What is a Code Block?

In Python, a code block is defined as a number of sequential statements, or lines of code, that share the same level of indentation.

In Python Style, an indent is defined as four spaces.

When starting out learning how to program, your programs will consist of a single block of code.

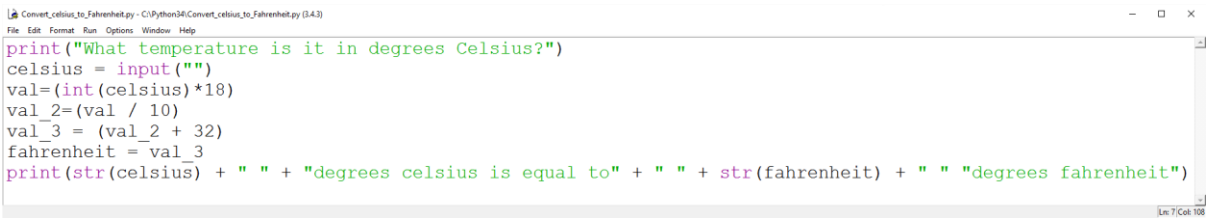

Figure 1: When learning how to program, you will probably begin to code simple calculators such as the calculator depicted above that converts degrees Celsius into degrees Fahrenheit. The above program consists of merely 1 block of code comprising 7 lines. As you can observe, all seven lines share the same level of indentation.

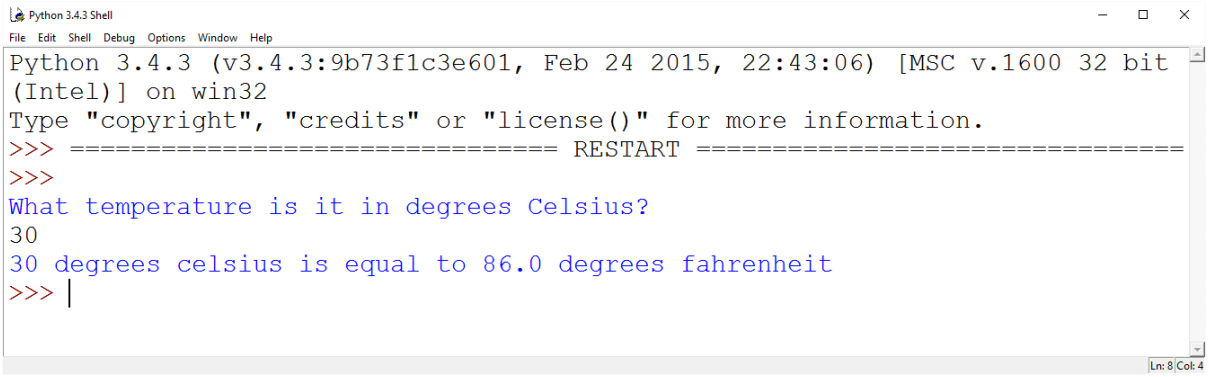

Figure 2: What the code depicted in **Figure 1** looks like when interpreted and used.

However, whenever you attain to a greater level of programming ability that will allow you to code programs with greater complexity and sophistication, then more than one block of code will be required:


