

# ENSF 380

## 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

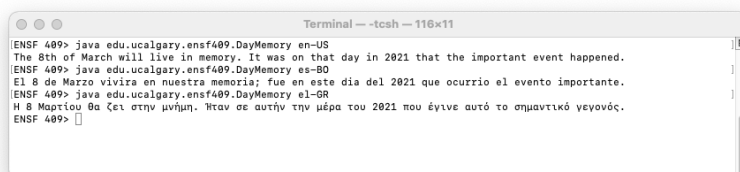
### Exercise 19.2

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.