### **Class 19: Little Languages**

6.102 – Software Construction Spring 2024

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## Warmup



Look at examples/RowYourBoat.ts, and run it with npm run RowYourBoat

• if no sound in Node: npm run WebServer instead, and open the URL it prints

You should hear Row Your Boat played twice... but we want the second time to be *transposed* up one octave in pitch

TODO-1: implement transpose as an instance method of Music and its variants

• first TODO-1 in MusicLanguage.ts line 163, then Concat.ts, Rest.ts, Note.ts





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• first TODO-1 in MusicLanguage.ts line 163, then Concat.ts, Rest.ts, Note.ts

TODO-2: implement transpose as a new variant class of Music instead

- you can leave the transpose instance method in place just don't use it
- TODO-2 is in MusicLanguage.ts line 160 and Transpose.ts

#### Transpose



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• first TODO-1 in MusicLanguage.ts line 163, then Concat.ts, Rest.ts, Note.ts

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TODO-3: implement transpose as a visitor

• TODO-3 is in MusicLanguage.ts line 157 and TransposeVisitor.ts

# Little Languages