

The University of Queensland -INFS3204/7204 Project

Semester 2, 2009

Assessed: Week 12

Weighting: 35%+5% bonus

Title: Social Networking site for newcomers to Brisbane and existing Brisbane residents,

1 Overview

The aim of this project is to create a fully working prototype of an online social networking system, targeted towards new Brisbane residents. This website should also cater to existing Brisbane residents. This project provides an opportunity for students to gain practical knowledge taught in this course, including C# programming, business systems integration and technical concepts in web services.

1.1 Task Descriptions

Your project group has been assigned to develop a social networking website for new Brisbane residents to get to know other newcomers to Brisbane, the current residents, and the city itself. The website should provide meaningful functionalities for existing Brisbane residents. The website should have basic features of social networking services, such as user profiles, the ability to define relationships with other users, and allow users to interact with each other. In this system, Brisbane residents can set up their social network based on the locations they are from, the languages they speak and their other interests. This project consists of 35% weight for the final course assessment. The mark breakdown is as follows:

10% for the project report,
17% for the final project demonstration,
8% for the source code and structure,

There are an additional 5% bonus marks available for demonstrating unique or innovative features in your product. Feel free to email your idea to your lecturer, your tutor or even discuss on the newsgroup. All the core features that are stated in the next section have to be implemented by your group. The project should show your understanding of web services in the aspects of analysis, design and implementation. The web application has to be user-friendly and highly interactive. The emphasis is on implementing **web services on each functional component accordingly**. This course is about web service. So it is very important to design your application with the implementation of web service in mind. You are encouraged to look at various social networking website for ideas.

2 Core Features

2.1 User's Function

The users of the system will be Brisbane residents, and administrative staff. Each non-administrative user will be required to register with the website before they login to the system. After registration, the user will be able to login into their account to change their password and access the functionality assigned to their account. The functionality of

administrative users will be limited to website maintenance including the modification and deletion of user accounts.

2.1.1 Registration

A non-administrative user will have to register for an account before logging in to the system. During registration the user will have to enter details including their name, address, home country, interests and other relevant information for their profile. Upon successful registration, an account will be created and a random password will be sent to the user's e-mail.

2.1.2 Login

Upon logging in, the user is presented with a homepage that shows their profile, groups they have joined and various other functions that you may have implemented. A user can view and edit their profile. A user may also view other users' profiles or home pages, which will allow them to set up user relationships or leave comments on these home pages. Users can also send messages or emails to other users as a form of communication (*this will be mention at the later part of the section*).

2.1.3 Edit Profile

A user can edit their own profile, in which will be displayed on their home page that others can view. User pictures and videos can be displayed within these profiles

2.1.4 Search

Users can search for other users or groups by providing keyword in a search field. If one or more of the search terms match, a list of results will be shown on screen.

2.1.5 Establishing relationship

A user can a establish relationship with other users. The type of relationship, (*for example X is my friend*), will be able to be nominated. The user can choose to reject or accept your request.

2.1.6 Communication

Users can send message to other users by sending them private messages. A message should have "To", "Subject" and "Message" fields. A user can identify the recipient by providing the user's email or username. (*You can think of alternative ways to identify recipient of the private message.*) Upon receiving a private message, the user will be alerted that the mailbox has unread messages.

2.1.7 Comment

Comments can be made from one user to another through a user's homepage. Comments can only be left on the homepage of other users if a relationship has been established between the users.

2.1.8 Joining group

A user will be able to search for groups they are interested in joining through the search function. If the group the user wishes to join is private then the user will have to seek approval from the administrator to join the group. If the group is public, anyone may join the group.

2.2 Group's Function

Within the website, users can create interest groups to discuss about what they love and passion about. Groups will have functionality to allow for users to have conversations and upload files to share between the group members. Each group will have an administrator, who will have certain privileges to perform housekeeping within the group.

2.2.1 Creating group

A user can choose to create an interest group. Once created, the user can invite others within the network to join the group.

2.2.2 Invitation

The group administrator will be able to invite anyone into the group. Upon invitation, the user will receive an email to accept or decline the offer. Everyone in the group can invite their friends to join.

2.2.3 File and media sharing

Users within the group can post videos or files to be shared among the other users. Group members can download these files. (*You are encouraged to set some form of file size limit for efficiency.*)

2.2.4 Housekeeping

Group administrators can kick out or ban abusive users from the group. Users that have been kicked out of the group will have to rejoin, while those that are banned are permanently restricted from rejoining the group until the group administrator lifts the ban. A group administrator can assign moderators to help manage the group. A moderator will be able to delete or edit posts to the group discussion board, and will be able to kick users out of the group. Moderators will not be able to ban users, but will be able to notify the group administrator of users who should be banned from the group.