C:/Users/ciara_000/OneDrive/Python Book/programs/temperature_converter.py (Work) - Brackets
File Edit Find View Navigate Debug Help
print("This is a Celsius-to-Fahrenheit Calculator.")
print("")
print("What would you like to calculate?")
print("")
print("Enter C for Celsius-to-Fahrenheit; enter F for Fahrenheit-to-Celsius; enter X to quit.")
choice = input()
choice = choice.upper()
str(choice)
print("")
"""----------------"""
if choice == "C":
print("Celsius to Fahrenheit:")
print("")
print("What temperature is it in degrees Celsius?")
print("")
celsius = input("")
val=(int(celsius)*18)
val_2=(val / 10)
val_3 = (val_2 + 32)
fahrenheit = val_3
print(str(celsius) + " " + "degrees celsius is equal to" + " " + str(fahrenheit) + " "
"degrees fahrenheit")
print("")
elif choice =="F":
print("Fahrenheit to Celsius:")
print("")
print("What temperature is it in degrees Fahrenheit?")
fahrenheit = input("")
val=(int(fahrenheit)-32)
val_2=(val *5)
val_3 = (val_2 /9)
celsius = val_3
print(str(fahrenheit) + " " + "degrees fahrenheit is equal to" + " " + str(celsius) + " "
"degrees celsius")
print("")
elif choice == "X":
print("goodbye!")
print("")
elif choice != "F" or "C" or "X":
print("Not a valid input")
print("")
print("")
while choice != "X":
print("This is a Celsius-to-Fahrenheit Calculator.")
print("")
print("What would you like to calculate?")
print("")
print("Enter C for Celsius-to-Fahrenheit; enter F for Fahrenheit-to-Celsius; enter X to
quit.")
choice = input()
choice = choice.upper()
str(choice)
print("")
"""----------------"""
if choice == "C":
print("Celsius to Fahrenheit:")
print("")
print("What temperature is it in degrees Celsius?")
celsius = input("")
val=(int(celsius)*18)
val_2=(val / 10)
val_3 = (val_2 + 32)
fahrenheit = val_3
print("")
print(str(celsius) + " " + "degrees celsius is equal to" + " " + str(fahrenheit) + " "
"degrees fahrenheit")
print("")
elif choice =="F":
print("Fahrenheit to Celsius:")
print("")
print("What temperature is it in degrees Fahrenheit?")
fahrenheit = input("")
val=(int(fahrenheit)-32)
val_2=(val * 5)
val_3 = (val_2 /9)
celsius = val_3
print("")
print(str(fahrenheit) + " " + "degrees fahrenheit is equal to" + " " + str(celsius) + "
" "degrees celsius")
print("")
elif choice == "X":
print("goodbye!")
elif choice != "F" or "C" or "X":
print("Not a valid input")
print("")
print("")
Line 4, Column 1 — 86 Lines
INS
Python
Spaces: 4

Figure 3: This calculator does much the same thing as the calculator depicted in **Figures 1** & **2**. It is a lot more complex and sophisticated, though. As we may observe, the above-depicted program comprises *several* blocks of code. We know this to be the case because the program contains various levels of indentation. The blocks of code that are to be executed when this program is run is contingent upon what the user inputs.

