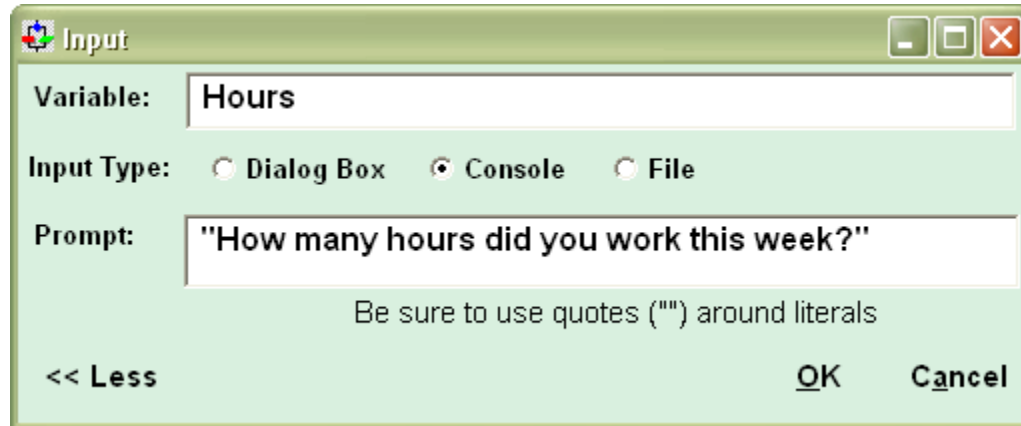


# WHILE LOOPS

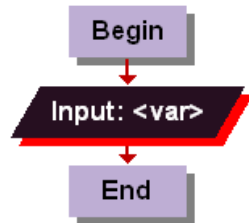
Chapter 3

# Console Input and Output

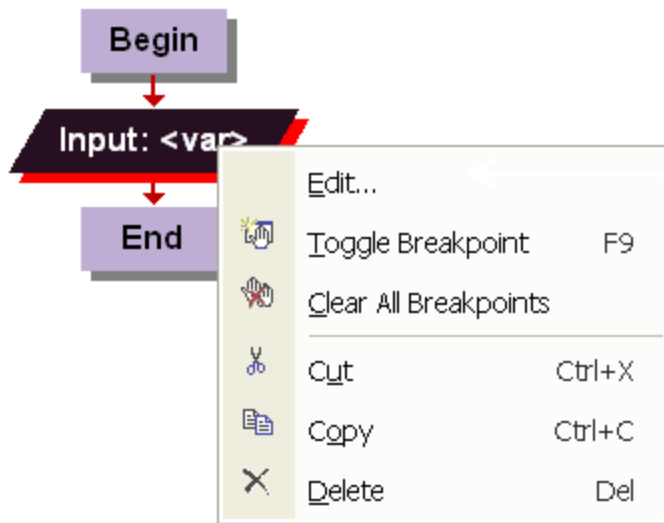
- Input and output interactions with the used are maintained for later inspection.



