

# Practice Exercises for Interactive Applications

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. Given the program template below, write a Python function `print_goodbye()` that defines a local variable `message` whose value is `"Goodbye"` and prints the value of this local variable to the console. Note that the existing global variable `message` retains its original value `"Hello"` after the call to `print_goodbye()` completes. [Print goodbye template](#) --- [Print goodbye solution](#) --- [Print goodbye \(Checker\)](#)
2. Given the program template below, write a Python function `set_goodbye()` that updates a global variable `message` with the value `"Goodbye"` and prints the value of this global variable to the console. Note that the existing global variable `message` has its original value `"Hello"` modified to `"Goodbye"` during the call to `set_goodbye()`. [Set goodbye template](#) --- [Set goodbye solution](#) --- [Set goodbye \(Checker\)](#)
3. **Challenge:** Given the program template below, implement four functions 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()` that prints the value of `count` to the console. [Count operations template](#) --- [Count operations solution](#) --- [Count operations \(Checker\)](#)
4. Complete the program template below so that the resulting CodeSkulptor program opens a frame of size 100×200 with the title `"My first frame"`. You will need to add only two extra lines of code. [Two extra lines template](#) --- [Two extra lines solution](#) --- [Two extra lines \(Checker\)](#)
5. Given the program template below, modify the program to create a CodeSkulptor frame that opens a 200×100 pixel frame with the title `"My second frame"`. Remember to use the Docs to determine the correct syntax for the necessary SimpleGUI calls. [Open frame template](#) --- [Open frame solution](#) --- [Open frame \(Checker\)](#)