CSE 215L: Programming Language II Lab
Faculty: Silvia Ahmed, Sec – 2, 3
Spring 2018

Instructor: Marufa Ferdausi
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Room: LIB 600 (C9)

Office Hours

MW	10:40 – 1:00
RA	10:00 – 1:00

Please make an **appointment** over **phone** or **Email** before visiting the instructor's office. Office hours are the chances for weak students to repeat the class in case they missed one or someone who is struggling with projects and works.

Course Objectives: To teach and instruct the students basics of object oriented programming (OOP) principles and methodology. Upon completing the course, a student will have clear and concise understanding of encapsulation, inheritance, file management, method overriding and other features of OOP using Java.

Marks distribution:

Regular Assessment	20%
Midterm	25%
Final	30%
Project	25%

Outline

Lab	Topic
Lab 1	Setting up environment with JDK and Eclipse IDE; Intro to Java, I/O; Elementary naming conventions; Variables and data-types; Mathematical and logical operators
Lab 2	Basic condition check using *if*, *if... else* construct; *else..if* versus *switch* case
Lab 3	Control structures; *while* and *do...while* loop; *for* loop; Use of *break* and *continue* statement
Lab 4	Method; input parameters and return value; Method overloading
Lab 5	Use of one dimensional array
Lab 6	Use of two dimensional array; Introduction to String
Lab 7	Introduction to class and OOP; OOP versus POP; The use of new
Lab 8	Access modifiers; Use of public versus private;Use of static and final
Lab 9	Inheritance in Java; Creating a super class and sub class; Method overriding
Lab 10	Polymorphism and dynamic binding; Class extending and method overriding using the final
Lab 11	**Middle Term exam**

Lab 12	Abstract class
Lab 13	A need for interface; Define classes that implement interfaces
Lab 14	Exceptions and exception handling; Write a *try-catch* block; *finally* clause; Creating custom exception class
Lab 15	File management; Random file access; Different file manipulation class
Lab 16	Generics; Generic classes and interfaces
Lab 17	Basic Threading; Implementing a thread; Synchronization
Lab 18	GUI programming (Game development); Exploring Java Swing
Lab 19	GUI programming (contd.); Java package; Importing package
Lab 20	GUI programming (contd.); Exporting package
Lab 21	Project Presentation
Lab 22	Project Presentation
Lab 23	**Final Exam**

Course Materials

- **Introduction to Java Programming,** Y Daniel Liang, Edition: 10
- **Java: The Complete Reference,** Herbert Schildt, Edition: 9
- **Java: How to Program,** Deitel & Deitel, Edition: 10
- **Hacker's Delight,** Henry S Warren Jr, Edition: 2

Academic Honesty and Regulations

- Every project and exam will be evaluated based the criteria of correctness, relevance, programming conventions, design and scope.
- If plagiarism is spotted, the examinee will be penalized
- During lecture side talking, irrelevant internet use, cell phone handling is not allowed. If spotted, the student will face penalty
- Every assigned project or assignment must use prescribed methodologies and tools that are taught in class, anything else will not be accepted