CS 152: Principles of Computer Science II (4)
MWF 10:30-11:30 Hoyt G35
Westminster College, Spring 2012

Instructor:
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Prerequisite: CS151

Text: Mark Allen Weiss, *Data Structures & Problem Solving Using Java*, Fourth Edition. This book will also be used in CS251.

Outcomes: Upon successful completion of this course you will be able to use the Java programming language to

- create and handle exceptions
- perform file input/output operations on binary and text files
- use "generic" types
- use method annotations
- implement nested classes and understand the difference between a nested class and a top-level class
- make use of refactoring techniques to modify existing code
- implement unit tests for your classes
- perform rudimentary algorithm analysis through detailed operation counting
- perform empirical analysis of algorithms
- implement the stack, queue, priority queue and tree data structures
- apply the stack, queue, priority queue and tree data structures
- perform rudimentary network programming including writing a simple client-server application
- perform rudimentary graphics and game programming including writing a simple game

Your responsibilities:

- Read ahead and understand text material.
- Complete/master the text, homeworks, labs and projects.
- Seek help **immediately** if you are struggling.
- Learn the material.
- Perform substantial work outside of class.

Important points/tips:

- Don't give up after reading something once, I don't.
- Work a problem while reading the material the second or third time.
- Understand the question and your solution before you start typing! Don't be too reluctant to start playing with possible solutions but don't jump into it without thinking.
- If you don't understand some technical aspect of Java, play with it in a "Test" class for a while. Don't be afraid to write throw away code.

Grading:

Letter grades are assigned based on the percentage of the available points that you receive. The grading scale is fixed. **I do not curve.** The grading scale is as follows:

Letter	Percentage	Letter	Percentage
A	[92,100]	A-	[90,92)
B+	[88,90)	B	[82,88)
B-	[80,82)	C+	[78,80)
C	[72,78)	C-	[70,72)
D	[60,70)	F	[0,60)

Below is an **approximate** breakdown of the point distribution of the material. Since I grade on a point scale, the actual breakdown depends on how many homework assignments, projects and quizzes are given.

Projects, homeworks, quizzes, labs	36%
Midterm in-class exams (2)	48%
Final exam	16%

Attendance: You are expected to attend all classes. Attendance will not constitute part of your grade, except in labs, but failure to attend will result in no credit for missed assignments, tests, quizzes etc. Additionally, failure to attend will probably result in poorer performance on exams. **I do not provide class notes to students who miss class, excused or unexcused.**

Homework:

Homeworks are given in order to help clarify text material and will be less frequent in this class than in CS151. Homeworks must be turned in at the beginning of class on their due date. Late homework will not be accepted. **Homework will be graded based on completeness and correctness.**

In-class exams:

There will be two in-class exams during the semester worth up to 150 points each. There will be a comprehensive final exam worth approximately 150 points.

Quizzes:

Quizzes may be given at any time throughout the semester. They will be worth 10 to 15 points each. Make sure you follow lectures and complete homework and reading assignments to help you prepare for quizzes.

Projects:

There will be several projects throughout the semester. Projects are graded based on completeness and quality of work. It is your responsibility to thoroughly test your solutions to the problems.

"Open" projects: These are designed for learning purposes only and you may cooperate with others to any extent that you desire. I highly recommend that you complete as much of these projects on your own as you can since you will need to master this material for quizzes, exams etc.

"Individual" projects: Absolutely no cooperation is permitted on individual projects. Keep your work to yourself and don't copy or seek help from others. You are not permitted to use any person's help or code, except help which I provide to you specifically, in completing your projects. You are not permitted to discuss your solutions to these projects with anyone else. These rules extend beyond students in our class. That is, you are not permitted to seek help from friends, tutors etc.

"Group" projects: Absolutely no cooperation is permitted outside of your pre-assigned group. Keep your group's work to yourself and don't copy or seek help from anyone outside of your group. You are not permitted to discuss your solutions to these projects with anyone who is not in your group. If any individual member of a group breaks these rules the entire group may be held responsible. These rules extend beyond students in our class. That is, you are not permitted to seek help from friends, tutors etc.

Should you ever find yourself questioning whether you, another group member, or another class member have been completely honest (in accordance with the above policies) in the completion of a project please come talk to me **right away.**

Academic policies:

The department of Mathematics and Computer Science has a set of guidelines regarding academic honesty which can be found at: http://www.westminster.edu/staff/bonomojp/cheating.html

Unless otherwise specified all exams and projects must be entirely individual work. "Verbal" cooperation on lab projects is encouraged but the exchange of programs or program fragments either electronically or by visual inspection is not allowed. Keep your work to yourself and don't copy from others.

Cheating on exams, quizzes or projects will result in a grade of 0 (zero) for that item. All academic policies offenses will be referred to the college dean.

Special note: Special attention should be paid to the policies on projects discussed above. That is, if you violate the policies regarding projects, I will report the incident to the Dean of the college and you will receive no credit for that project. In many cases it is very easy to identify cases of cooperation so **DON'T DO IT**.

Disabilities and special needs: I will make any necessary, reasonable accommodations for students with disabilities. If you have a disability which requires accommodations, it is your responsibility to indicate to me that you have a disability and to discuss with me what special needs you might have regarding this class. In addition to notifying me, if you have a disability which requires class accommodations, you must make it known to Westminster College's student affairs office so that they can send me the proper paperwork.

Westminster College actively strives for the full inclusion of all our students. Students with disabilities who require access solutions for environmental or curricular barriers should contact Corey Shaw, Director of Disability Support Services, located in 209 Thompson-Clark Hall. phone: 724-946-7192 e-mail: shawcj@westminster.edu.