Lecture 1

CSC 017 Course Overview

Department of Computer Science

Hofstra University

Course Logistics

- **Instructor:** Dr. Zonghua Gu

- **Email:** Zonghua.Gu@hofstra.edu

- **Office:** SIC 219

- **Office hours:** Tue 1:00-3:00 pm

- **Course website:** https://guhofstra.github.io/CSC017Sp25/

- 3 hours lecture, 1 hour lab

  - Lectures: SIC 125 MW 9:40-11:05 AM

  - Labs: SIC 206 M 8:30-9:25 AM

Discord Channel and Feedback Form

- On https://guhofstra.github.io/CSC017Sp25/

- Join the Discord channel
    - Used for all announcements and Q&A

- Use the anonymous feedback form anytime to provide your comments and suggestions for me.

Topics (Tentative)

Week	Topic
1	Introduction to Java Platform
2, 3	Classes and Objects in Java, Inheritance and Polymorphism
4, 5	Java String, Regular Expression, Algorithm Performance Analysis (Big-O)
6, 7	ADT, Generic Class in Java, Exception, Junit Test, Linked lists vs. Arrays
8	Hash Table: Linear Probing vs. Separate Chaining, Hashcode Implementation
9, 10	Balanced Search Trees: 2-3 Tree, Red-Black Tree, B+ Tree
11, 12	Basic Graph Algorithms: Depth-first Search vs. Breadth-first Search, Connected Components, Topological Order
13	Minimum Spanning Trees: Kruskal's Algorithm vs. Prim's Algorithm
14	Shortest Paths: Dijkstra's Algorithm, Bellman-Ford-Moore Algorithm
15	Sorting Algorithms: Heapsort, Quicksort, Mergesort, and Radix Sort

No Textbook

- No required textbook.

- Course contents are selected from different books and the Internet including tutorials, open courses, official documents, programming learning platforms, etc.

Lab Assignments

- Three lab assignments
  - Please sign up on Canvas to form groups of 1-3 each
  - Due dates are tentative
- Lab section attendance is optional
  - You may work on your laptops without coming to the lab section, but the tutor will be available in Lab SIC 206 to help you.

Assign Date	Assignment	Due Date
W1	Lab1 Warmup with OOP in Java Useful links: Getting Started with Java in VS Code, Java Program for Closest Prime Number, Programiz online Java compiler	Fri, 02/28
W4	Lab2 Use Flesch Score to measure readability, BasicDocument.java, Document.java	Fri, 04/11
W8	Lab3 Stock Analyzer, Lab3 Starter code, myStock.java Refs: HashSet in Java, TreeSet in Java	Fri, 05/23

Grading Policy

- Midterm exam: 30%

- Final exam: 40%

- Three Labs: 30%

- Graded on a curve based on the total marks

  - Absolute marks do not matter, but your relative ranking in the class determines you r final letter grade

- **Late Days:** Each student is allowed a total of 3 late days for this class, which may be spent in units of one day (24 hours) on any project(s) throughout the semester. Once your late days have been used up, late work will not receive any credit. Late days are intended to handle all issues, including unexpected problems such as illness.