Indian Institute of Information Technology,

Vadodara

Web Technology

12th Nov 2016

Project Report On

BuMpy-

your own virtual world

A Social Networking Site

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Submitted to-

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Abstract

People have used the idea of “Social Network” in a very broad way over a decade to connect to each other, to share ideas to each other as a very large scale from interpersonal to international.This is a project of building a social networking site using java server pages (Jsp) and servlets. In this social networking site user can do many functionalities like add friend, find friend, add Post, like and comment post and also can send messages, receive messages etc. We did this project to make a social networking site

for our own college and also to learn the basic functionalities and some deep areas where the java language is used at server side also. This uses purely java environment.

Introduction

The title of our project is Bumpy,your own virtual world, for connecting with our local friends, relatives etc for real-time information sharing, receiving support from like-minded individuals, accessing news in real life etc.

The front-end will be of HTML pages with JavaScript for client side validation whereas all business logics will be done in Java Servlet which reside at middle layer. And these layers will interact with third layer of database, which will be MySql database. The web server will be Apache. We are using Model View Controller (MVC) method for our website.

Purpose

This document is the project report of out for the social networking Website named Bumpy.The purpose of this document is to describe the functionality, requirements and general interface of our social networking website.

Project Scope

Today there are lots of social networking sites working around us and we are using them actively as well. So why did we pick up this as our project?

We planned in our first year to create a social networking site for our friends circle like in school, college or for our colleague because as one of the IT institutes it should have its own social network where all students, faculties and administration can actively involve. We won't be able to build the whole working dynamic website in the period of this course because of the hectic schedule but we have completed basic functionalities and we have a plan to gradually develop a good Website so that the administration can allow us to deploy it in our campus. This Project we are taking as a stepping stone to our social network arena for our college.

What made us do this Project

As we know today's world is full of internet based thing. Generally we use the social networking sites like Facebook, Linkedin etc. for connecting to the other people throughout the world, So we thought of making a social networking site which can be used as a social networking site for of our IIIT.

Background Study needed

For making this project we referred to some existing social networking sites like Facebook, LinkedIn etc. to see how they manage such a large amount of users, how the flow goes from one page to another page.
But all this was not enough, we also had to make it purely using the java environment.
So, the study needed was

- About apache server
- Jsp language
- Scriptlets & servlets
- Html, css, Javascript, jquery and other required knowledge for making a dynamic website.

- MVC (model, view, controller)

Resources required

The resources required for this project are:-

1. Xampp (for getting apache server for connection, and also for database).
2. Mysql (database)
3. Eclipse mars (for making code)

Functional Requirements:

Major features of our social networking website are:

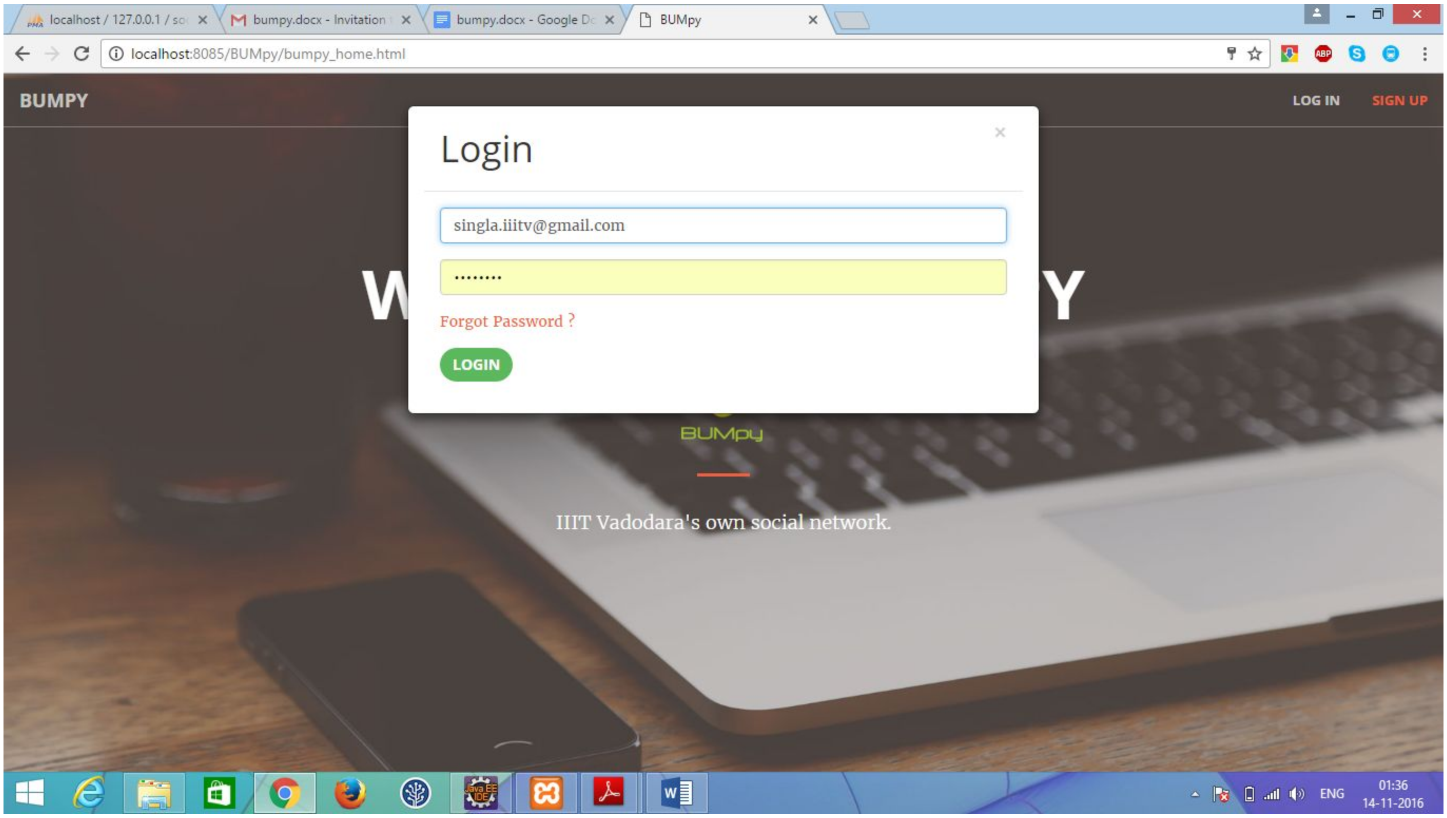
- LOGIN/LOGOUT using sessions
- SIGN UP Feature for new users
- Can see the posts of his/her friends as well of his/her own as well
- Can add his/her posts
- Password Change management
- Forgot password
- Can find various people
- Search for new friends
- Add friends
- Accept request of friends
- Message to friends
- View messages received and reply
- Profile page for every user

Key Features:-

The Basic features of our website are:

1. Login:

At the time of Login, user will be asked his/her username and password. User has to authenticate himself by entering the correct username and password otherwise he/she won't be logged in.



