Practical Two - Encrypted Message System 101

Introduction

Welcome to the Encrypted Message System 101, a program that is going to require you to write key components including basic ciphers to help encrypt the messages between clients. While this application is not ready for networking, it is very similar to a basic email application.

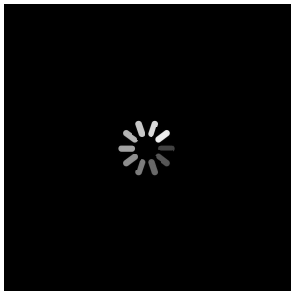
In addition to writing the code, you will be learning to use an **Integrated Development Environment (https://en.wikipedia.org/wiki/Integrated_development_environment)** (IDE), and in particular for this class, you will be using **IntelliJ (https://www.jetbrains.com/idea/)**. While you are technically free to use other IDEs, the TAs will not be able to support you with other environments.

*These instructions have been written for the **Eclipse** IDE, and minor changes will be needed when using **IntelliJ** (This is due to a last minute change in the lab machines).*

What you will learn

- String manipulation
  - charAt
  - substring
  - indexOf
- Reviewing classes
  - getters / setters
  - Simple methods

Setting Up Your IDE - Eclipse

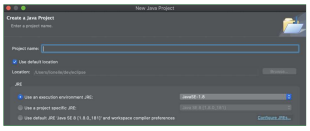


CS 163/4: Java Programming (CS 1) uses the Eclipse Integrated Development Environment (IDE) for developing Java code. Eclipse is favored as a premier tool in academia and industry. A standard installation of Eclipse is available on all CS Department Linux computers for use by CS163/4 students. As a default, it will be assumed that students use this version on CS Department Machines. Basics of how to use the Eclipse IDE productively will be covered somewhat in lecture and more extensively in course recitations. Lab machines are currently using the Oxygen version of Eclipse, which is version 4.7.2. Eclipse documentation is found **here (http://www.eclipse.org/documentation/)**

Eclipse can also be downloaded for free and installed on most platforms. Eclipse is written entirely in Java, so it will operate properly on most any platforms that support Java. This includes Linux, Solaris, Mac OS X and properly configured Windows platforms. It is assumed that many students will find it possible to install and use Eclipse on their own computers, and the instructor and GTAs will try to help informally. However, successful installation and use of tools such as Eclipse on your own machine demands some understanding of how to install and use new software on that platform, and ultimately it falls to the individual student to either succeed at such an effort or to use the resources already provided by the CS Department. The help that can be offered by the instructor and GTAs is by necessity limited.

If you decide to run Eclipse on your system, make sure you download and install the Java Development Kit (JDK) first from **here (http://www.oracle.com/technetwork/java/javase/downloads/index.html)**. The current version of Java on department systems is 1.8 (**Version 8 (https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html)**). After installing Java, download and install Eclipse from **here (http://www.eclipse.org/downloads/)**. Select the version called Eclipse IDE for Java Developers. In both cases make sure you select the correct operating system.

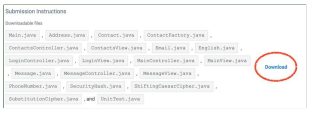
Creating an Eclipse Project



Before you download the files from zybooks, you will want to create a project in eclipse. To create a project, go to File -> Java New Project. Name your project something meaningful, such as P2. After you create the project, go to the code in zybooks by clicking through the link in **canvas (http://canvas.colostate.edu/)**.

Downloading The Template Files

You will notice with the files, that you will have to download them, and not work in zybooks.



When you click the download button (image shown on the right), it will download the files as a zip archive. For many browsers such as chrome, you will see the download at the bottom left with an arrow by it. If you click on the arrow, you can see where the file was downloaded. For most computers, it will have been downloaded to the **Downloads** folder.

From this point, you have two options to copy the files into your project:

Option 1: Directly copying files

Navigate to your downloads folder (**Mac OS Instructions (https://osxdaily.com/2016/07/24/access-mac-downloads-folder/)** and **Windows Instructions (https://support.microsoft.com/en-us/help/4028272/windows-10-find-my-downloads)**), and extract the zip file. This is often done by double clicking, but you can also right click to extract. You can then copy the files into the src directory in your project.

Option 2: Using Eclipse's Import

Go to eclipse right click on your project folder and go down to **import**, as shown in the screenshot. Your project name may be different.

1. Click on the General->Archive File, and click next
2. Select the file in your file system. This is more than likely in your downloads folder, and you can click **browse** to navigate your zip file to find it.
3. Select the destination directory, which will be your **src** directory (src is short for "source"). There is a browse button next to the destination or "into folder".