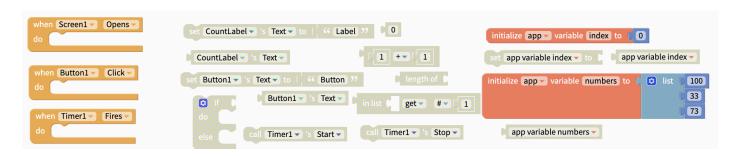
CS 107 Sample Test Coding Questions

Consider the following UI and blocks



Button1 is the one with "click me" on it. CountLabel is the label with a 0.



a. Code blocks that show, in CountLabel, how many times Button1 has been clicked.

Answer:

In the Designer, or Screen. Opens, make sure CountLabel. Text is set to 0. Then here are the blocks:

```
when Button1 Click do set CountLabel 's Text to CountLabel 's Text 1
```

b. Modify the code so that Button1 also shows how many times it has been clicked. Specify any changes you might need in the initial component properties (Designer or Screen.Opens)

Answer: In the Designer, or Screen. Opens, make sure CountLabel. Text and Button 1. Text are set to 0. Then here are the blocks:

```
when Button1 Click do set CountLabel 's Text to CountLabel 's Text + 1

set Button1 's Text to CountLabel 's Text 

CountLabel 's Text 

Text to CountLabel 's Text 

Text
```

CS 107 Sample Test Coding Questions

3. Code blocks so that each time you click Button1, it toggles between "click me" and "stop it"

In the Designer, set Button1. Text to "click me". Then here are the blocks:

```
when Button1 Click do if Button1 's Text = " (" click me ")

do set Button1 's Text to (" stop it ")

else set Button1 's Text to (" click me ")
```

4. Code blocks so that the first number in "numbers" is displayed in CountLabel when the app launches, and each time you click Button1, it shows the next number in the list "numbers". If the last (3rd) number is showing, and Button1 is clicked, show the first item in numbers.

Here are the blocks:

```
initialize app variable numbers to
                                       🔯 list 📜
                                                100
                                                33
                                                              initialize app variable index to
                                                73
when Screen1
                 Opens
     set CountLabel 		 's Text 		 to
                                             app variable numbers
                                                                     get 🔻
when Button1
                 Click
     set app variable index to
                                    app variable index
                app variable index
                                            length of
                                                       app variable numbers
          set app variable index
     set CountLabel 

's Text 

to
                                             app variable numbers
                                                                     get 🔻
                                                                                    app variable index
```

5. Code blocks so that clicking Button1 causes the number in CountLabel to increase by 1 every 2 seconds.

In the Designer, set CountLabel. Text to 0. In the Blocks, create a Timer and set its Interval to 2, its Enabled to false, and its Loops to true. Then here are the blocks:

CS 107 Sample Test Coding Questions

```
when Button1 Click do call Timer1 's Start when Timer1 Fires do set CountLabel 's Text to CountLabel 's Text 1
```

Note that Timer1. Start sets the Timer. Enabled property to true. For this app, the count will keep changing forever (Timer1 is never disabled)

6. Code blocks so that each time you click Button1 it shows how many times its been clicked, but when the number reaches 5, it starts counting down on each click, down to 0, at which time it starts counting up.

In the Designer, set Button1.Text to 0. Then here are the blocks:

```
initialize app variable incr to 1

when Button1 Click do if Button1 's Text = 5

do set app variable incr to 1

if Button1 's Text = 0

do set app variable incr to 1

set Button1 's Text to Button1 's Text app variable incr
```