Assignment Two

**Design document Due on:** Wednesday October 10, 2006 (Submit to your tutor)

**Demonstration:** Wednesday October 17, 2006 (in tutorial)

**REQUIREMENTS**

In this assignment, we'll design and implement the basic part of the system we have analyzed in assignment one. The requirements for this assignment include:

- Implement the basic user management functions that will enable
  - anybody to register with a user name and a password.
  - registered users to log in with user name and password.
- Implement the basic content management functions that will enable
  - registered users to upload either text file (.txt) or image file (.jpg)
  - registered users to assign tags to any content.
  - anybody to view any content with a list of tags assigned to that content.
    The time when the tag is assigned and the user that assigned the tag will be displayed as well.
  - owner of the content to delete any tag except the last one of that content
  - registered users to delete any tag they assigned
- Implement the basic summary functions that will enable
  - anybody to view the list of 10 most popular tags and 10 most popular contents
  - registered user upon registration to view a list of tags the user has assigned and all contents the user has uploaded
  - registered user upon registration to view a list of contents being viewed by others recently (since last login)
  - registered user upon registration to view a list of contents being tagged by others recently (since last login)
- Special Requirements
  - Password need to be stored in MD5 encrypted format.
  - All contents are considered as public in this implementation.
  - Each content can have 1~20 tags.
  - Each content should use a title to identify itself.
  - Popularity of tags is computed as the number of times it is being assigned to different contents
  - Popularity of contents is computed as the number of times it is being viewed.
  - If a database is required, the company prefers to use HSQLDB or MYSQL.

**DELIVERABLES AND ASSESSMENTS**

On week 11, please hand in a printed design document to your tutor. The design document should contain two sections:

- Section one: Design patterns [12 marks]
In this section, you should use a set of class and/or interaction diagrams to illustrate the important design patterns you applied in your design. You can either use the note symbol in class diagram or use a separate interaction diagram to represent important dynamic behaviors. For each pattern, please also briefly describe the problem you try to solve.

Section two: Future evolutions [6 marks]

In this section, you should describe how your current code might be reused or modified to handle some future requirements. Please give detailed instruction on which existing class(es) can be reused or might be affected and which new class(es) may be created to handle those future requirements. Below are possible future requirements you should consider:

1. The company needs to display the existing summary in different format. For instance, instead of displaying the 10 popular tags as a list, the company may want to display them in a tag cloud.
2. The company may want to display a combination of other summaries. For instance, it may want to display the list of most recent tags in addition to most popular tags.
3. The company may want to use the same system to upload and manage other content types such as video/audio files.

On week 12’s tutorial, each group will demonstrate the system you implemented [7 marks]. The tutor will ask each group member 2-3 questions regarding the design and implementation. The questions are used to assess individual member’s contribution to the project. Members may receive different marks for assignment 2 based on their answers to those questions.