

## Lesson 5 Lab 8.3 – Functions and Flowcharts

### Critical Review

Based on the type of loop used for validation, you may have noticed the concept of a priming read. This is this the first input before the validation loop.

The purpose of this is to get the first input value that will be tested by the validation loop.

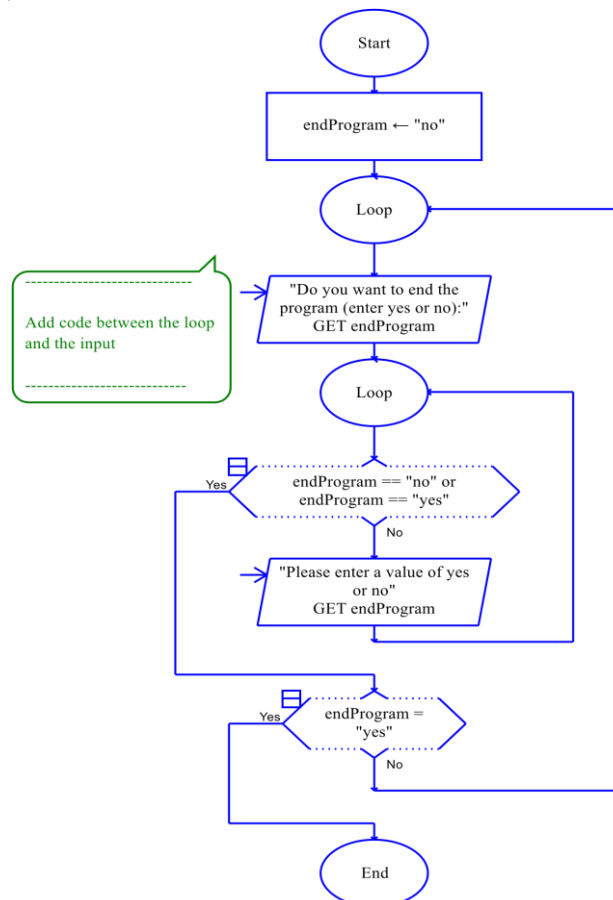
A priming read is used with a while loop, rather than a do-while loop.

**Note:** If the programmer is asking for a particular type of input (either numeric or string), the user is free to enter something else. This will normally cause a fatal error at some point of program execution. Avoiding these fatal errors is beyond the scope of basic Raptor programming. What this means is that all errors cannot be resolved using Raptor.

This lab requires you to modify a RAPTOR flowchart created from Lab 6-4 to incorporate validation loops.

**Step 1:** Start Raptor and create a RAPTOR flowchart using the pseudocode provided in Lab 6-4. Save your new flowchart as *Lab 8-3*. The *.rap* file extension will be added automatically.

**Step 2:** In the main module, modify your loop condition so that the user must enter a “yes” or a “no” value. This can be done with nested Loop symbols. Your flowchart might look as follows:



**Step 3:** In the `getNumber` module, modify the code so that the input must be at least 2 or more students and no more than 30 students. If the user enters a valid number, the program should continue. If not, display an error message that says “Please enter a number between 2 and 30 – Try again!!” Use a `prime read` in this situation.

**Step 4:** In the `getScores` module, modify the code so that the input must be between 0 and 100. If the user enters a valid number, the program should continue. If not, display an error message that says “Please enter a number between 0 and 100 – Try again!!” Use a `prime read` in this situation.

**Step 5:** Execute the program to make sure it works and upload your completed RAPTOR (.rap) file as your submission.