CSCE 330 Fall 2023
HOMEWORK 9
Assigned Tuesday 2023-11-09. Due Thursday 2023-11-16.

Watch the video lecture "Function Level Programming and the FL Language" by Dr. John Backus, available at
`https://archive.org/details/JohnBack1987`, and answer the following questions:

1. What does it mean for a program to be "referentially transparent?"

2. When writing an FP/FL program, do you work at the object level or at the function level?

3. Name three combining forms.

4. Write a non-recursive FP/FL function to find the length of a sequence. Write down its application to the sequence `<3,4,5>`.

5. Backus argues that, when writing an FP/FL program, you do not need to worry about efficiency, but only about correctness. This is because "mysterious" optimization allows the correctness preserving transformation of inefficient programs into efficient ones. What is "mysterious"?