Practice Exercises for Button and Input Fields

Solve each of the practice exercises below. Each problem includes three CodeSkulptor links: one for a template that you should use as a starting point for your solution, one to our solution to the exercise, and one to a tool that automatically checks your solution.

1. Write event handlers `print_hello()` and `print_goodbye()` 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 --- Print hello/goodbye (Checker)
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 --- Register buttons (Checker)
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`, and the function `print_count()` prints the value of `count` to the console. Count operations template --- Count operations solution --- Count operations (Checker)
4. Write a program that creates an input field and echoes input to that field to the console. Echo template --- Echo solution --- Echo (Checker)
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 --- Pig Latin (Checker)
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 --- RPSLS (Checker)

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