2.2.5 Communication

Users within a group can communication via a discussion board. Only group members can view this board. Inappropriate or offensive messages will be able to be deleted or edited by the group administrator and moderators. Additionally the discussion board should show 10 to 15 messages per page to reduce lengthy download times.

2.2.6 Group Homepage

Each group will have a homepage that displays the group name, description, profile pictures and the list of current members. A limited view of the home page excluding profile pictures and list of current member should be considered for non-members who access the group homepage.

2.3 Security

As a standard security feature, the log in page must be protected with SSL. You can research online how to set up your own SSL certificates on the ASP.NET web server. Passwords **must** be stored as a hash in the database. All web pages that require valid user credentials can only be accessed if the user is logged in. All online forms must be validated before they can be submitted. (*If you cannot implement SSL please think of other security features that may be used to replace it.*)

2.4 Additional features

There are a few optional features that you can choose to implement into your system. Marks will be awarded according to how well the optional features are being integrated in the system. Your group can suggest your own optional features that your group are more confident to work with, feel free to talk on the newsgroup, email your lecturer or tutor for verification. Below are a few optional features that the group can implement. These features alone are not considered sufficient for the bonus 5% marks for innovation or technical merit.

2.4.1 Poll and statistics

Users can create polls on their group to get feedback from an event. They may choose to create polls or statistics from feedback gathered from friends. The creator of the poll can choose to stop the poll at anytime or set a fixed end time. After voting, users should be able to view the results graphically.

2.4.2 Forum

The purpose of the forum is to create greater functionality for groups. Instead of using a discussion board, the user can create a topic and everyone can post message and comment on it. Other users can also provide link for other users to download important files or post images to view by interested parties. There are many forums example that are available on the Internet for referencing.

3 Technical Requirements

The project must be implemented using ASP.Net 2.0 with C# on Microsoft .Net framework. It is strongly recommended that the ITEE Oracle server be used for the database implementation. You are required to design the necessary database schema. Creation and population of sample data should be made for demonstration purposes. You are to emphasize the web services as your core implementation.

4 Assessments

The following assessment is required for this project.

4.1 Project Report

The project report will require the inclusion of:

- An analysis of the proposed system including
 - A breakdown of the project's functionality
 - Benefits/risks of using web services in this particular scenario
 - Other purpose factors.
- Design of the system including:
 - Development methodology
 - System architecture
 - Web services orchestration diagrams
 - Choreography diagrams
 - Interface design
- Implementation of the system including:
 - Development environment
 - Tools and third party libraries used

The report must be consistently and professionally formatted. It is recommended that you keep your report within 20 to 30 pages. Please use Times New Roman as your font and the size should be 12 and a spacing of 1.5. Please follow the IEEE standard of referencing.

4.2 Source code

All source code for this project needs to be submitted electronically along with the report. Place all files into a well-organized directory. Remember to attach your Visual Studio solution files as well. Your code must be neatly formatted, indented and commented for easy readability. Obvious bugs and code hackery will not be tolerated.

4.3 Submission

You will need to submit the electronic copy of **both** report and code by **5pm, Monday, Week 12** via online submission website. Archive **both** report and code into a **single** zip or rar file named by your group number.

5 Demonstration

The demonstration is scheduled during lecture time of week 12 in the lab.

5.1 Marking Scheme

Marks for each deliverable are as follows:

Project Report:	Marks (%)
Overall structure and presentation	2
Analysis	2
Design	4
Implementation	2
Total:	10

Demonstration:	Marks (%)
Interface Design	3
System Usability	2
Core features Completeness	7
Security & Validation features	2
Additional features	3
Total:	17

Source Code:	Marks (%)
Code structure	2
Implementation of web services	5
Commenting of source code	1
Total:	8

Bonus:	Marks (%)
Innovation/Technical Merit	5
Total:	5

5.2 Project Updates and FAQ

Changes and clarifications regarding the project may be made up to one week prior to the submission deadline. Updates will be posted on the newsgroup as well as the project website if this happens. You are expected to check both of these locations regularly to receive these notifications. Questions regarding the project should be directed to the tutor (email available on course website), or to the lecturer if the tutor is unavailable. The course website maintains a list of frequently asked questions by students; check that page first before asking. You are also encouraged to use the newsgroup for project discussions. You must read and understand the University's policy on plagiarism. Any cases of plagiarism once detected will be swiftly dealt with according to university policy.