singla.iiitv@gmail.com

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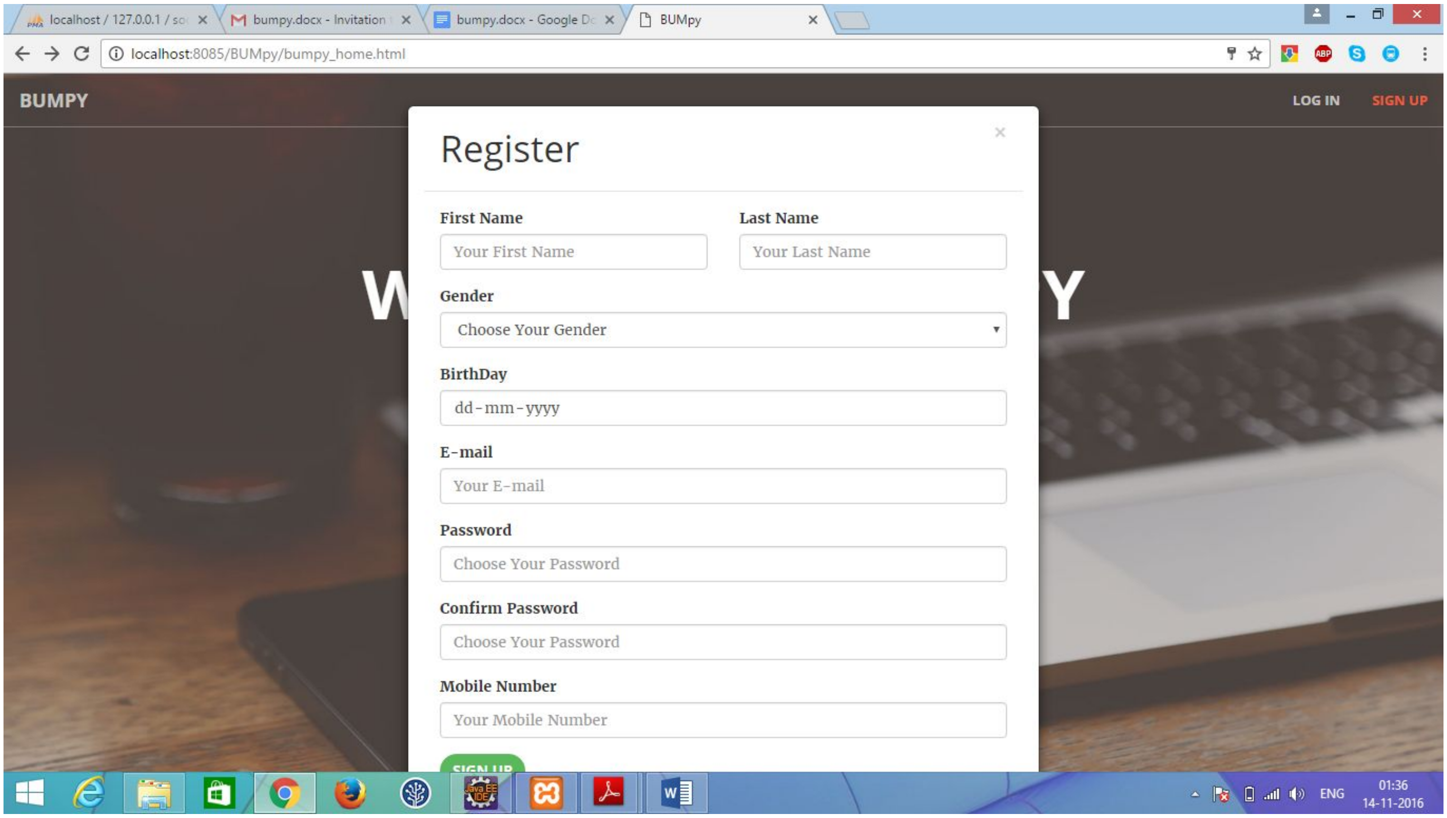
IIIT Vadodara's own social network.

2. Sign Up:

First time user or who are not registered on our website can sign up on our website. They will be asked information like first name, last name, email, password,date of birth, gender,mobile no etc to create account on our website. He/she will have to fill the details to start using our social network.



Register

First Name
Your First Name

Last Name
Your Last Name

Gender
Choose Your Gender ▾

BirthDay
dd-mm-yyyy

E-mail
Your E-mail

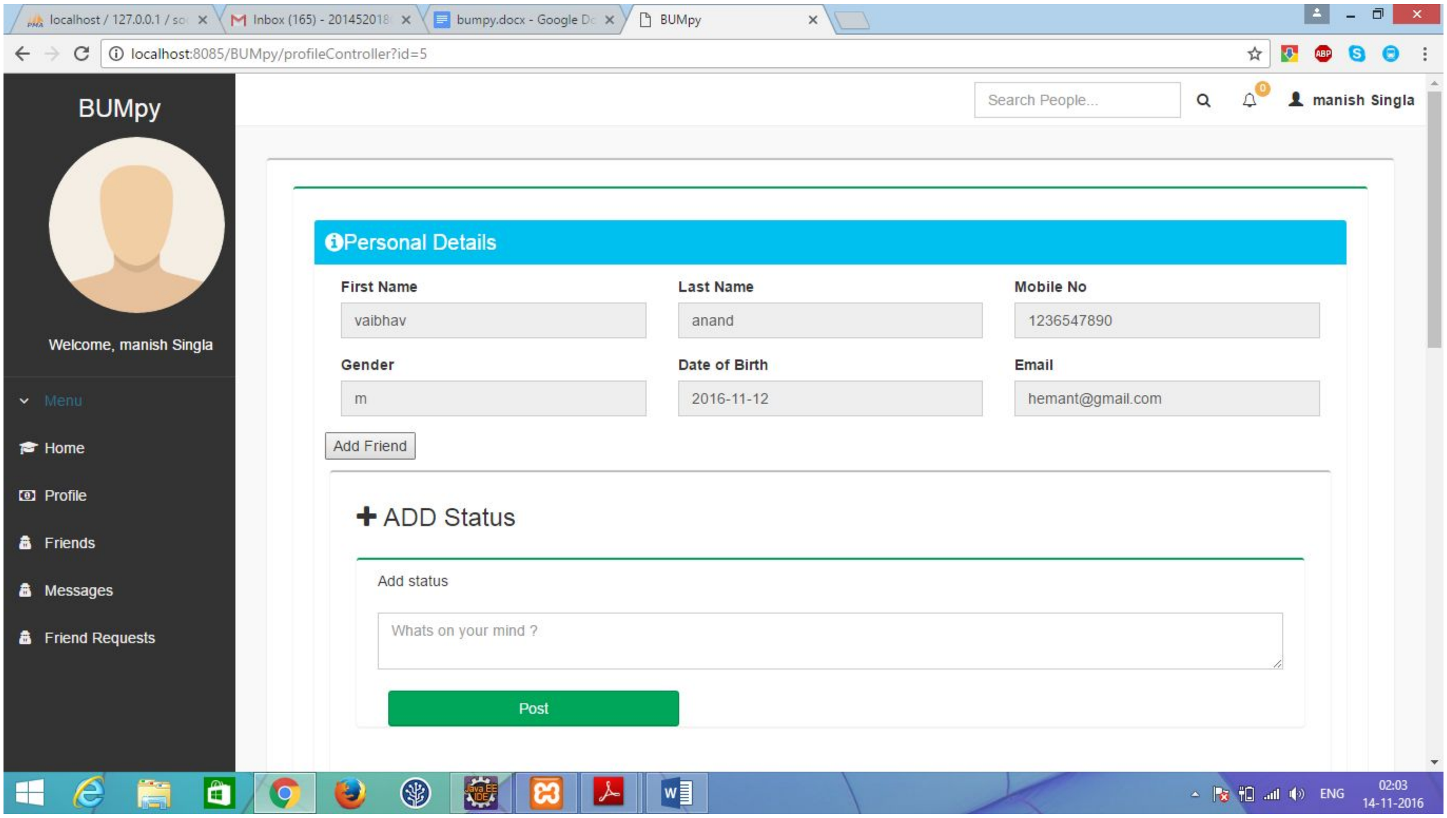
Password
Choose Your Password

Confirm Password
Choose Your Password

Mobile Number
Your Mobile Number

3.Add Friend:

