

STUDY GUIDE

CONTROL FLOW IN PYTHON

Key Terms and Definitions

- » Expression: Any valid piece of code that evaluates to something.
- » **if Statements:** Expressions that evaluate to a Boolean result (True or False) and test a conditional statement, such as comparing two objects. You can write code that operates a certain way only if the if statement evaluates to True. You can use the elif (else if) condition to link multipleif statements and the else condition to tell your code to do something different if theif statement evaluates to False.

» while Loops:

You can think about the while statement as a repeated if statement, which first evaluates thewhile expression before deciding whether to execute its code block. A while loop is generally used in Python if it is not known when the looping will stop or how many iterations the loop will require. The while loop is in many ways the most basic looping construct. All other loops can be rewritten as a while loop.

- * for Loops: A while loop in which the "while" statement is automatically set to be a specific number of iterations.
- » raw_input: A built-in Python function that prompts the user for text input and returns the user's input as a string.
- » range: A built-in Python function that returns a list of numbers between given starting and ending points in defined increments.

Guiding Questions

- 1. Name a few situations in which you would use awhile loop versus a for loop, and vice versa.
- 2. What do we mean when we say a piece of code "evaluates" to a result?
- 3. Think about how if statements relate to your decision-making process. What does their statement for choosing your outfit in the morning look like (using if/elif/else to reach a conclusion)?

Additional Resources

1. DataCamp:

- » Python Data Science Toolbox (Part 1)
 - Specifically, see Section 3, "Lambda Functions and Error-Handling" and complete the "Introduction to Error Handling" portion.
- 2. All Built-In Functions
- 3. HackerRank, Python Challenges
 - » Try these challenges to practice your Python skills.