

# Introduction to Database Systems – CS43005 – Spring 2009

## Project – Citation Management System

In this project you are required to design a database application to manage citations and share them in a group of researchers. Your citation management system operates as follows:

Any researcher before s/he uses the citation management system should register as a user. To register the user supplies a selected user id, password, first name, last name, department, university. Moreover, each user id is attached with a specified table named by its user id. Every user has permission to browse all the citations in the website. However, each user can only edit (insert, delete, update) the table named by her/his user id. We go over an example. S/he is a new user and creates an account such that user id is 'r1' in the citation management system. At the same time, a table named 'r1' is created and edit permissions are also granted to user 'r1'. Now, for user 'r1', s/he can login the system and browse all citations in all users table. In addition, user 'r1' also can insert (update or delete) citations in her/his table 'r1'; however, s/he can not edit citations inserted by other user ids. Users can search interested citations by different keywords like paper title, authors or keywords in abstract. Also, users can sort the citations alphabetically or by the authors name(s) or publisher name. Further, users can export the citation in the database to bib format which can be used in latex (bib format in latex will be provided in the following example). Therefore, information about each citation includes: title, authors, publication year, pages, title of conference or journal where paper published, and abstract.

User operations for citation management system are register, edit registration, browse all citations, edit its own citation table, and export citations to bib format which can be used in latex.

Citation in the table:

Title	Authors	Year	Pages	Publisher	Abstract
Graph mining	KDD Lab	2009	1--12	SIGMOD09	Introduction

Its corresponding bib format:

```
@article{kddlab09,  
  author = {KDD Lab},  
  title = {Graph mining},  
  journal = {SIGMOD09},  
  pages = {1--12},  
  year = {2009}  
}
```

**Note:** "kddlab09" is the label for this citation which will be used in the paper to refer this citation (typically, it is the combination of first author's last name and the year when paper published). The order of fields (author, title, journal, pages, and year) is not important, and abstract should be ignored in bib format and only used for browsing.

### **Implementation Environment**

You will be implementing your project using MS Windows platform. Your application should use WEB interface between users and database. You are allowed to use PHP to implement your interface and program. MySQL is used as database management system to store all tables.

### **Project Stages and Required Documentation:**

A project goes through several stages and each stage is to be documented. The following stages are required:

- ER diagram for the citation management system. Documentation should include a diagram, a description of every entity, attribute, and relationship. Additionally, for each entity a key must be given. Documentation should not exceed more than two pages;
- Conversion of the ER diagram into a minimal set of relations. Documentation should not exceed more than one page;
- A set of SQL table definitions. Loading sample tables. Your documentation of this step should include a set of Create and Create index SQL statements;
- Description of Web based user interface along with an outline of each screen. Documentation should not exceed more than 4-5 pages. You are to provide help screens and help pages to operate your database application.
- Description of a set of PHP program that take data from the web interface, prepare a SQL statement(s) and submit these statement to SQL. After the execution of the program, the data obtained from SQL should be displayed on the screen. You should allow users to scroll through your data and to cancel the query during the execution or modify the data on the screen. Documentation for this stage consists of a description of each program and a program source code.
- Finally, you should prepare a user manual (1-3pages) that describes how to install your application, and how to use it. You should assume that you give a user a diskette (or CD) that contains your application. User should be able to follow your instruction in installing your package.