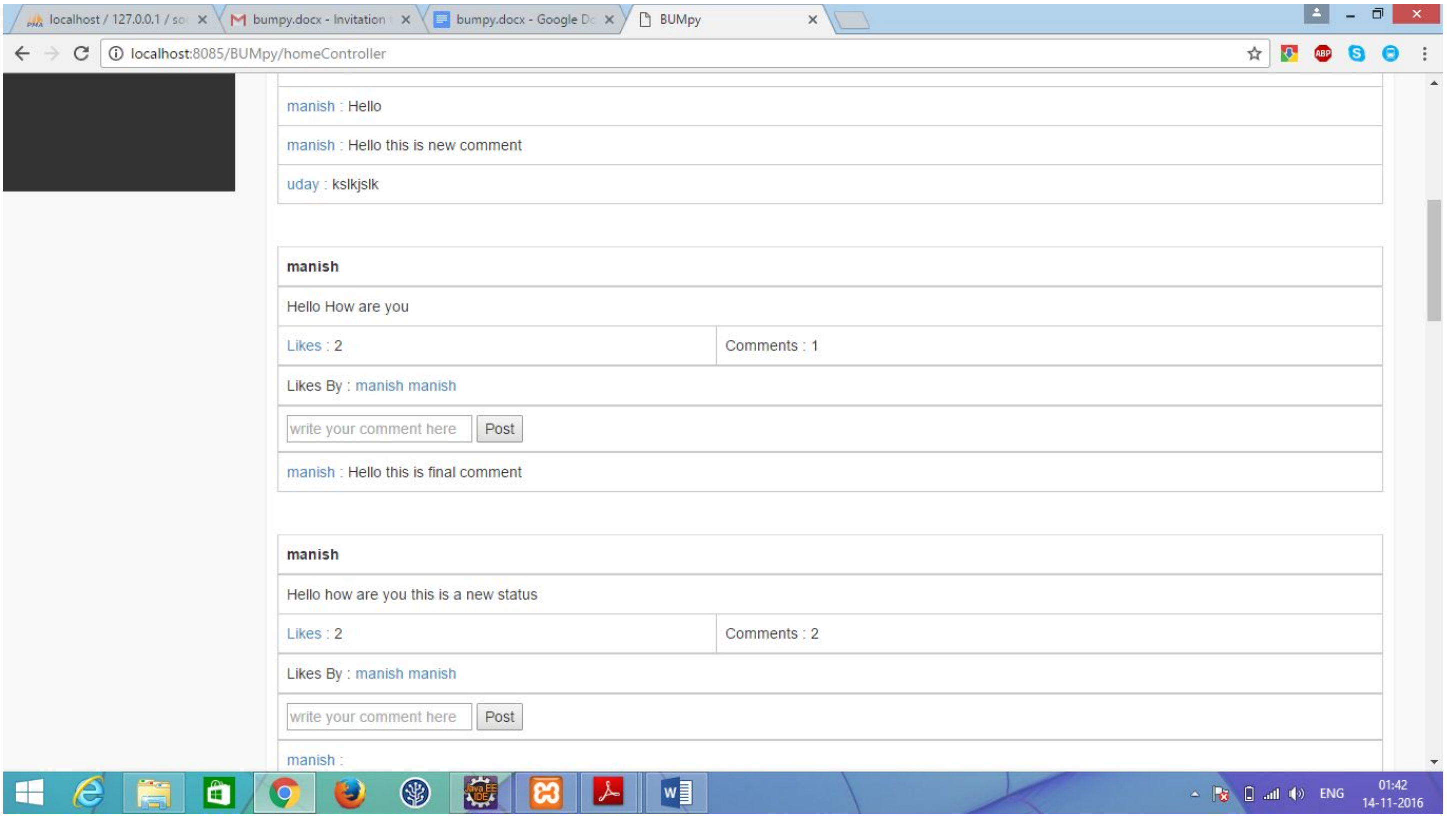
After logging in of by a registered user, he/she can make new friends who are also registered on our website.He/she can click add friend button to add him/her in his/her friendlist.



First Name	Last Name	Mobile No
vaibhav	anand	1236547890
Gender	**Date of Birth**	**Email**
m	2016-11-12	hemant@gmail.com

4. News Feed:

User can see other’s posts,other’s comments on their post.He/she can comment on post, he/she can like posts of others as well as itself.He/she can see the list of users who has liked a particular post.



manish : Hello

manish : Hello this is new comment

uday : kslkjslk

manish

Hello How are you

Likes : 2 | Comments : 1

Likes By : manish manish

write your comment here | Post

manish : Hello this is final comment

manish

Hello how are you this is a new status

Likes : 2 | Comments : 2

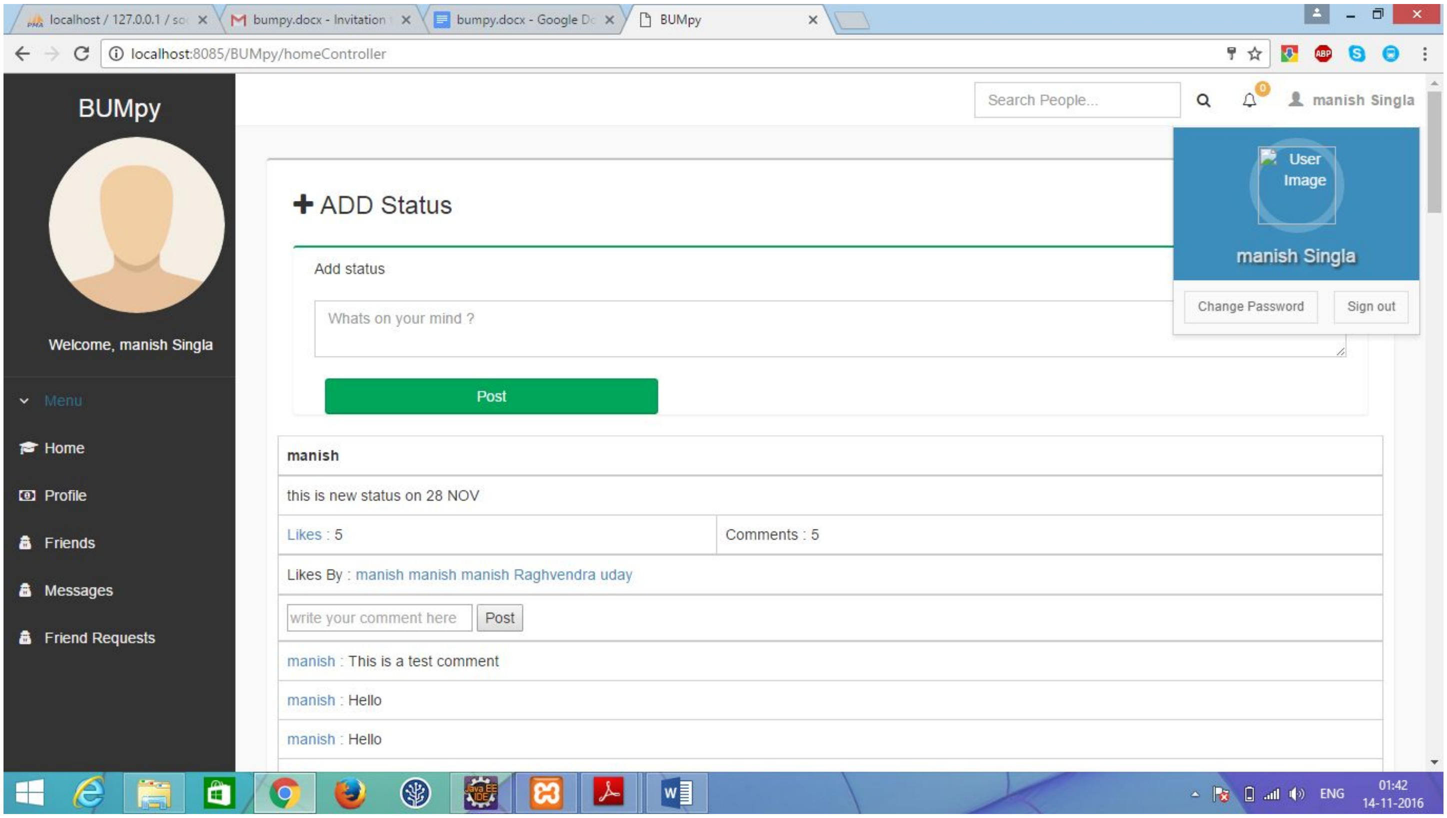
Likes By : manish manish

write your comment here | Post

manish :

