BLG317E - DATABASE SYSTEMS

2019-2020 FALL

Instructor:	Prof. Dr. Şule Öğüdücü sgunduz@itu.edu.tr	H. Turgut Uyar uyar@itu.edu.tr
Office:	EEB 4324	EEB 2422
Assistants:	Kıymet Kaya kayak16@itu.edu.tr Yunus Emre Cebeci cebeci16@itu.edu.tr Mustafa Esengün esengun@itu.edu.tr Mehmet Koça koca19@itu.edu.tr	

Textbook: Chris J. Date, “An Introduction to Database Systems”, Addison-Wesley, ISBN 0-321-19784-4, 2004.

Weekly Plan

Week	Date	Lecture	Exercise
1	2019-09-18	Introduction	
2	2019-09-25	Relational Model	Flask (Basics, Application Structure)
3	2019-10-02	Relational Model - SQL	Flask (Data Model)
4	2019-10-09	Relational Algebra	Flask (Forms)
5	2019-10-16	Relational Algebra - SQL	Rel
6	2019-10-23	Application Development	SQL
7		1st MIDTERM EXAM	
	2019-11-06	TERM BREAK	
8	2019-11-13	Database Design	Flask (SQL), SQLAlchemy
9	2019-11-20	Concurrency	Normalization, E/R Diagrams
10	2019-11-27	Non-Relational Databases	Concurrency
11	2019-12-04	XML Databases	Non-Relational Databases
12		2nd MIDTERM EXAM	
13	2019-12-18	Project Presentations and Demos	
14	2019-12-25	Project Presentations and Demos	

Grading

- The weights of the exam grades are 30% for each midterm and 40% for the final exam.
- Instead of taking the second midterm exam, students can opt for doing a term project which has the same weight. Students who take the second midterm exam cannot submit a term project.
- Students who attend less than 70% of classes (30/42 hours) will fail with the grade VF and cannot take the final exam.
- Students whose weighted average of the midterm grades (of the 1st and 2nd midterm exams, or of the 1st midterm exam and the project) is less than 30/100 will fail with the grade VF and cannot take the final exam.
- Students whose end of term overall average is less than 40/100 will fail.

Important Notes

- You have to follow the course announcements, your exam results and attendance status on the Ninova system (http://ninova.itu.edu.tr/). Check the Ninova site regularly for updates.
- Course related e-mail notifications will be sent to your ITU account; check it regularly.
- When sending e-mail to the instructors or assistants, use your ITU account and always include your full name at the end of the message.
- You are expected to know everything that was announced in the classroom. There does not necessarily have to be an announcement on Ninova. If you have missed a class, ask your classmates if there were any announcements that you need to know.
- Attendance will be checked on all three hours of the sessions and announced as "-", "1", "2", or "3" on Ninova.
- Any form of cheating or plagiarism will not be tolerated. This includes actions such as, but not limited to, submitting the work of others as one's own (even if in part and even with modifications), providing work for others to submit and copy/pasting from other resources (including Internet pages, even if attributed). Serious offenses will be reported to the faculty administration for disciplinary measures. Carefully read the following document prepared by the Student Affairs Office: http://www.odek.itu.edu.tr/?SayfaId=13

Term Project

The term project is building a web application that uses a database. It will be developed either individually or as a team of 2-4 students. Students from different sections can be in the same team. There is no restriction on the subject and scope of the application.

The technologies that will be used are the Python programming language, the Flask web framework, and an SQL database. The SQL database must be accessed via a dbapi2 compatible driver. Using object-relational mappers or any abstraction layer over the SQL language is not allowed. The documentation will be prepared using Sphinx.

The Git version control system will be used for evaluating students' work. The projects will be hosted on GitHub, and deployed to Heroku. The documentation will be hosted within the same GitHub project and will be available through GitHub Pages.

Due to the faculty's limited resources, the number of projects that can be evaluated is limited. Therefore, after a trial period, only projects with sufficient progress will be selected to continue. Students will be evaluated individually; that means, a member of a team might be eliminated from the project even if the other members are selected to continue. Evaluations will be based on the amount, significant contribution, and regularity of the progress.

Schedule

Week 3 (Mon 10:00): Students submit their project proposal forms to the Ninova system. For teams with multiple members, each student must submit a separate form. Students who don't submit a form by this deadline cannot submit a project later. Students whose proposals are found to be inadequate are given an extra week to revise their forms.

Week 4 (Mon 10:00): Revised proposal forms are submitted to the Ninova system. Students whose proposals are rejected at this stage cannot submit a project later.

Week 8: The projects and students that are selected to continue are announced.

Week 12: Students in continuing projects can still opt to take the second midterm exam instead of submitting the project.

Week 13 (Mon 10:00): The code source files and the presentation document are submitted to the Ninova system.

Weeks 13-14: Students give a hands-on demo to the assigned assistant and selected projects are presented to the class.

Week 14 (Mon 10:00): The report source files and the printable report are submitted to the Ninova system.

Grading

The project grade is determined by the student's code and her/his performance at the demo session. The students who don't attend the demo session get 0 as the project grade. The report is graded over 15 points and the presentation is graded over 5 points. Both the report and presentation grades are evaluated as bonus points which are added to the project grade. Students who don't attend the demo session can not get any bonus points.