## Glossary

# IT Automation with Python

## **Terms and definitions from Course 1**

## A

**Automation:** The process of replacing a manual step with one that happens automatically

## B

**Break:** A way to exit out of a loop before the loop's condition is false

**Built-in functions:** Functions that exist within Python and can be called directly

## C

**Client-side scripting language:** Primarily for web programming; the scripts are transferred from a web server to the end-user’s internet browser, then executed in the browser

**Code editors:** Tools to provide features, including syntax highlighting, automatic indentation, error checking, and autocompletion

**Comments:** Notes to yourself and/or other programmers to make the purpose of the code clear

**Computer program:** A step-by-step list of instructions that a computer follows to reach an intended goal

**Control statements:** Programming constructs that direct the flow of execution of a program by allowing you to make decisions, repeat actions, or choose between different code paths based on specific conditions

## D

**Data types:** Classes of data (e.g., string, int, float, Boolean, etc.), which include the properties and behaviors of instances of the data type (variables)

**Dictionaries:** A data type used to organize elements into collections, taking the form of pairs of keys and values

## E

**Explicit conversion:** This occurs when code is written to manually convert one data type to another using a data type conversion function

**Expression:** A combination of numbers, symbols, or other values that produce a result when evaluated

## F

**For loop:** This executes a block of code for a specified number of iterations or over a collection of items

**Functions:** A reusable block of code that performs a specific task

## I

**IDE:** A software application that provides comprehensive facilities for software development

**Implicit conversion:** This occurs when the Python interpreter automatically converts one data type to another

**Infinite loop:** A sequence that is missing a method for exiting the loop, causing the loop to run forever

**Interpreter:** The program that reads and executes code

**Input:** Information that is provided to a program by the end user

**Iterators**: Variables that allow you to loop through a collection one item at a time

## L

**List comprehensions:** Create new lists based on sequences or ranges

**Logic errors:** Errors in code that prevent it from running correctly

**Logical operators:** Operators used to combine or manipulate boolean values (True or False) to create complex conditions for decision-making

**Loop:** A sequence that makes the computer do repetitive tasks

## M

**Machine language:** Lowest-level computer language. It communicates directly with computing machines in binary code (ones and zeros)

## O

**Object-oriented programming language:** Most coding elements are considered to be objects with configurable properties

**Output:** the end result of a task performed by a function or computer program

## P

**Parameter (argument):** A value passed into a function for use within the function, controlling the behavior of the CSV reader and writer

**Pass:** A placeholder statement which is used when the syntax requires a statement, but you don't want to execute any code or command

**Platform-specific scripting language:** Language used by system administrators on those specific platforms

**Programming:** The process of writing a program to behave in different ways

**Programming code**: A set of written computer instructions, guided by rules, using a computer programming language

**Programming languages:** Language with syntax and semantics to write computer programs

**Python:** A general purpose programming language

**Python interpreter:** Program that reads and executes Python code by translating Python code into computer instructions

## R

**Recursion:** The repeated application of the same procedure to a smaller problem

**Refactoring:** When a code is updated to be more self-documenting and clarify the intent

**Return value**: This is the value or variable returned as the end result of a function

## S

**Script:** Often used to automate specific tasks

**Semantics:** The intended meaning or effect of statements, or collections of words, in both human and computer languages

**String:** A data type used to represent a piece of text. sequences of characters and are immutable

**Syntax:** The rules for how each statements are constructed in both human and computer languages

## T

**Tuples:** Sequences of elements of any type that are immutable, written parentheses instead of square brackets

## V

**Variables:** These are used to temporarily store changeable values in programming code

## W

**While loop:** This is used when a segment of code needs to execute repeatedly while a condition is true