

Activity: Control Structures; Pondering the Final Project

A. Why?

- Control structures are how we organize the behavior of our programs
- We need to think about what final projects people might do.

B. Outcomes

By the end of the class you should

- Understand how to translate typical if-else and while loop structures in LC-3 assembler.
- Have begun thinking about what final projects we might do.

C. Questions

Skipped Questions 1 & 2 in class — just did Question 3.

1. Sketch LC-3 assembler code for the following high-level pseudocode:

```
if (X >= 0 && X <= K) {  
    ... True branch ...  
}  
else {  
    ... False branch ...  
}
```

2. Sketch LC-3 assembler code for the following high-level pseudocode:

```
while (Y >= 0 || Y <= K) {  
    ... Loop body ...  
}
```

3. Earlier this semester, people leaned toward doing projects (possibly individually, possibly in groups) from a list to be thought about later. In group, discuss possible project ideas and whether they'd be done in groups or individually. Just to start the discussion, last semester people did the same (individual) project, a stack-based calculator (in LC-3 assembler). One idea I'd like to toss out is a console-oriented LC-3 simulator (written in a high-level language).