Wiki - Practice exercises for buttons and input fields

Solve each of the practice exercises below. Each problem includes two CodeSkulptor links; one for a template that you should use as a starting point for your solution and our solution to the exercise.

1. Write event handlers print_hello() and print_good_bye() for the two buttons with labels "Hello" and "Goodbye" defined in the program template below. Pressing these buttons should print the messages "Hello" and "Goodbye", respectively, in the console.

   Print hello/goodbye template
   Print hello/goodbye solution

2. Given the three function print_color(), set_red(), and set_blue() in the program template below, create three buttons that print and manipulate the global variable color. Use the CodeSkulptor Docs to determine the SimpleGUI method for creating a button if needed.

   Register buttons template
   Register buttons solution

3. **Challenge:** Given the program template below, implement four buttons that manipulate a global variable count as follows:

   - The function reset() sets the value of count to be zero,
   - The function increment() adds one to count,
   - The function decrement() subtracts one from count,
   - The function print_count() prints the value of count to the console.

   Count operations template
   Count operations solution

4. Write a program that creates an input field and echoes input to that field to the console.

   Echo template
   Echo solution

5. Write a program allows a user to enter a word in an input field, translates that word into Pig Latin and prints this translation in the console. For the sake of modularity, we suggest that you build a helper function that handles all of the details of translating a word to Pig Latin (see the practice exercises for logic and conditionals) . The provided template includes the operations for extracting the first letter and rest of the input word in the partial definition of this function.

   Pig Latin template
   Pig Latin solution

6. **Challenge:** Add an interactive user interface for your implementation of "Rock-paper-scissors-lizard-Spock". Create an input field that takes a player's guess, generates a random computer guess, and prints out the player and computer choices as well as who won in the console. Make sure that your program checks for and correctly responds to bad input.

   RPSLS template
   RPSLS solution