Lab 4 - Loops and Enhancement (Snake, MultiTrain)
CS 161 - Fall 2016

Due date: 10pm, Monday, September 26th - Monday not Tuesday

Goals
- to use definite loops (for loops)
- to reuse solutions from a previous assignment

Overview

The Snake program counts 25 points and draws a one-line ASCII art snake of the user-requested length. The MultiTrain program counts 75 points. It will draw a train with the user-requested length with the user's characters.

Snake

The program will ask the user how long the snake should be and will then draw a one-line snake with a head (~<:) ), as many diamond segments as the user requested ( <> ), and a tail ( -- ). Consider this sample interaction:

How long should snake be?
30
~<:)<><><><><><><><><><><><><><><><><><><><><><><><><><><><><><>--

Use a for loop. You do not need to use extra methods. Keep it simple.

Before submitting your program, test it. Think about what you expect to see printed.

MultiTrain

Order of input is important. The train picture shown results from the interaction shown with my program ignoring the engine and caboose characters. I realize many of you want to have user characters for the engine and caboose, so they are included and must be read. They do not need to be used. This also allows you to start drawing the train after the user enters the input. More about that below.

How many interior cars should be drawn?
2
Drawing 2 interior cars.

Please enter an engine character, a caboose character, and 4 characters for drawing cars (edge stripe for each one)
B a 8 * & ~

You may (and should) use your previously created train methods from Train. You are not creating new art unless you wish to do so. Reuse your code.

Specification: Input and Output

The first input is the number of interior cars to draw. The number should be used to prompt for the number of characters needed for drawing those cars. The remaining input should be requested all at once so that the user types it all and presses return before you start drawing. You will then read it as you need it when drawing cars. The second and third input are the characters for the engine and caboose. You do not need to use them in your drawing, but you must read them. The remaining characters are pairs of edge and stripe used to draw interior train cars as in the previous assignment.

Implementation Details

- Prompt for the number of cars and read that.
- Then prompt for all the rest of the data. The user will type a line of input.
- Then read the engine and caboose characters.
- Draw the engine. Use the engine character (and caboose character) if you wish.
- Use a for loop to read the two characters you need (you already asked for them, and the user already typed them) and call your car method. Both the read and the call to your car method are inside the loop. Do not prompt the user inside the loop. The user already provided that input. Asking would mess up your picture. You will fill the edge and stripe variables with new data each time through the loop.
- Draw the caboose. You may use the provided input or not.