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CS 162

Module 4

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 Show me that you know what a set of data is and some ways of looking through it for important information.

1. Describe a set of data that could be important to someone,  
   (Maybe the set of quarter mile times for a group of racers in a group of cars or lines of code from programmers)

My first thought was a fishing competition. Finding the length and weight of the biggest fish among the competitors or how many total fish were caught in the allotted time.

1. Describe a sequence of steps to find a useful piece of information in that data set,  
   (Maybe find the best times for individual racers (were they all using the same car))

Like the racers, going through the individual competitors to find who had the biggest fish in either subcategory of weight or length.

1. Discuss ways that grouping or ordering your data might help you find certain items or categories of data,  
   (Maybe find the best times for each car grouped by make or model)

Grouping the fish into small, medium, and large categories based on the length of the fish could help us in ordering or grouping the data. Or, if a competitor caught multiple fish, finding which one of their total number was the biggest and using that towards which fish was the largest.

Prototype a GUI with a button, a text box, and a label ✓

Show how event listeners work by having a button that when pressed will copy the text from the text box and place it on the label. ✓

Is there any way to automate some tests on these graphical objects?  
(Of course there is! But let’s stay simple for the moment)

We could test output of whether or not the new label configuration is equal to the entry variable.

**Attempt** to create a few PyTests that will work with the data behind the scenes ✓  
(maybe a test that checks the default value in your text box, label, or that some variables has an expected value)

1. Create another program (yes you can start with your old code!) to now include 9 more text boxes (all 10 held within some kind of collection, such as a list) and change the listener to find the smallest number from the textboxes and display it in the label
2. Now that that is working, let’s change the button one more time; have the button, when clicked, change the label's text to match that of the next smaller number in the list of textboxes.  
   (so if you had the numbers 1, 5, 3, 7, 8, 3, 6, 9, 0, 12 in the text boxes, then the first click would display a 0, the second click would display a 1, the next a 3, the next a 3 (since there is another 3 in the list), and so on)
3. **Attempt** to create a few PyTests similar to before.