CSC 210: Installing and running Java programs using Eclipse

Downloading Eclipse

1. Download Eclipse IDE 2021-06 from https://eclipse.org/downloads/ by clicking on the appropriate link. This takes a while to download, so be patient.
2. Follow any prompts to install Eclipse. When asked what to install, select "Eclipse IDE for Java Developers", and click Install.
3. Accept the user agreement when prompted.
4. When installation completes you can optionally select "Launch" to launch the application.

Opening Eclipse and setting your workspace

1. Double click the Eclipse icon to open Eclipse. You will be prompted to select a directory as a workspace. This workspace directory will store preference and other information and is the location where Eclipse looks for your Playground project. On your personal computer, the default workspace location should be used. From a classroom computer, it is recommended that you create a directory on your flash drive, which can be used to store your Playground projects and code. Note that Eastern has OneDrive, which provides cloud storage for students, but syncing is slow and it will be difficult to access projects and code stored on OneDrive during class. However, you may choose to use OneDrive on your personal computer.

Creating a Project

1. On the Welcome menu, select "Create a new Java project", or Select File→New→Java Project. Name the project 'Playground'. Under the "Module" section, make sure "Create module-info.java file" is NOT checked. Then click Finish. We will use the Playground project for all programs in class, unless specified otherwise. The Playground project will be created in the current workspace. On your personal computer or if saved on a flash drive, the Playground project will only need to be created once.

Adding and removing a single program (i.e., a single *.java file)

1. Right click on the Source Folder (e.g., *src*) in the Package Explorer tab and select New File
2. Click on Advanced and click on 'Link to file in the file system'
3. Click 'Browse' to select the file to add, then click on 'Finish'
4. To remove a program from Eclipse, right click on the program to remove, and select Delete. **Note**: you should get a message indicating that only the workspace link will be deleted. If this is the case, click OK to remove the program from your project. If this is NOT the case, then removing the program may delete the file from your computer. See me if this happens.

Adding and removing a folder with <u>multiple</u> programs

Note: in this class, we will assume that all programs to be added are in the same folder, and not in one or more subfolders. Adding a folder containing subfolders of programs can be done in Eclipse, but the process is a little more complicated.

1. If you have a folder containing one or more programs, you can add the folder by right clicking on the Project under the Package Explorer (we have named the project Playground), then clicking on Build Path → Link Source and selecting the relevant folder.
2. To remove folders that have been added following the directions above, right click on the folder that has been added, and select Delete. A message should come up indicating that only workspace links will be deleted. Be aware that if you do not receive this message, you will be deleting the actual files rather than simply removing them from your project (which you probably don't want to do – see me if this is the case). Click on OK to complete the process.

Creating a program from scratch (we will not do this until much later in the semester)

1. Create a Project in the current workspace if you do not have one already.
2. Select File→New→Class
3. Give your class a name, such as HelloWorld. This will create the file HelloWorld.java in your Project folder. **Note:** if you create a program in this manner, removing the program from your Project folder can cause problems.
4. Under 'Which method stubs would you like to create?' check 'public static void main (String[] args)'
5. Click 'Finish'

For a first program, modify the HelloWorld.java program within Eclipse to read as follows:

```
public class HelloWorld {

        public static void main(String[] args) {
                System.out.println("Hello World");
        }
}
```

Running a program

1. To run a program, click on the green play icon. Program output appears at the bottom of the screen.