5. Add Post:

If user is logged in, he/she can update status or he/she can add post.It will be displayed on the news feed for other users to comment ,like and other functionality of website.



manish

this is new status on 28 NOV

Likes : 5 | Comments : 5

Likes By : manish manish manish Raghvendra uday

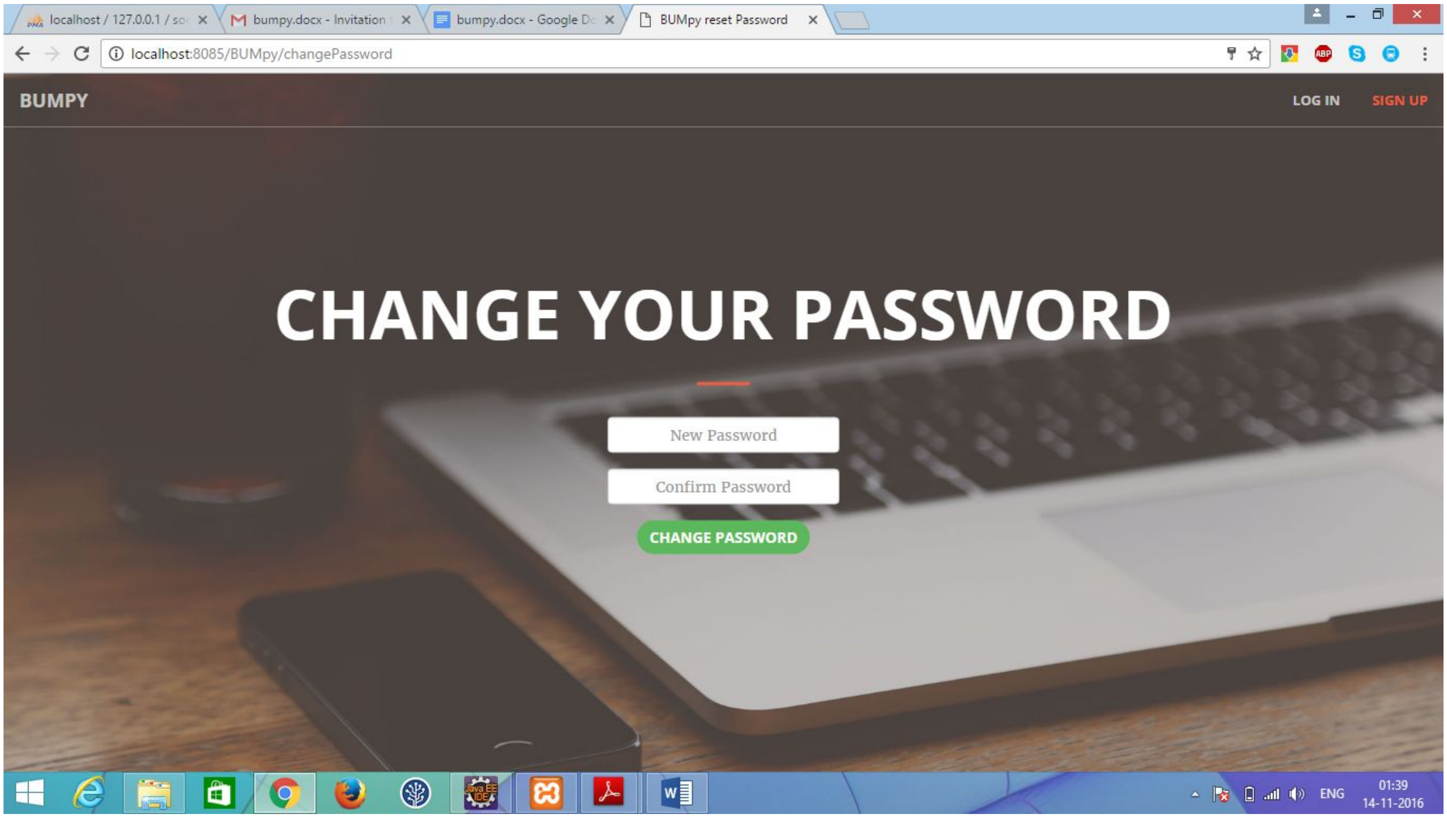
manish : This is a test comment

manish : Hello

manish : Hello

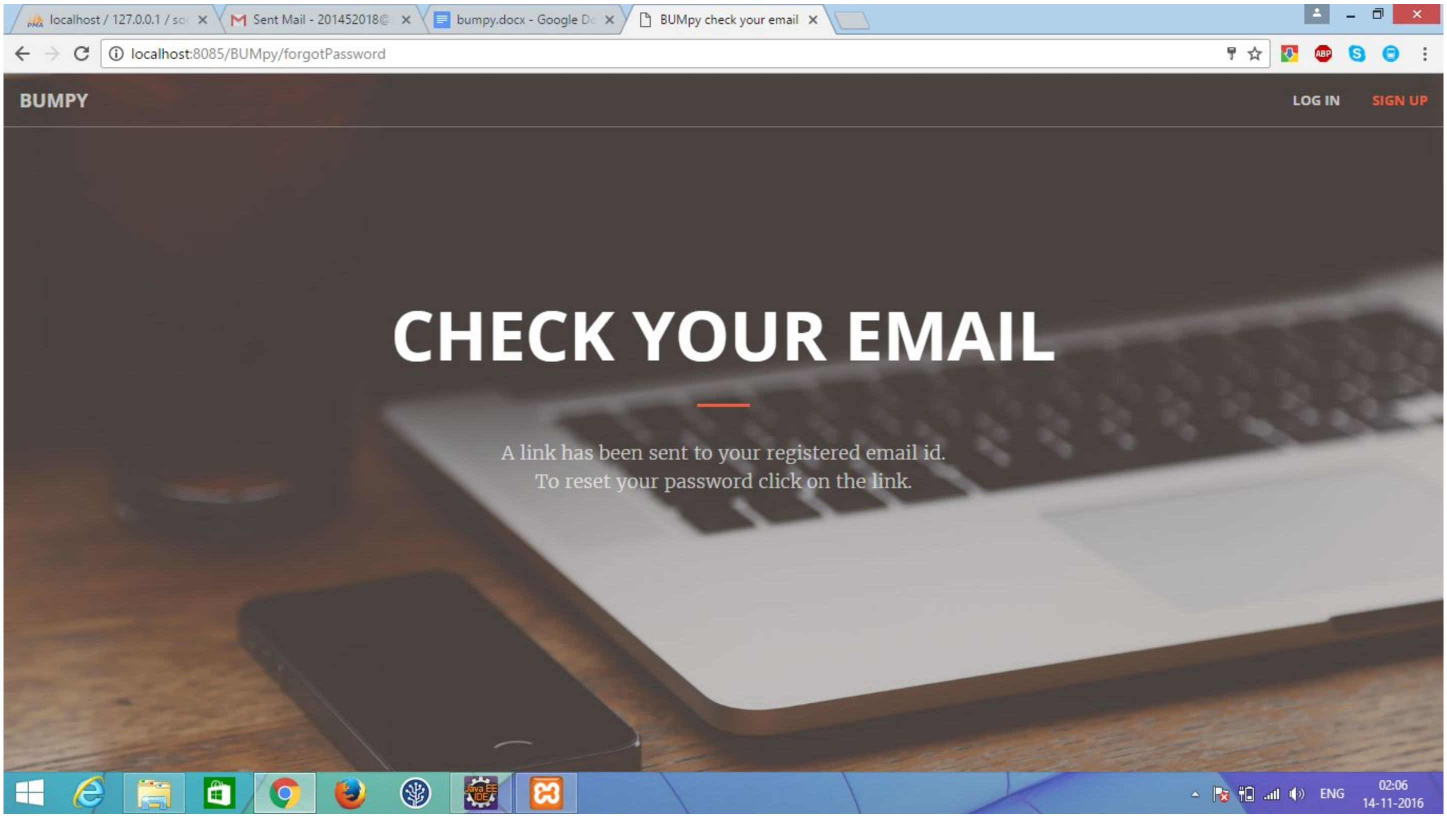
6. Password Change Management:

