San José State University
Department of Computer Science
Spring 2021
CS 49J – Java Programming

Course and Contact

Information Instructor:	Ramin Moazeni, PhD
Class Hours:	TTh: 6:00PM - 7:15PM
Office Hours:	TTh: 5:30PM – 6:00PM, Over zoom
Email:	Ramin.Moazeni@sjsu.edu
Classroom:	ONLINE over Zoom: https://sjsu.zoom.us/meeting/register/tZYqduChrDkiEtXt2vc7ATrIRxfywyH7z2cS
Prerequisites:	Previous programming experience in a language other than Java.

Course Description
Introduction to the Java programming language and libraries. Topics include fundamental data types and control structures, object-oriented programming, string processing, input/output, and error handling. Use of Java libraries for mathematics, graphics, collections, and for user interfaces.

For the official catalog description, please visit the online catalog at http://info.sjsu.edu/web-dbgen/catalog/courses/CS049J.html

Learning Outcomes
Upon successful completion of this course, students should be able to:

- Write Java applications which are appropriately documented using Javadoc
- Use Java to read and write text files
- Implement from specifications Java classes that embody data structures
- Use and work with pre-existing implementations in the Java collections framework
- Use iterators and enhanced for loops to traverse collections
- Write a graphics program that draws simple shapes
- Use Java exceptions for error handling

Required Texts

Title	Big Java Early Objects 7/e.
Author	Cay Horstmann
Publisher	Wiley
ISBN	ISBN 978-1-119-49909-1
	Available in the bookstore or directly from Wiley

You will need a wireless laptop (running OSX, Windows, or some version of UNIX)

Course Mechanics

Desktop/Laptop

You will be required to have a desktop/laptop running Windows, Mac OSX, or a version of Linux to all classes and exams. It must be capable of installing and running the course software

Course Requirements

Exams (50%)

One online in-class mid-term (25%) and an online final exam (25%). Exams cannot be made up, except for reasons of illness, as certified by a doctor, or documentable extreme emergency.

Programming Assignments (45%)

Schedule your time well to protect yourself against unexpected problems. I suggest starting early so you have time to ask questions if you need helps. Late work is accepted with a penalty of 10% per day. Late homework is not accepted one week past it's due date **All homework is due at 11:59PM** on the due date specified.

Quizzes (5%)

Quizzes will be given throughout the course covering the required material discussed.

Grading Policy

Your grade for the course is based on the exams, the homework, and quizzes. Grades are calculated by weighting the scores as defined below.

At least	Letter Grade
93	A
90	A-
87	B+
83	B
80	B-
77	C+
73	C
70	C-
67	D+
63	D
60	D-
below 60	F

Exams

- The exams are based on lectures, homework/lab assignments, and reading materials covered before the exam's date.
- Absolutely NO items may be shared during the exams, including books, notes, and calculators.
- Absolutely NO usage of cell phones during exams. Cell Phones must in off or silent mode and not within your reach.

Individual Work

All homework and exams must be *your own individual work*. It is OK to have general discussions about the assignments or read other material for inspiration. You may *never* copy anything from anyone **without attribution**. This means if you find code on Stackoverflow or another web site, you need to give the URL where you found the code in a comment at the top of your class so that I can look at it if necessary.

You may copy from the textbook, the labs, or anything we do in class without attribution. For assignments and exams, you may not copy anything from any other student at all, and you may not collaborative produce results in pairs or teams. Your work must be entirely your own.

It is never okay to share your code with other students. If the other person submits your work, both students will receive a 0.
First incident of cheating will result in a 0 on that assignment or exam. Second incident will result in a F for the class.

BSCS Program Outcomes supported by this course:

(a) An ability to apply knowledge of computing and mathematics to solve problems
(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
(c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
(i) An ability to use current techniques, skills, and tools necessary for computing practice
(j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices
(k) An ability to apply design and development principles in the construction of software systems of varying complexity

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/

CS 49J, Java Programming, Tentative Schedule

Week	Lesson	Class Date	Reading	
1	1	28-Jan	Administrative, Intro to Java	
2	2	02-Feb	Intro to Java (Contd)	
2	3	04-Feb	Basic Java Concepts	
3	4	09-Feb	Basic Java Concepts (Contd)	
3	5	11-Feb	Lab Setup – IntelliJ, Git, Bitbucket	
4	6	16-Feb	Java Methods	
4	7	18-Feb	Java Reference Parameters	
5	8	23-Feb	Scope, Comments, Decision Statements, Switch Statements, Loops	
5	9	25-Feb	for-loop, Accumulator Variables, Sentinel Values, and Random Class	
6	10	02-March	Intro to Classes and Objects	
6	11	04-March	Classes and Objects, Inheritance, Interfaces, Abstract, InnerClass	
7	12	09-March	File IO	
7	13	11-March	File IO (Contd)	
8	14	16-March	Exception Handling	
8	15	18-March	Exception Handling (Contd)	
9	16	23-March	**Midterm (6pm-7:15pm)**	
9	17	25-March	Streams and Binary Input/Output	
10	18	30-March	Spring Recess	
10	19	01-April	Spring Recess	
11	20	06-April	Java Collection Framework -- Linked List, List Iterator, Sets, Maps	
11	21	08-April	Java Collection Framework -- Linked List, List Iterator, Sets, Maps (Contd)	
12	22	13-April	Java Collection Framework -- Stacks, Queues, Priority Queues	
12	23	15-April	Java Collection Framework -- Stacks, Queues, Priority Queues (Contd)	
13	24	20-April	Graphical Applications	
13	25	22-April	Graphical Applications (Contd)	
14	26	27-April	Graphical Applications (Contd)	
14	27	29-April	Event Handling	
15	28	04-May	Generic Classes	
15	29	06-May	Generic Classes	
16	30	11-May	Multithreading	
16	31	May-13	Multithreading	
17	32	May-20	**Final Exam (5:15pm-6:45pm)**	