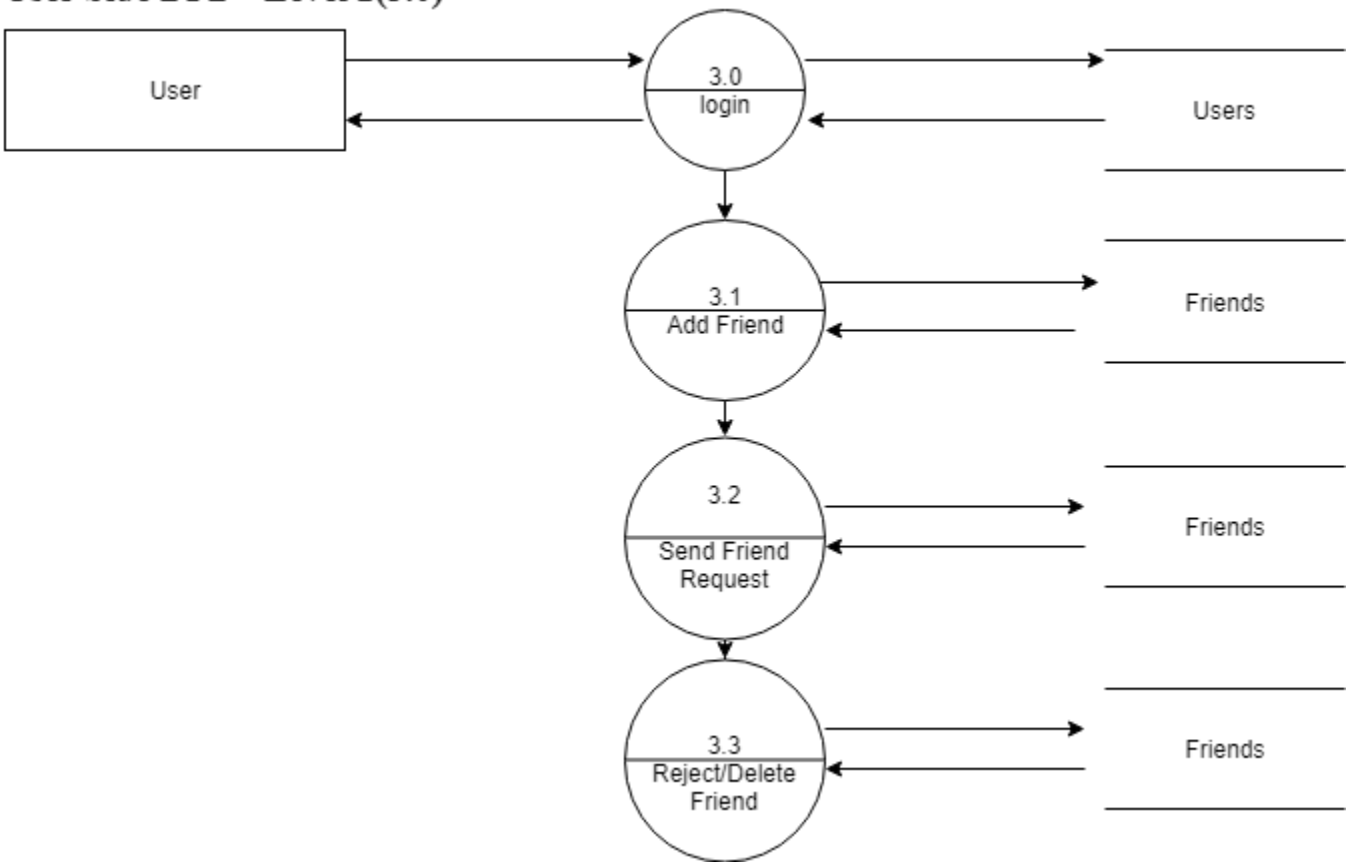
User Side DFD - Level 2(6.0)



User Side DFD - Level 2(4.0)



User Side DFD - Level 2(3.0)



5 SUMMERY

5.1 ADVANTAGE

Social Networking site is a platform where one can connect with their friends and family. Where they can share their memories, share jokes, memes. Can advertise their product and what not!

It’s a platform to meet new people around the globe and to know their language, culture and much more.

5.2 CONCLUSION

While developing the system a conscious effort has been made to create and develop a software package, making use of available tools, techniques and resources – that would generate a proper system for ONLINE SOCIAL NETWORKING.

While making the system, an eye has been kept on making it as user-friendly. As such one may hope that the system will be acceptable to any user and will adequately meet his/her needs. As in case of any system development process where there are a number of short comings, there have been some shortcomings in the development of this system also.

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And the required guidance, suggestions to develop website was given by faculty, staff members, family and friends.