If user is logged in and he/she can change password by clicking on change password button.He/she will have to enter password twice.



7. Forgot Password:

If a registered user want to login to hang out on our website but he/she forgot his/her password, in this type of situation he/she can reset his/her password by clicking forgot password. For this he/she will be asked to enter his/her registered email id and after this server will send a email to authenticate his/her identity after authentication, he/she will be given access to change password option.

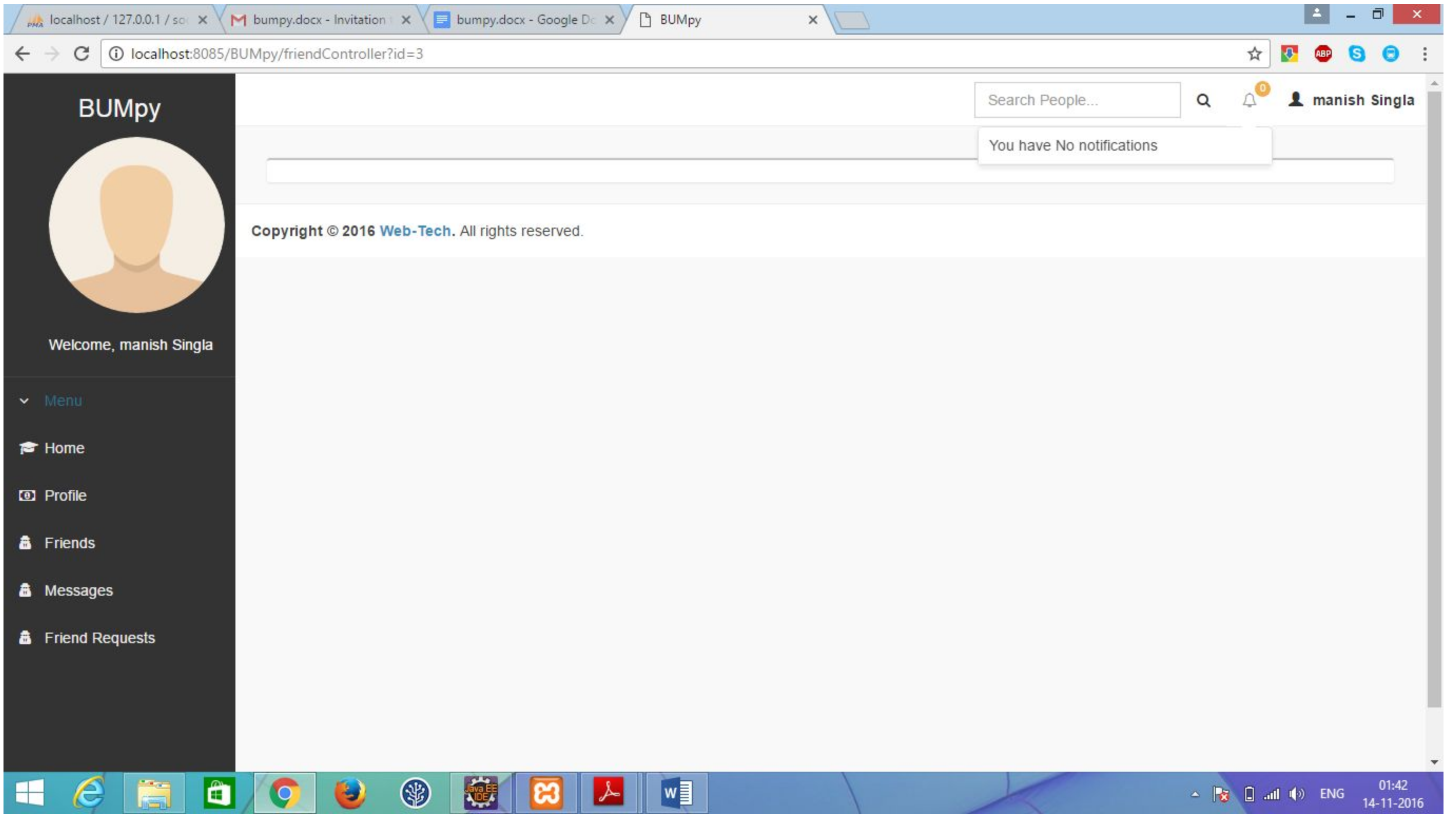


CHECK YOUR EMAIL

A link has been sent to your registered email id.
To reset your password click on the link.

8. Find various people:

In this functionality user can find his/her new friend. For this he/she will be asked to enter his/her name and click on the search icon.



