Manoj Vasa

Aug. 8, 2016

Code Reading

General Questions

1. Time spent in class: 50 minutes

Time spent outside of class: 2 hours 40 minutes

1. Yes, I was in the class for the introduction to the reading
2. I worked with Aaron Loomis to discuss how the IntStack class was affecting the Postfix class and how the Postfix class was altering the stack.
3. I have never seen the Postfix notation before.

Reading#1 – Postfix Report

1. The Postfix takes a character argument, puts those elements in an array, and then performs arithmetic operations on those elements after converting them to integers.
2. Postfix, simple expression: ab+

Postfix, complex expression: abn+\*

InfixToPostfix, simple expression: a+b

InfixToPostfix, complex expression: a\*(b+n)

1. Lines 11 and 13 would still need to be ifs. This is the case due to the process of how the code executes the information. The information from the line 9 if statement changes information that is critical for the if statements that come after line 9. Since lines 11 and 13 have ifs as well the execution of the previous statement will lead to changes that affect these lines as well.
2. On line 9, the ‘+’ is neither concatenation nor addition, because it is used as a type char. The plus on line 10 is being used as addition since the elements in the array s are of type integer. The plus on line 18 is being used for concatenation.
3. This code wouldn’t work on numbers that are more than one digit. The infixtopostfix class would still execute lines 9 to 12, but wouldn’t execute line 14 after seeing that an integer has more than one digit. The code will still loop through N times before exiting, but line 14 is never executed due to the numbers being more than one digit.
4. When this code encounters the parentheses in the input, it writes over them with the data that is occupying the top of the stack.
5. The top element of the stack is going to be on the rightmost of the array s and the bottom element of the stack is going to be on the left of the array s.
6. If the stack were full the value of N would be the length of the stack minus the length of the string character inputted into the array.
7. Another push instruction to a full stack would result in a stack overflow.
8. This was a difficult code to read, but I’ve come to understand it in the time I’ve taken at home.

Reflection Questions

1. It felt as if I was reading an unfamiliar language at first glance. However, as I looked further into the code I was intrigued by how organized and clean it appeared. The structure was clear and the process of the code was understandable too.
2. I began with the Postfix class and then saw a function that looked unfamiliar to me. Then, I searched for the IntStack class to make sense of the Postfix class even further. Reading the IntStack class helped me in reading through the rest of the Postfix class. Tracing while reading the code very helpful in letting me understand the process the code was executing. Collaborating with one other person assisted me in clearing my doubts and learning new information about the code that I already didn’t know. In a future reading I would read more into detail and visualize the stack as I trace the code.
3. The part that was most difficult for me to comprehend were lines 15 and 16 of the Postfix class. This was difficult because I couldn’t recognize the process that the cod was executing at these particular lines.
4. Questions 8 and 7 were the most difficult to answer for me. Although, I did have experience with stacks all of last semester, I found it difficult to trace this particular code in a stack. It seemed so foreign to me as I read the code in class.
5. Reading this code proved to be challenging as I began. After some explanation of the process and further reading the code I was able to understand what was happening with the code. After further reading I was able to understand what each class was executing. Overall I was somewhat confident of my ability to read the code although it took me some time to comprehend the contents.
6. This code just seemed so foreign to me as I’ve never been introduced to Postfix or Infix classes before.