## **ENSF 409**

## Exercises - Lesson 19

The following exercises correspond to the video for Lesson 19.

## Exercise 19.1

1. Modify the code to use character-based streams.

Lesson19\_IOStream/01\_ByteStream

- FileReader is similar to FileInputStream
- FileWriter is similar to FileOutputStream

## Exercise 19.2

- 1. Create a program which can provide a formatted string in multiple languages.
- 2. You can assume that any data files used in testing will contain valid data.
- 3. Three Java files with comments describing methods are provided, along with three data files and an FAQ.
- 4. You may need to create additional classes and member and/or class data.
- 5. Part of this exercise is identifying the appropriate class to use for each part of the problem. Hence, no UML diagram is provided.

Lesson19\_IOStream/09\_Internationalization

 $The following \ code \ in \ main() - after \ instantiating \ a \ Translator \ object - produces \ the \ output \ shown \ below.$ 

System.out.println(trans.translate(3, 8, 2021));

Tip: The exercise can be solved without any I/O classes other than those referenced in this lecture, but you may need to read additional documentation.