You have No notifications

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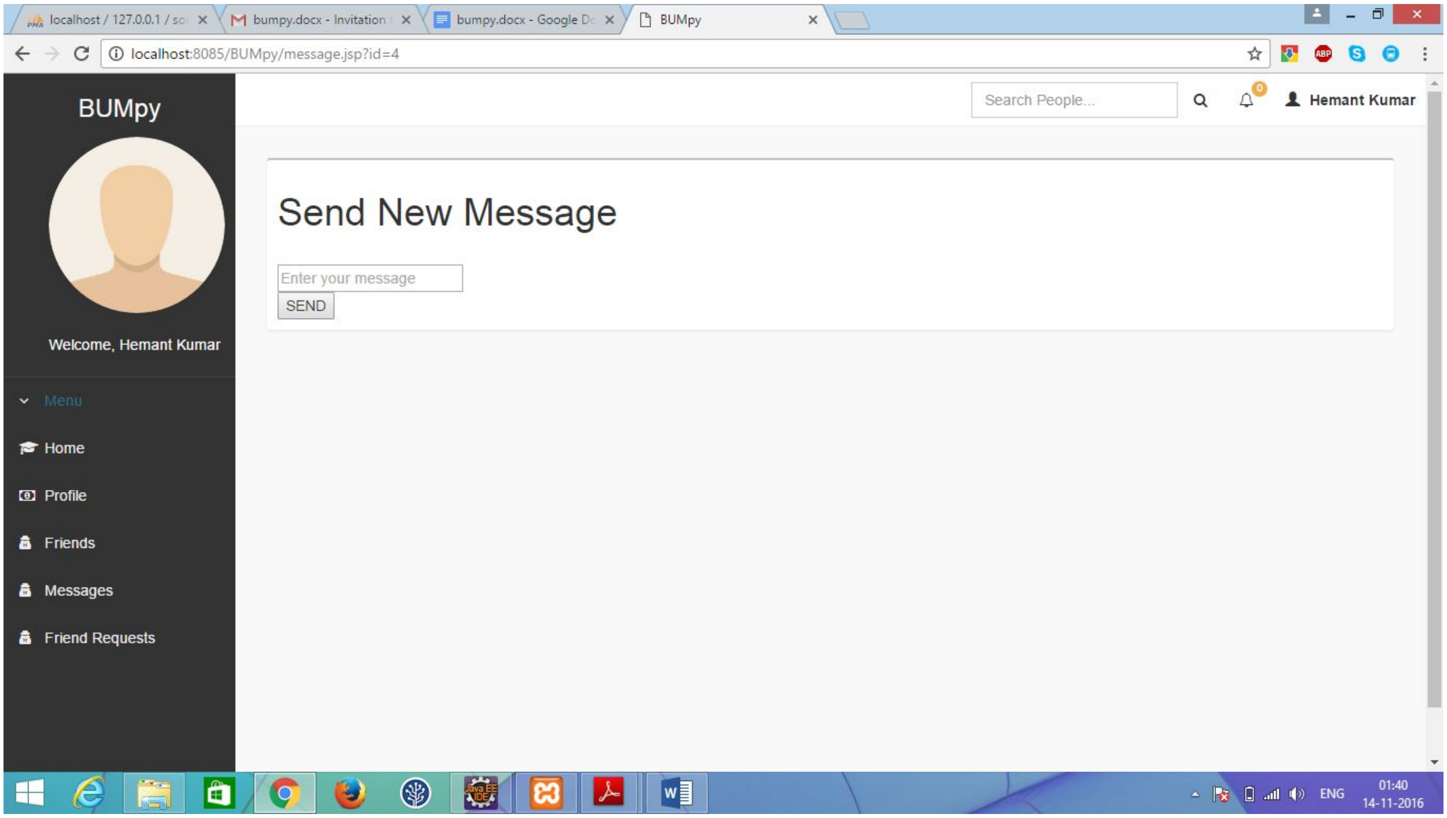
9.Accept request of friends:

In this feature user will see a friend request in friend request option on the profile.In this he/she will have to options to respond to that friend request one is accept and other is reject.If he/she click on accept, that person will be added into his/her friend list and if he/she click on reject optio, the friend request will be deleted.

10. Sending message:

In this he/she can send message to any of his/her friends. For this he/she will have to click on message option after this a list of his/her friends will be displayed.He/she will have to select the name of the friend to whom he/she want to send text message, after this he/she will have to enter message and hit send button.

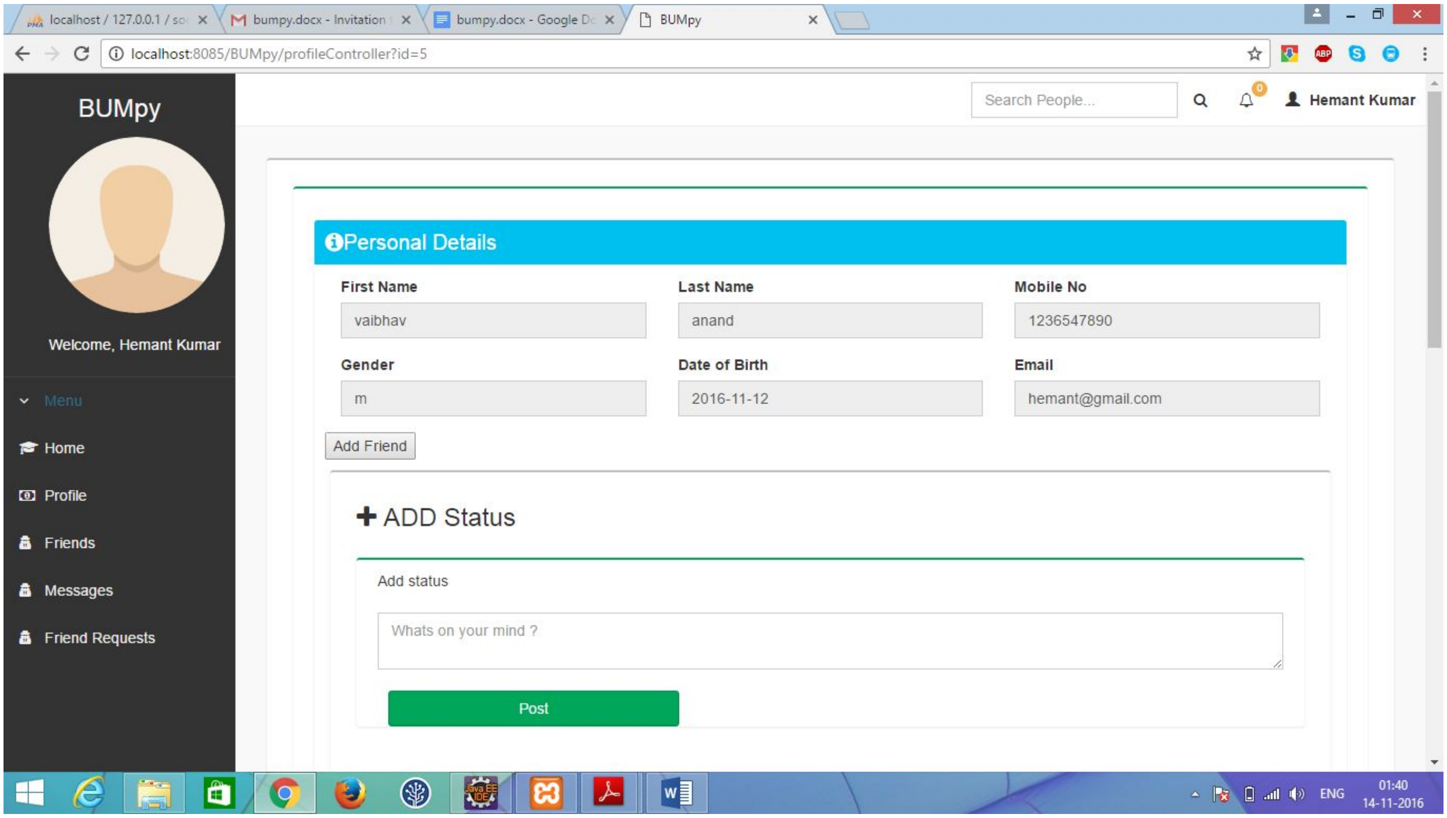


11. View and reply message:

In this if user has received any message, he/she can view and reply to that message.

12. Profile page of every user:

In this feature, there will be profiles of every user based on the details that he/she had submitted on the time of sign up.