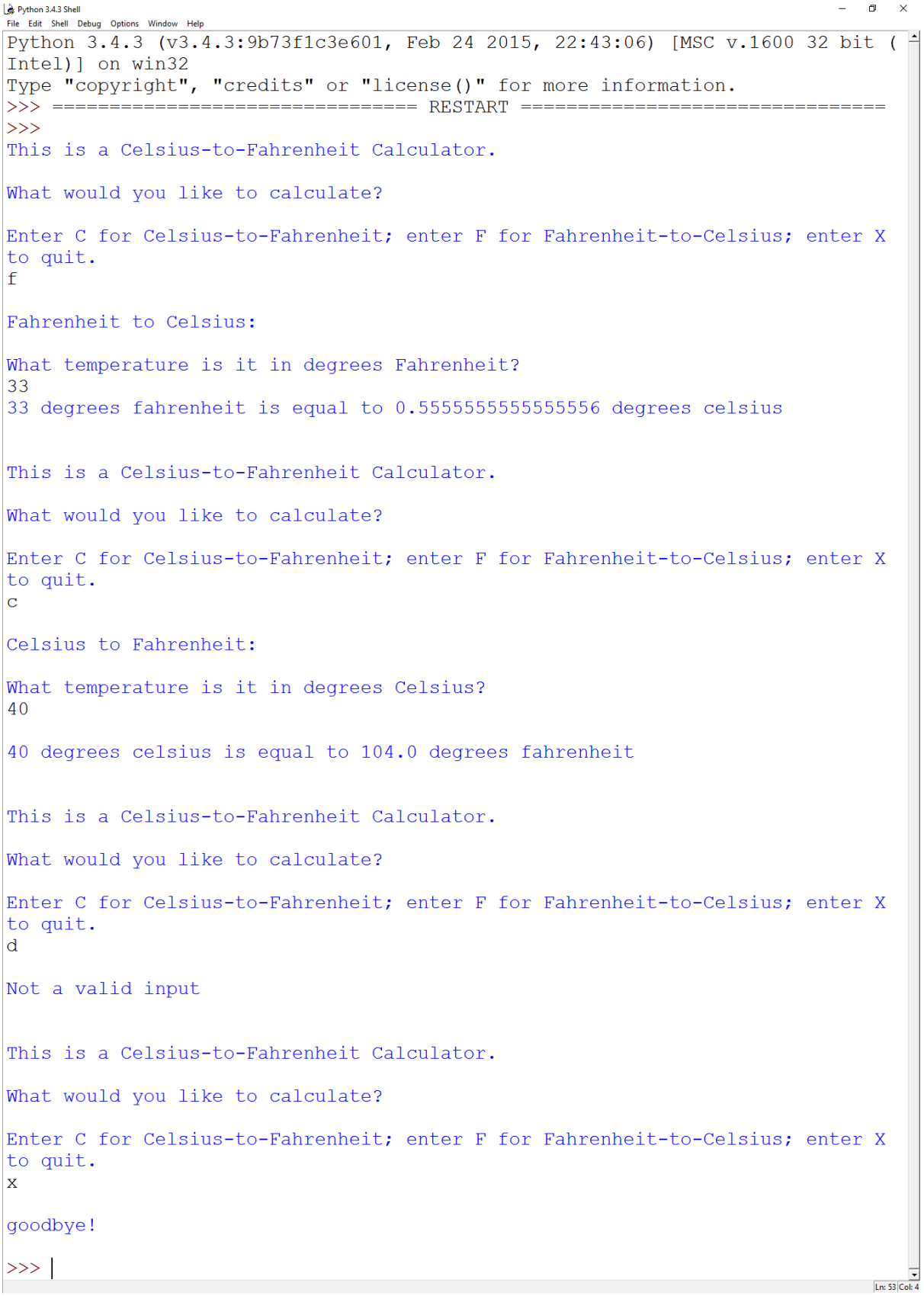
Python 3.4.3 Shell
File Edit Shell Debug Options Window Help
Python 3.4.3 (v3.4.3:9b73f1c3e601, Feb 24 2015, 22:43:06) [MSC v.1600 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ========== RESTART ==========
>>>
This is a Celsius-to-Fahrenheit Calculator.
What would you like to calculate?
Enter C for Celsius-to-Fahrenheit; enter F for Fahrenheit-to-Celsius; enter X to quit.
f
Fahrenheit to Celsius:
What temperature is it in degrees Fahrenheit?
33
33 degrees fahrenheit is equal to 0.5555555555555556 degrees celsius
This is a Celsius-to-Fahrenheit Calculator.
What would you like to calculate?
Enter C for Celsius-to-Fahrenheit; enter F for Fahrenheit-to-Celsius; enter X to quit.
c
Celsius to Fahrenheit:
What temperature is it in degrees Celsius?
40
40 degrees celsius is equal to 104.0 degrees fahrenheit
This is a Celsius-to-Fahrenheit Calculator.
What would you like to calculate?
Enter C for Celsius-to-Fahrenheit; enter F for Fahrenheit-to-Celsius; enter X to quit.
d
Not a valid input
This is a Celsius-to-Fahrenheit Calculator.
What would you like to calculate?
Enter C for Celsius-to-Fahrenheit; enter F for Fahrenheit-to-Celsius; enter X to quit.
x
goodbye!
>>>
Ln: 53 Col: 4

Figure 4: What the program depicted in **Figure 3** looks like when interpreted and used.