

# CECS 277 LAB DEPENDENCY INVERSION

**OBJECTIVE:** Get some practice writing to an interface rather than a concrete implementation.

**INTRODUCTION:** Please remember the coding standards [here](#).

In a way similar to what we did in lecture today with the geometric shapes, we are going to have you implement to an interface rather than concrete classes. You will start with the code [here](#), and refactor it so that the `StringWriterImp` and `StringReaderImp` classes each implements an interface, and your `StringProcessorDependent` class binds to those interfaces, rather than concrete implementations. Finally, you have to redo `DependencyInversionDependent` so that it, too, creates variables that use those interface variable types rather than the concrete implementations.

**PROCEDURE:**

1. Build `StringReader` and `StringWriter` interfaces calls for everything but the constructors in `StringReaderImp` and `StringWriterImp`.
2. Update `StringReaderImp` and `StringWriterImp` so that they implement their respective interfaces instead of being independent classes. Be sure to put in the `@Override` annotations as appropriate.
3. Copy `StringProcessorDependent` and call the copy `StringProcessor` and change it so that it relies on your new interfaces rather than any specific implementation of those interfaces.
4. Copy `DependencyInversionDependentRunner` to `DependencyInversionRunner` and make that work with the new interfaces as well. Remember that you cannot create instances of an interface, but you can declare variables of an interface type.
5. The demo code that we went over in lecture is [here](#).

**WHAT TO TURN IN:**

- `StringReader.java`
- `StringWriter.java`
- `StringReaderImp.java`
- `StringWriterImp.java`
- `StringProcessor.java`
- `DependencyInversionRunner.java`
- Your sample output, named `console.txt`