Personal Details

First Name	Last Name	Mobile No
vaibhav	anand	1236547890
Gender	**Date of Birth**	**Email**
m	2016-11-12	hemant@gmail.com

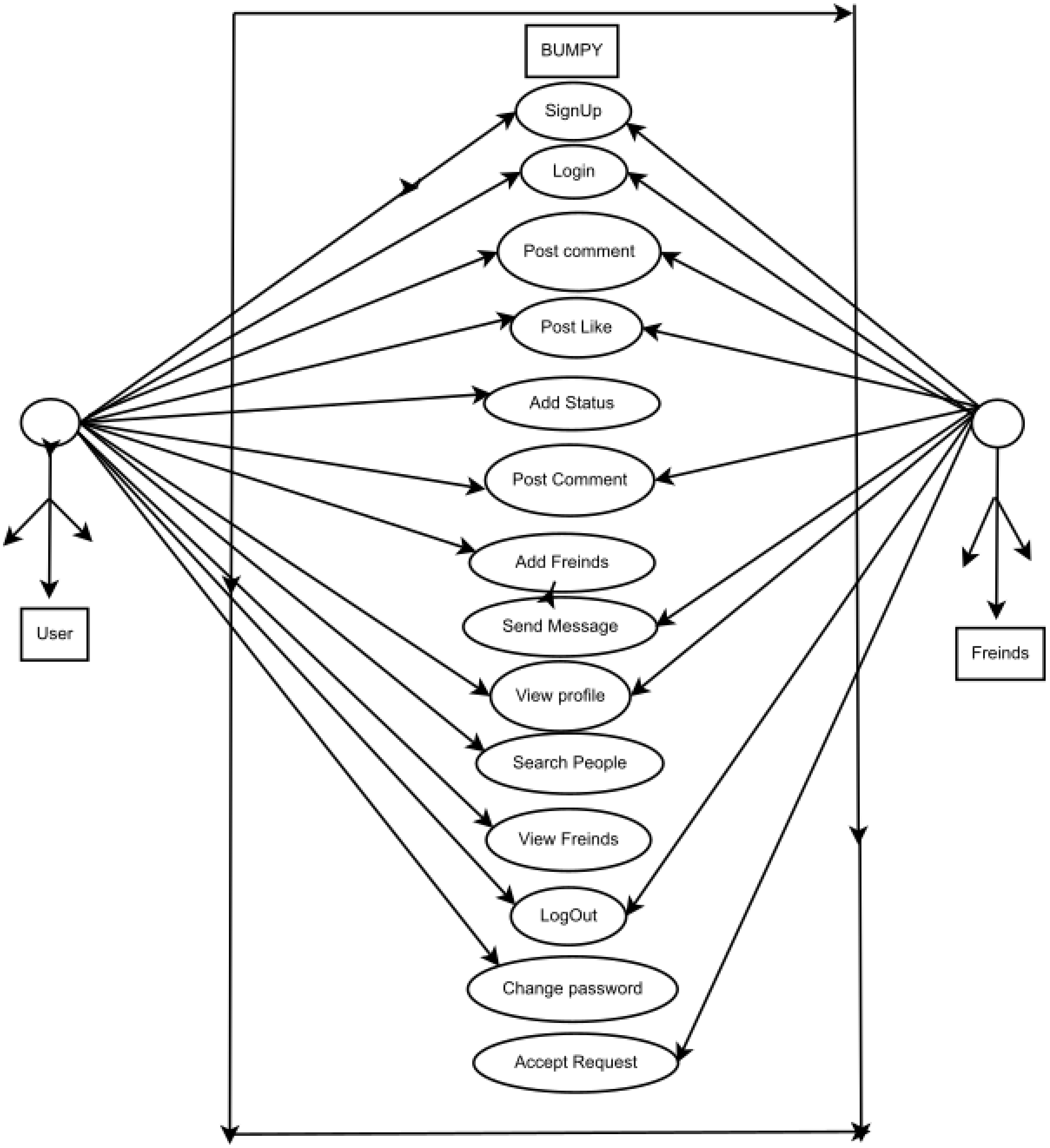
ADD Status

Add status

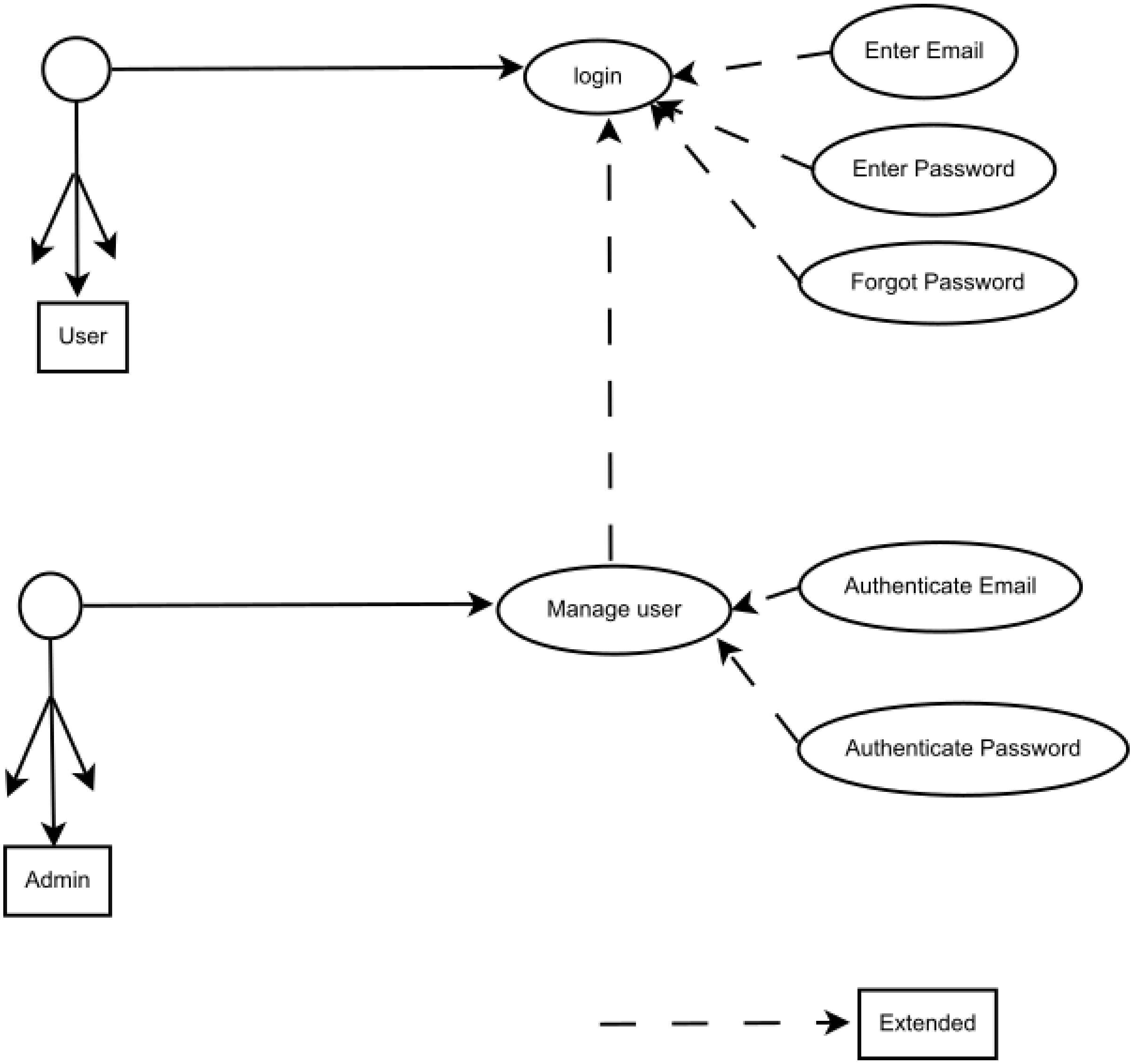
Whats on your mind ?

