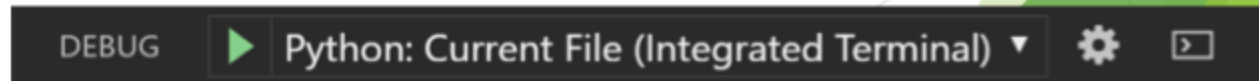


SI206 Discussion 6

VS CODE


VSCode Debugger

- ▶ VSCode has a pretty cool built in debugger that we will be using
- ▶ To access it, use the menu at the top or press the bug icon on the left side bar menu
- ▶ At the top, you will see a dropdown menu. Select “Python: Current File (Integrated Terminal)”
 - ▶ This will open up your current file in the VSCode terminal



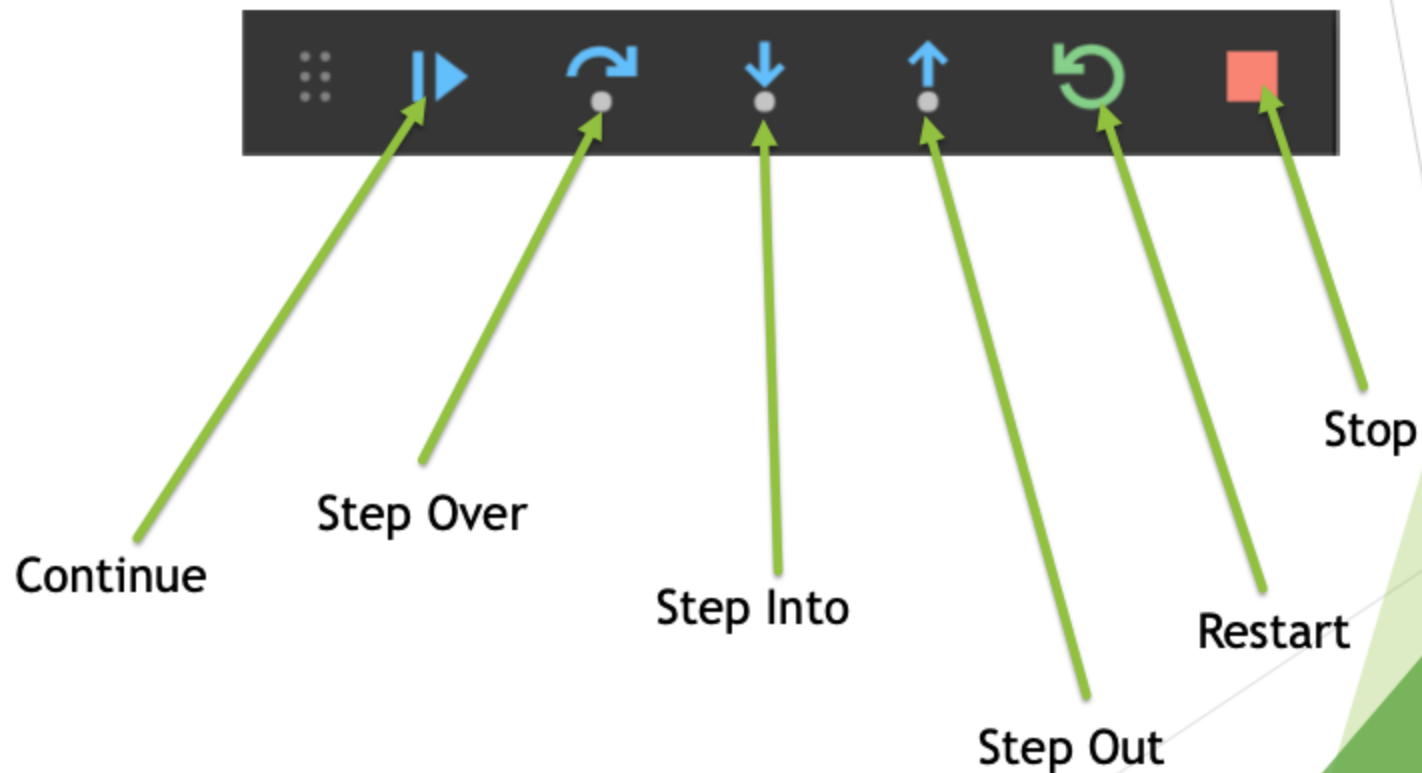
Setting Breakpoint(s)

- ▶ Setting up breakpoints is helpful when you debug
- ▶ Basically, breakpoints tell the debugger when to pause
- ▶ To set a breakpoint in VSCode (and most other IDE's, you just need to click *to the left* of the desired line



```
22  def main():
23      my_calc = DiscountCalculator()
24      my_calc.add(2,2)
25      my_calc.subtract(4,3)
26      my_calc.multiply(4,3)
27      my_calc.divide(12, 3)
28
```

The Debugging Toolbar



Breaking down the Debugging Toolbar

- ▶ Continue: continue executing code until next error, breakpoint, or program finishes running
- ▶ Step Over: stop after executing the function
- ▶ Step Into: stop before executing the first line within the function
- ▶ Step Out: exit the current function and stop before executing the line after the function is called
- ▶ Restart: restarts debugging of the program
- ▶ Stop: stops the debugger

DEMO

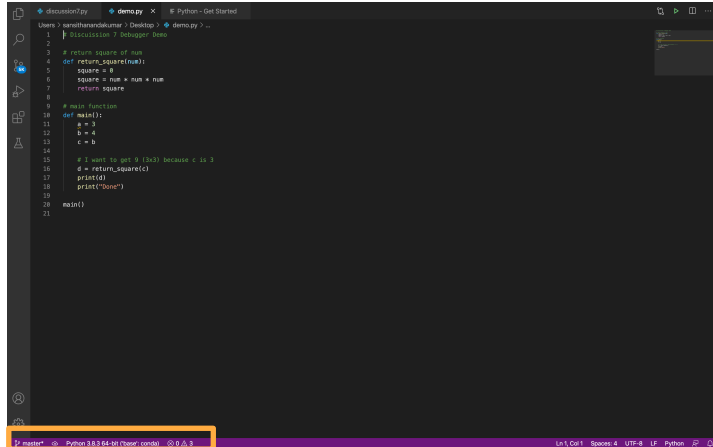
APPENDIX

SOME EXTRA TIPS

- Add print statements
- Tab to space and space to tab

Press the F1 key and type convert **tabs** to space or use the Ctrl+Shift+T key binding. This command convert all **tabs to spaces**.

- Use terminal outside of VS code
- Check your python version on the bottom left corner



The screenshot shows a Visual Studio Code editor window with a Python file named 'demo.py'. The code in the editor is as follows:

```
1 # Discussion 7 Debugger Demo
2
3 # return square of num
4 def return_square(num):
5     square = 0
6     square = num * num
7     return square
8
9 # main function
10 def main():
11     a = 3
12     b = 4
13     c = b
14
15     # I want to get 9 (b*b) because c is 3
16     d = return_square(c)
17     print(d)
18     print("done")
19
20 main()
21
```

The status bar at the bottom of the editor shows the following information: Python 3.8.5 64-bit (base code) 0.0.0.0. The status bar is highlighted with a red box.