CS 1270 – Database Management Systems

Stan Zdonik
Fall 2020

1 What is the Course About

The amount of information that must be processed in many applications is exploding. A modern database management system (DBMS) provides the scalability that is required by these applications. As a result, DBMS's are now ubiquitous in modern industrial practice. This course examines the practice of database management through two major units. The first discusses the users' view (externals) of a DBMS. It covers concepts that are fundamental to the proper use of a DBMS, including database languages and database design. The second discusses what goes on inside (internals) of a DBMS. It covers algorithmic detail for some of the key components of a DBMS.

2 Course Staff

2.1 Who We Are

Position	Name	CS Login
Professor	Stan Zdonik	`sbz`
HTA	Jarrett Huddleston	`jhuddle1`
HTA	Jason Ludmir	`jludmir`
Grad TA	Ani Kristo	`akristo`
UTA	Min Seong Kang	`mkang30`
UTA	David Romano	`dromano`
UTA	Weike Dai	`wdai8`
UTA	Sunny Deng	`ydeng11`
UTA	Zhe Hu	`zhu24`
UTA	Nine Prasertsup	`tprasert`
UTA	Harry Zhao	`zzhao58`

2.2 Office Hours / TA Hours

Professor Zdonik will be available by appointment only. The TAs will hold hours during the week. See the website for a complete and up-to-date schedule of office office hours. If hours need to be re-scheduled, students will be informed via the course mailing list.

TA hours will be held over zoom. Students will log in to a queue through signmeup.cs.brown.edu, and visit a zoom link provided on the site to wait to be called. Once it is a student is logged in the zoom waiting room, when they are called for hours they will be let in to a breakout room with the ta. Please consult the documentation on the website for more information.

3 Prerequisites

None, although we recommend having taken CS 22 and at least one of CS 32 or CS 33. You also must be familiar with the Java programming language. If you have only taken CS 15, CS 17, or CS 19 you should e-mail `cs1270tas@lists.brown.edu` to discuss the course expectations.

4 Email

The two official course email address are `cs1270tas@lists.brown.edu` (which goes to all TAs) and `cs1270headtas@lists.brown.edu` (which goes to the HTA and Professor Zdonik).

In general, `cs127tas` should be used for all course-related questions. The exceptions are when you have a reason to speak only with a specific TA (i.e., about a specific grading question) or with the professor and/or HTAs.

Students who sign up for the course will be subscribed to a mailing list. The TAs will use that list for any course announcements: reminders about due dates, any hours switching, review sessions, etc. Please make sure to read your email!

5 Textbook

You are required to have access to *Database System Concepts, Sixth or seventh Edition* by Silberschatz, Korth, and Sudarshan. ISBN: 0073523321. Resources for where to purchase the book can be found on the website. We encourage students to share textbooks with their friends.

6 Lectures

Lectures will be held on Tuesday and Thursday, 2:30-3:50 PM via Zoom unless otherwise specified. See the website for an up-to-date schedule of the lectures. Please note that this schedule is subject to change.

Lecture slides and a recording of each lecture will be available online on the course website.

Each of the lectures has an associated reading in the textbook (a list of the associated readings can be found on the lecture page of the website). We recommend looking at the chapter(s) before coming to lecture as well as after lecture to reinforce the concepts.

Because the class is offered remotely and students will not all be in the same timezone,

attendance for lectures is not required although it is recommended for those who can attend. Recordings will be available in a timely manner after lectures.

During Lectures we will also have 1-2 poll questions asked via zoom. These will not be graded and are intended to help students check their understanding of the material.

7 Assignments and Grading

We plan on having five homeworks and three programming assignments. Most coding will be done in Java. The number of homeworks could be subject to change depending on how we progress through topics during the semester.

In addition, there will be two quizzes offered online in place of lecture on their assigned days. Students will have a 24 hour window in which they can take the quiz, which will take about as long as a single lecture. Quizzes will be offered through canvas

Each homework will have two parts:

1. A set of warm-up questions, which will not count towards the grade of the assignment, but will be considered if a student is on a boundary for a final grade.
2. Two or three multi-part problems that will be graded

The grade breakdown is as follows:

Programming	40%
Homeworks	20%
Quiz 1	20%
Quiz 2	20%

Anonymous grading will be used, meaning that all grading will be done by the course staff without knowing the name of the student who turned in the assignment. This means that when turning in homework, please only write your Banner ID on your handin and not your name. Also please note that all of the grading in this course will be done by graduate and undergraduate students.

8 Incomplete Policy

Incompletes are granted only under **exceptional** circumstances (e.g., severe illness, death in the family, etc). Getting a dean to certify your reason for requesting an incomplete helps, but is not sufficient by itself.

Too heavy of a course load is not sufficient reason for an incomplete!

9 Late Policy

Everyone is allowed a total of five "free late days" on programming assignments for the semester. Beyond that, you are penalized 25% of the assignment's value for each day it is late. Late penalties are capped at 100% of an assignment's value. Late days may not be used on regular homework assignments and you are penalized 20% of the assignment's value for each day it is late. If you want an extension for some reasons, you can contact Professor Stan or any of the HTAs to look through your request.

10 TA Hours

TA Hours will be held at varying times of day at multiple points of the week, with 1-2 TA's per timeslot. They will be one on one meetings with TA's and will be held over zoom. The hours calendar as well as a more in depth guide for how hours will run can be found on the hours tab of the course website.

11 Piazza

We will be using Piazza to manage course announcements and allow students to get questions answered quickly. Here, you can see any updates that we post as well as ask clarification questions. We have chosen to use Piazza to provide you with a platform to address questions you have by either asking other students and the course staff or searching for existing answers.

Please use Piazza only for quick clarification questions and save in-depth questions for TA hours. Additionally, do not post any code to Piazza. Doing so is a violation of the collaboration policy. A good rule of thumb is that if a question is specific to your implementation of the project, it should be asked in hours rather than on Piazza.