Use Case Diagrams :

1. **All features:**


BUMPY
SignUp
Login
Post comment
Post Like
Add Status
Post Comment
Add Freinds
Send Message
View profile
Search People
View Freinds
LogOut
Change password
Accept Request
User
Freinds

2. Login Use case diagram:



Details of the Project

We have main pages as follows:

1) Sign Up page-For making a new account of user.
2) Login page-For entering into the account after Signup.

3) Change Password page for security/privacy purpose of the user.
4) Home-For getting start page or new newsfeed.
5) Profile-For uploading/updating information of the user.
6) Find Friends-For searching friends or any people which user wants.
7) Friends-For seeing the profile/activity of the user.
8) Message-For interacting/chatting with the friend.

How it works

First of all one has to register to our website to access the internal facilities. If he/she is registered already then he/she has to authenticate to the website by providing the email address and password to the sign in page if the combination matches to the existing user then he/she gets the access to the website.

First of all, he/she is redirected to the home page where he/she can see the posts from the other connected users (Friends) to that users. He/she can like and comment on those posts etc.

If the user has to find friends to add them as their friends then he/she has to search for the name of the user to whom he wants to connect. He/she will be redirected to the page where list of existing users is shown those are not the friends of the user yet.

He/she can click on to any User name , it redirects user to the profile of that other user and here user can click on the add friend to request for adding friend and the other user will get the friend request to confirm or reject the request.

He/she can see the list of existing friends to see their profile from the profile he/she can send him message by clicking on the send message button which redirects user to the send message page .

He/she can see the list of messages those are received from other friends to user by clicking on the messages button he/she can reply to that message by clicking on the user name of any one user.

Silent feature

- Mobile Compatibility and responsive.
- Use of confirmation mail
- MVC architecture

This project uses MVC for controlling the flow of the pages and the information. First of all when user clicks on any button corresponding servlet gets the request which gets the database information using the corresponding dao file that fetches information from database and the controller.

Future Plan for the Website

We will take this project further by completing it. Adding extra features and work on the security of this website. We want to deploy this website for our own college.

MVC Strategy:-

Controller Strategy:-

In our web application controllers are servlets. Controllers process request which works with get or post method. Whenever get request is invoked in the url, controllers get the response from that requested url and routes the views in requested url. Whenever post request is invoked in an url, controllers render the post request and routes the views in post request url and post the processed data in the database.

Controller does not disclose the whole structure of the database or program or any function for security reasons that why we use controllers. whenever user access some information, respective controller is called first and then it create object of the related class and process the request, then again control is passed to the controller and it redirect it to the view. There are many controllers or servlet files in our application, work process of each of them is as follows:-

1. **login Controller:-** Whenever user click on login on main page(bumpy_home.jsp), it redirect the request to login controller. login controller first authenticate the email_id and password entered by user, if it's correct it redirect the request to home controller and if its not correct it redirect the request to login_error.html view.

2. **Home Controller:-** It gets the request from login controller and redirect it to home.jsp view.

3. **Accept Request:-** When user get an friend request and click on accept it redirect the request to accept request controller. It accept the request and pass the control to friend Controller.

4. **friend controller:-** It gets the request from friend controller and redirect it to friends.jsp view.

5. **Add_friend Controller:-** When user send an friend request to someone, control is passed to the add-friend controller. further it redirect it to profileDao and finally redirect the result to view.

6. **Comment Controller:-** Whenever user comment on any post, control is passed to the comment controller, it get the id of the user and text and redirect the page to commentDao, which further updates the database.

7. **forgot password controller:-** user clicks on forgot password, control is passed to the forgot password controller, controller gets the email id for recovery of password and redirect the request to change password controller.

8. **like controller:-** when user clicks on like button, control is passed to the homeDao and it update the database and further redirected to the home controller.

9. **message controller:-** when user send a message to other users, control is passed to the message controller. It redirect the result to the msglist.jsp view.

10. **profile controller:-**whenever user click on profile button, request is redirected to the profile controller. It collect information from database using Dao and redirect the result to the profile.jsp view.

11. **Signup Controller:-** When a new user register on site page is redirected to the signup controller and it updates the database after varification of emailid using Dao and redirect to the home.jsp view.

12. **myfriend controller:-** when user click on myfriends button, request is redirected to the myfriend controller, which extract the data from database using Dao files and redirect it to the myfirend.jsp view.

Model Strategy:-

Model is the lowest level of pattern among mvc which is responsible for maintaining data. And it holds methods for manipulation on the corresponding data. we write data structure of our application in models. there are many model classes in our project, which functions as described below:-

1. **Comment.java:-** get and set method for comments and posts.
2. **emailpasswordbean.java:-** get and set methods for email and passwords.
3. **friends.java:-** get comments of userid and fname.
4. **homefeed.java:-** homefeeds.java is to set posts,comments, likes etc on home page.
5. **loginbean.java:-** get and set methods of emailid and password for login.
6. **myprofile.java:-** get and set methods for get profile and set profile with get id and set id.
7. profile.java:- It sets the profile name and url.
8. **sendemail.java:-** It gets called to send email in case of forgot password or varification of email.
9. **status.java:-** get and set methods for status with get id and set id methods.

View Strategy:

A *View* , which is a collection of classes representing the elements in the user interface (all of the things the user can see and respond to on the screen, such as buttons, display boxes, and so forth).

There are many controllers or servlet files in our application, work process of each of them is as follows:-

1. **Bumpy_home.jsp:** When user will open our website, the first page that user will see would be this homepage. On this page login, sign up forgot password options will be present. First interaction with user will be on this page.

2. **CheckYourEmail.html:** When user forgets his/her password and he/she will click on forgot password, he/she will has to interact with this page.In this he/she will be asked his/her registered email to reset his/her password.

3. **Home.jsp:** on this page, when user logs in, he/she gets redirected to homecontroller and after this home controller redirects request to home.jsp

4. **Login_error.html:** This page gets called by the controller when user enter wrong data during logging to the website.

5. **logout.jsp:** This page get called when user click on the logout button.

6. **Message.jsp:** This page gets called by the controller when user clicks on message button to send text message to any of the other user who is present in his friend list.

7. **msgList.jsp:** This page gets called by the acceptfriend controller when user gets a friend request and he/she has two options with it whether to accept or reject the request.

8. **msgSection.jsp:** This page gets called by the controller when user click on message section and the list of friends gets displayed.

9. **myfriends.jsp:**This page get called by the myfriendscontroller when user click on friends button. After this action, list of his/her friends gets displayed.

10. **profile.jsp:** On this page, users may do many interactions with the website. He can add status, post something, like status, see the list of people who has liked a particular post.

11.reset_password.jsp: This page gets called by the change_password controller when user clicks on the reset password button to change his/her account password.

12.Signup_error.html: This page gets called when any error occurs during the time of signup like user has not entered valid email id or the mobile number that he/she has entered is less than or is more than 10 digits.

Non Functional Requirements:

1. Performance Requirements

(a). Login Activity Performance

Logging in with your account needs a direct connection with the server. Therefore, network speed is needed for good performance.

(b). Registration Performance:

Performance of server at the time of request/response when it is placed is being placed solely depends upon server configuration for the application and the kind of request/responses that is being placed.

(c). Compatibility:

Compatibility of the website with different browsers can also be an issue sometimes and also the pixels compatibility of images that users can upload as posts or as profile pictures.

(d).Traffic:

The amount of concurrent users is a guideline to enforce the software to be able to handle a significant amount of concurrent users i.e. network traffic.

2 . Security Requirements:

- The software should provide a secure login to every individual user. Changing of user password is a necessary feature required by the user.
- The user also should be aware of not giving the credentials to anyone to secure the account.

Technologies:

HTML, CSS, BOOTSTRAP , AJAX, JSP, JAVA SERVLET.