

Lab 10 Exercise

CS 2112 Course Staff

November 2024

1 Introduction

The following paragraph is *copied* and pasted from the course website. Please **don't** type it out.

CS 2112/ENGRD 2112 is an honors version of CS 2110/ENGRD 2110. Credit is given for only one of 2110 and 2112. Transfer between 2110 and 2112 (in either direction) is encouraged during the first three weeks. We cover intermediate software design and introduce some key computer science ideas. The topics are similar to those in 2110 but are covered in greater depth with more challenging assignments. Topics include object-oriented programming, program structure and organization, program reasoning using specifications and invariants, recursion, design patterns, concurrent programming, graphical user interfaces, data structures, sorting and graph algorithms, asymptotic complexity, and simple algorithm analysis. Java is the principal programming language.

2 Bullets and Stuff

2.1 Lab Sections

- Monday 19:30-20:20
- Wednesday 19:30-20:20

2.2 Assignments

1. Intro to Java
2. Ciphers and Encryption
3. Data Structures and Text Editing
4. etc.

3 Random Math Equations

This math is inline with a paragraph of text: $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$. The following equations are separate blocks:

$$\frac{x+y}{y-z}$$

$$\sqrt{x+\frac{1}{2}}$$

$$\cos^2 x + \sin^2 x = 1$$

$$\lim_{x\rightarrow\infty}\frac{1}{x}$$

$$ds^2 = dx_1^2 + dx_2^2 + dx_3^2 - c^2 dt^2$$

$$x = a_0 + \frac{1}{a_1 + \frac{1}{a_2 + \frac{1}{a_3 + a_4}}}$$

$$\sum_{i=1}^\infty \frac{1}{i}$$

$$\frac{1}{4\pi}\int_0^\infty \frac{1}{r}\frac{\partial U}{\partial n}ds$$

$$\begin{aligned} y &= x^2 + 2x + 2 \\ &= x^2 + 2x + 1 + 1 \\ &= (x+1)^2 + 1 \end{aligned}$$

$$\begin{bmatrix} \cos(\theta) & 0 & 0 \\ 0 & \cos(\phi) & 0 \\ 0 & 0 & \cos(\sigma) \end{bmatrix}$$