NYU Tandon School of Engineering April 15, 2019
Computer Science and Engineering
CS 6083 INET, Spring 2019

Project #2 (due May 10)

In the second project, you have to create a web-based user interface for the database designed in the first project. In particular, users should be able to register, create a profile, log in, create posts, add pictures or video to posts, maintain friendships or relationships with other users, like pictures, like activities, pin locations on maps, send and answer friend requests, etc., as described.

Note that you have more freedom in this second project to design your own system. You still have to follow the basic guidelines, but you can choose the actual look and feel of the site and offer other features that you find useful. In general, design an overall nice and functional system. There will be some extra points available for a nice and smooth design. If you are doing the project in a group, note that all students have to attend the demo and know ALL details of the design, and specify what each student did. So, work together with your partner, not separately. Also, slightly more will be expected if you are working in a team. Start by revising your design from the first project as needed. In general, part of the credit for this project will be given for revising and improving the design you did in the first project.

A note about the interface you are expected to build for this project. When users log in, they should come to a starting page where they can see a feed of posts and activities that are of interest to them, say posts by friends or posts and comments relevant to their interests, or new locations relevant to their interests. Also, posting (or reposting), liking, and commenting could be done via appropriate buttons for each entry, but details are up to you. Users should also be able to browse the site, and there should be some way to search using keywords or tags or maps, for example retrieving all posts that refer to a particular location and/or a particular activity, all locations on a map that have certain activities, or all posts or comments that contain certain keywords, etc.

Users should be able to perform all operations via a standard web browser. This should be implemented by writing a program that is called by a web server, connects to your database, then calls appropriate stored procedures that you have defined in the database (or send queries), and finally returns the results as a web page. You can implement the interface in several different ways. You may use frameworks such as PHP, Java, Ruby on Rails, or VB to connect to your backend database. Contact the TA for technical questions. There also should be ways for users to search certain activities, or all posts on the site, by typing in keywords that are matched against tags or names.

Every student (or group) is expected to demo his/her (or their) project at the end of the semester via the online meeting system, or the screen capture tool available at https://stream.nyu.edu, or in person. If you use your own installation, make sure you can access this during the demo. One popular choice is to use a local web server, database, and browser on your laptop, which means you need to use your own laptop to the demo. (In this case, your project does not have to be available on the public Internet; it is enough to have it run locally on your laptop). Also, one thing to consider is how to keep state for a user session and how to assign URLs to content – it might be desirable if users could bookmark a picture, a wall, a user profile, or the results of a search. Grading will be done on the entire project based on what features are supported, how attractive and convenient the system is for users, your project description and documentation (important), and the appropriateness of your design in terms of overall architecture and use of the database system. Make sure to input some interesting data so you can give a good demo.
Describe and document your design. Log some sessions with your system. Submit your description (documentation) and the logs in the NYU Classes system before the demo. You should also be able to show your source code during the demo. The documentation should consist of 15-20 pages of carefully written text describing and justifying your design, and the decisions you made during the implementation and describing how a user should use your system. Note that your documentation and other materials should cover both Projects 1 and 2, so you should modify and extend your materials from the first project appropriately.

There will be opportunity to get extra credit by implementing nice extra features (chat, timeline, input checks, security, etc.), but available extra credit is limited to about 15 points of the project grade, and there may also be extra credit of up to 5 points of the project grade for doing an early demo, before the deadline, by May 3.

Project grade breakdown:

Login and Signup page	5
Edit Profile	5
Add friend Accept & Decline requests	10
Activity Post	10
Diary entry which contains title, timestamp, text and multimedia	10
Add location	10
View Privileges	5
Like and dislike	5
Search friend or postings	5
User Interface & user session	15
Submitted report	20
Features Extra Credit	15
Early Demo Extra Credit	5
Total	**120 (100 + 20 extra credit)**