# How Did We Get This Box

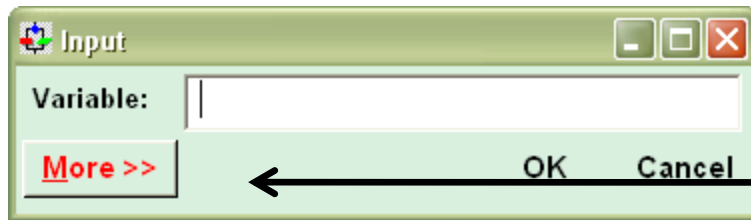


Right click the input: box

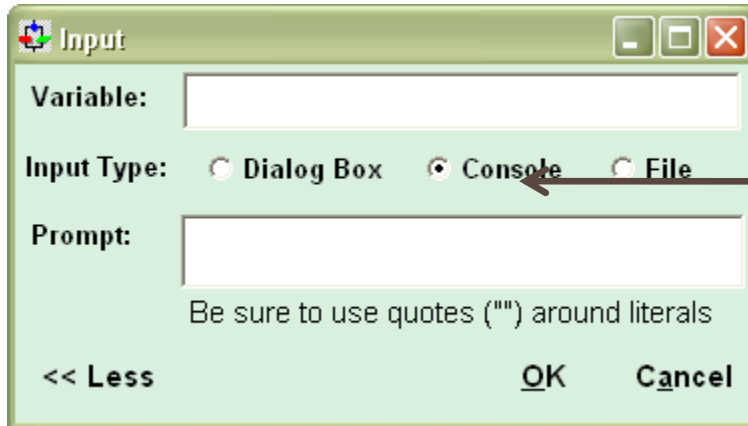


Click edit

# How Did We Get This Box



Click the More button



Click console and fill in variable and prompt

# Console Input and Output

- ❑ Persistent
- ❑ Each line remains in console window
- ❑ To move to new line you must use an end of line symbol

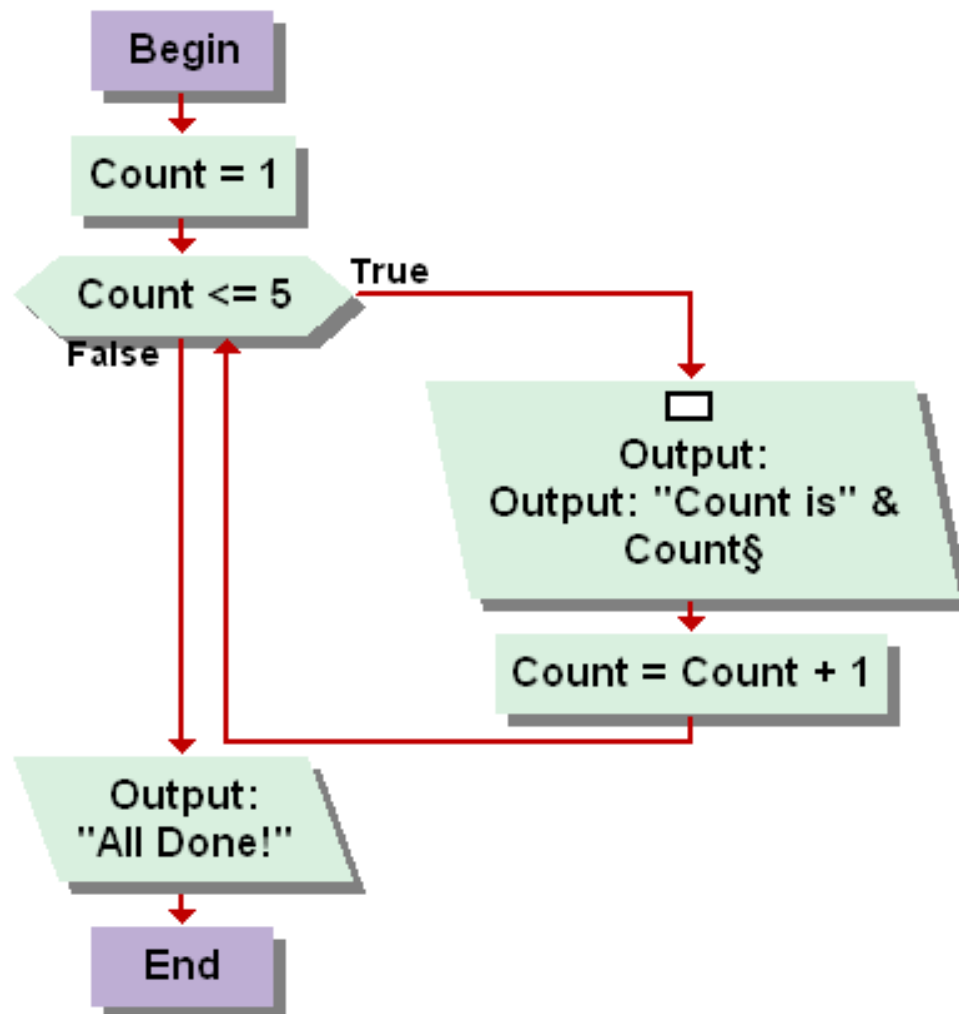
# LOOPING



**Used to Perform Same Action Multiple Times**

# While Loops

- Used to repeat actions
- Condition inside the loop remains true
  - ▣ Body of the loop executes
- Condition inside the loop is false
  - ▣ Body of the loop does not execute
- Use a control variable
- Example Count







