Data Management and File Structure

CENG 351

Course outline

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Text book: File Structures: An Analytic Approach, Betty Salzberg, Prentice Hall, ISBN:0-13-314691

- Introduction:
    - The need for managing large dynamic files
    - Operations on files
    - Definitions
- Disks
    - Disk hardware structure
    - Timing on disk I/O
    - Records and buckets
    - Double buffering
- Sequential files
    - Pile files
    - Sorted sequential files
- Sorting
    - Internal sorting
    - External sorting
- Indexing
    - Simple indexes
    - Tree indexing
    - B-Trees
    - B+Trees
    - Operations on B+Trees
- Hashing
    - Hashing with buckets and chaining
    - Linear hashing
- Introduction to Database Management Systems
- Introduction to structured query language (SQL)

Grading:

Lab assignments and term project 30%

Midterm exam 30%

Final exam 40%