2025 REMAKE OF "Line 39 Label Printer 2013" PROGRAM

Inputs / Known Variables:

1. Take constant input from connected measurement hardware = "actual length"
    a. Laser measuring device provides numerical distance input value.
2. Take user input from barcode scanner device = "desired length"
    a. Currently code39 barcode format = numerical 1234.56 value only. Want to change this to code128 barcode format to potentially accept alphanumerical data of "desired length" + "work order number".
3. "off by distance" = "actual length" minus "desired length"
4. Fixed variable "green tolerance" = 0.1 (inches)
5. Fixed variable "yellow tolerance" = 6 (inches)
6. Boolean "allow print"
7. "LabelText" = "pre-defined sentence text here"

Function / Calculations Needed:

1. Laser input (probably in inches) should be converted to [Feet + Inches]
2. Barcode input (in inches) should be converted from [Inches] to [Feet + Inches]
3. If "off by distance" is greater than "yellow tolerance" or "desired length" = 0 or undefined, then display red box, set "allow print" to false
4. If "off by distance" is less than "yellow tolerance" but greater than "green tolerance" then display yellow box, set "allow print" to false
5. If "off by distance is less than "green tolerance" then display green box and set "allow print" to true

Graphic User Interface:

1. Always display "desired length"
2. Always display "actual length"
3. Always display "off by distance"
4. Include "X to Clear" button to set "desired length" to zero
5. Include "Spacebar to Print" button only if green box is displayed / boolean "allow print" equals yes

Output / Label Printing:

1. When green box is displayed and "allow print" = true, press spacebar to print label
    a. Label should be 1" x 2" from Zebra GK420d USB connected printer
    b. Label should print "LabelText" sentence, "desired length", and "actual length"
    c. Example: **Wespa USA Length Verification**
        WO#1234: **23 ft 8.75 in**
        Produced: **23 ft 8.79 in**
        Tolerance: **0.10 in**
        Off by: **0.04 in**

Other:

1. 2013 version includes button for "LaserOn / LaserOff", not sure how this works or if necessary for regular use, but should be included for testing
2. 2013 version includes "Printer Select" options and margins (good luck with that)
3. Don't need anything in metric, all printed values should be in either [Inches] or [Feet + Inches]
4. Need very simple/idiot-proof primary GUI for daily operator use, but require flexibility in adjusting variables, printer settings, laser settings, in a hard-to-access settings menu or separate detailed config file.

5. Would like to allow for potential in future to: change barcode input from numerical to alphanumerical, change printed label output text/size/spacing, include newly generated barcode on the printed label output (taking data from alphanumerical barcode input), etc.

Last Barcode Scanned:

Work Order: 1234
Length: 23 FT 8.75 IN

CLEAR

TABLE LENGTH:

23 FT 8.79 IN

OFF BY:

0.04 IN

ORDER LENGTH:

23 FT 8.75 IN

WITHIN TOLERANCE

PRINT
(spacebar)

Last Barcode Scanned: Work Order: 1234
                                   Length: 23 FT 8.75 IN

CLEAR

TABLE LENGTH:

23 FT **4.94** IN

OFF BY:

3.81 IN

ORDER LENGTH:

23 FT **8.75** IN

NEAR TOLERANCE

PRINT
(spacebar)

Last Barcode Scanned: Work Order: **SCAN NEXT**
                                   Length: **WORK ORDER**

CLEAR

TABLE LENGTH:

31 FT **11.02** IN

OFF BY:

ORDER LENGTH:

00 FT **0.00** IN

OUTSIDE TOLERANCE

PRINT
(spacebar)