# Counting Backwards

# While Loops and Sentinel Values

- Use when you don't know the number of iterations
- The user inputs the end
- Use a special value (sentinel value) to indicate stop



# Grocery Checkout

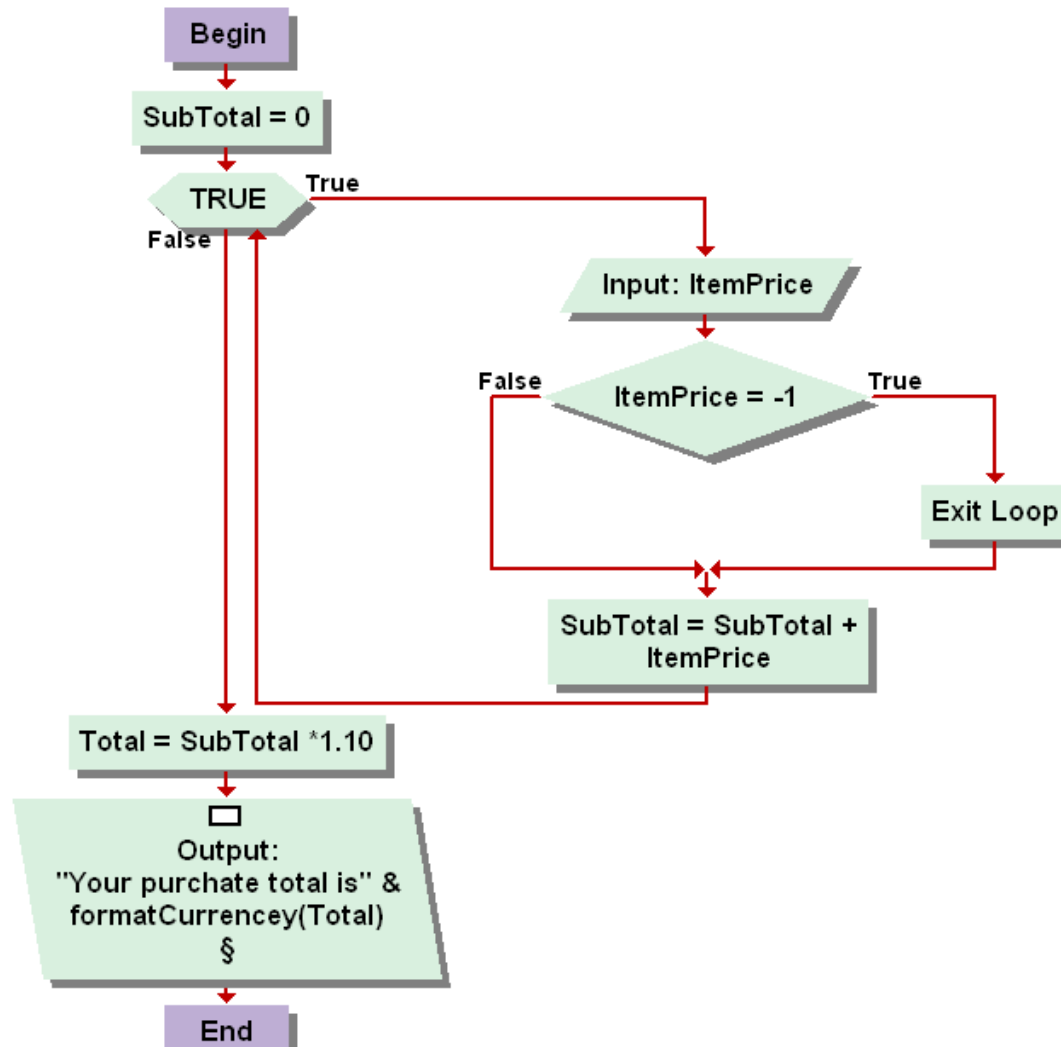


Determine the Average

# Exit Loop

- Causes control to jump out of the loop
- Goes to the statement immediately below the loop
- I am not a big fan of these.
  - ▣ You should have another way of exiting the loop.
  - ▣ Redesign the code rather than use

# Grocery Checkout Using Exit Loop



This will be handled very differently in Java



# Redesign the Grocery Checkout Not using the Exit Loop



# High-Low Game