COMP132 Spring 2021

DESCRIPTION

Object oriented programming using Java. Data types, expressions, control statements, strings, arrays. Classes, objects, methods, overloading, variable scope, memory. Recursion. Inheritance, polymorphism, abstract classes, interfaces, nested classes, anonymous classes. Exception handling. Strings and regular expressions. File I/O. Generic collections. Generic classes and methods. Lambdas and streams. Event-driven programming. Multithreading.

Note: The new COMP132 will cover only Java and Object Oriented Programming

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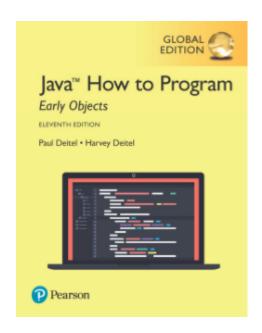Farrin Marouf Sofian, fsofian19@ku.edu.tr

LEARNING OBJECTIVES

to gain extensive knowledge, practice and understanding of advanced object-oriented programming features for software development in Java

COURSE INFORMATION

Required Textbook

Java How to Program, Edition: 11, Deitel&Deitel, Pearson

Assesment Methods

Laboratory	Programming Lab	30%
Final Exam	Programming + blackboard based test	30%
Quiz	In Class - blackboard based test	15%
Project	Term Project - programming	10%
Midterm Exam	Blackboard based test	15%

Grading policy: (Adjustment Possible due to pandemic conditions)

- Programming Laboratory: The Laboratory is an important part of the course and it is mandatory. 2x50 minutes lab sessions are continuous and is considered ONE LAB. Your lab work will be

graded during the lab. There will be around 10 graded lab sessions. Only the health report or dean reports will be accepted as excuses. Maximum 2 labs can be excused. If you attend less than 1/2 of a LAB, it will not be graded. See the course web site for details.

If your lab average is below 40 (out of 100) you will fail this class (letter grade of F) regardless of your final exam grade!

- Midterm Exam: **UPDATE on makeup:** For only those studetns who have a valid excuse (approved health excuse, excuses approved by dean of students etc), the final exam will be counted as the midterm makeup. Note that makeup of final will noto be counted as the midterm makeup.
- In Class Quizzes: These are short tests. No makeup. They are part of the class participation. Approximately 10 quizzes. One worst quiz will be excluded (instead of makeup).
- Term Project (programming): There will be one programming project in the second half of the course.
- Final examination: The final exam contains a test part, and a programming part. The test part is closed notes/slides/book exam. During the programming part, the course text book and the lectures slides are allowed. (Subject to change depending on the pandemic conditions).

Any duplication in any programming assignments or exams will be regarded as cheating and will be prosecuted to the fullest extent allowed by university policy regarding academic dishonesty.

Writing programs is the only way to learn how to program, therefore the lab/homework assignments and programming part of the exams are very important learning tools and constitute a significant portion of your grade. The problems in lectures, labs, homeworks and exams would be similar in nature, thus lecture and lab attendance and the time you spend on homeworks and problems would have a large impact on your performance.

Text Book

We will closely follow the required textbook.

Blackboard Site

We will use the blackboard course site for all purposes. All the communication will be done thru announcements and discussion forums. It is important that you follow blackboard announcements and use discussion forums for any question/communicaiton. Individual emails related to the course might not be responded timely.

Tools, infrastructure:

We use Eclipse Integrated Development Environment (IDE) for Java (8 or newer) in the lecture and labs, and github classroom. It is strongly recommended that you install eclipse/Java on your personal computer. IT will help in case you need help with the installation. See instructions in the course web page for installing these tools. Familiarize yourself with them by going through the tutorials installed with the tool as soon as possible.

These IDEs and compilers have been installed on PCs in computer labs as well (accesible by login in vlab.ku.edu.tr) .

Schedule and Subjects (During the course, slight changes are possible)

- Introduction and overview of Java, Classes, Objects
- Control Statements, Expressions
- Methods - a deeper look: scope, overloading,call stack, parameter passing, recursion
- Arrays, Multidimensional Arrays, ArrayList
- Object Oriented Programming, Deeper look into Classes, Inheritance
- Polymorphism, Interfaces, Abstract Classes
- Exception Handling
- Strings, Regular Expressions
- Files, I/O Streams
- Generic Collections
- Functional Programming with Java - Lambdas and Streams
- Generic Classses
- Java GUI Programming - Event Driven Programming
- Multithreading, Concurrency