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Fundamentals of Problem Solving Using Python I and II

CSCI2011 and CSCI2012

Glossary

Version: 1.1
Effective Date: 13 June 2018

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CHANGE HISTORY TABLE

| Version | Description of Change | Date |
|----------------|------------------------------|-------------|
| 0.1 | Initial Draft | 19 SEP 2017 |
| 0.2 | Technical Edit Review | 21 SEP 2017 |
| 0.3 | Security Review | 25 SEP 2017 |
| 0.4 | Project Manager Review | 25 SEP 2017 |
| 0.5 | Functional Lead Review | 25 SEP 2017 |
| 1.0 | Final Version | 25 SEP 2017 |
| 1.1 | Post Pilot Update | 13 JUN 2018 |
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GLOSSARY

| Term/Acronym | Definition |
|---------------------------|---|
| <code>>>></code> | The default Python prompt of the interactive shell; often seen for code examples which can be executed interactively in the interpreter. <i>Source: https://docs.python.org/2/glossary.html</i> |
| <code>. . .</code> | The default Python prompt of the interactive shell when entering code for an indented code block or within a pair of matching left and right delimiters (parentheses, square brackets or curly braces). <i>Source: https://docs.python.org/2/glossary.html</i> |
| Abstraction | The third step in the computational thinking process. During this step, the user focuses analysis on the important information and exclude or hide irrelevant details. <i>Source: Introduction to Computational Thinking WBT (COMPT1000)</i> |
| Algorithm | A general process for solving a category of problems. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Algorithmic Design | The fourth step in the computational thinking process. During this step, the user creates a mathematical process to efficiently solve problems or complete a task. <i>Source: Introduction to Computational Thinking WBT (COMPT1000)</i> |
| Argument | A value passed to a function (or method) when calling the function. <i>Source: https://docs.python.org/2/glossary.html</i> |
| Array | A JSON data type that is an ordered list of zero or more values, each of which may be of any type. <i>Source: Fundamentals of Problem Solving Using Python I Course, Lesson 7</i> |
| Assignment | A statement that gives value to a variable. <i>Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/</i> |
| Attribute | A value associated with an object that is referenced by name using dotted expressions. For example, if an object <i>o</i> has an attribute <i>a</i> it would be referenced as <i>o.a</i> . <i>Source: https://docs.python.org/2/glossary.html</i> |
| Block | A section of code which is grouped together. <i>Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/</i> |
| Body | The sequence of statements inside a function definition. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |

| Term/Acronym | Definition |
|-------------------------------|---|
| Boolean expression | An expression whose value is either <i>True</i> or <i>False</i> . Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Branch | One of the alternative sequences of statements in a conditional statement. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Break | A statement used to exit a for loop or a while loop. Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/ |
| Bug | An error in a program. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Code | A piece of text that cannot be understood without a key, hence the source code for a program. Source: http://cse.csusb.edu/dick/cs202/glossary.html |
| Code cell | An element within Jupyter Notebook. Code cell is the default type of cell and allows you to edit and write new code. Source: http://jupyter-notebook.readthedocs.io/en/stable/notebook.html |
| Collections Library | A Python library that implements specialized container datatypes providing alternatives to Python's general purpose built-in containers, dictionary, list, set, and tuple. Source: https://docs.python.org/3/library/collections.html |
| Command mode | A setting within Jupyter Notebook. When you are in command mode, you are able to edit the notebook as a whole, but not type into individual cells. Source: http://jupyter-notebook.readthedocs.io/en/stable/examples/Notebook/Notebook%20Basics.html |
| Command prompt | The application, on Windows, where commands are typed into a window for execution. Source: http://jupyter.readthedocs.io/en/latest/glossary.html |
| Comment | Information in a program that is meant for other programmers (or anyone reading the source code) and has no effect on the execution of the program. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Computational thinking | A set of data-driven problem-solving techniques that deconstruct a problem into a format that can be processed by a human, machine, or both. Source: <i>Introduction to Computational Thinking WBT (COMPT1000)</i> |
| Concatenate | An operation that joins two operands end-to-end. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |

| Term/Acronym | Definition |
|------------------------------|---|
| Condition | The Boolean expression in a conditional statement that determines which branch is executed. <i>Source:</i> http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Conditional statement | A statement that controls the flow of execution depending on some condition. <i>Source:</i> http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Continue | A statement used to skip the current block, and return to the "for" or "while" statement <i>Source:</i> http://www.pythonforbeginners.com/cheatsheet/python-glossary/ |
| Counter | A data structure within the Collections Library. It is a dictionary subclass for counting objects. <i>Source:</i> <i>Source: Fundamentals of Problem Solving Using Python II Course, Lesson 7</i> |
| CSV Library | A Python library that implements classes to read and write tabular data in CSV (Comma Separated Values) format. The CSV format is the most common import and export format for spreadsheets and databases <i>Source:</i> https://docs.python.org/3/library/csv.html |
| DataFrame | A two-dimensional data structure, (i.e., data is aligned in a tabular fashion in rows and columns), in the Pandas Library. <i>Source:</i> https://www.tutorialspoint.com/python_pandas/python_pandas_dataframe.htm |
| Dataset | A basic data container. <i>Source:</i> http://www.pymvpa.org/tutorial_datasets.html |
| Data structure | A collection of related values, often organized in lists, dictionaries, tuples, etc. <i>Source:</i> http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Data type | A collection of values together with the operations that use them and produce them, plus the assumptions that can be made about the operations and values. <i>Source:</i> http://cse.csusb.edu/dick/cs202/glossary.html |
| Datetime Library | A Python library that supplies classes for manipulating dates and times in both simple and complex ways. <i>Source:</i> https://docs.python.org/3/library/datetime.html |
| Datetime Object | A combination of a date and a time. It is an object in the Datetime Library. <i>Source:</i> <i>Fundamentals of Problem Solving Using Python II Course, Lesson 6</i> |

| Term/Acronym | Definition |
|--------------------------|---|
| Debugging | The process of finding and removing any of the three kinds of programming errors (syntax, runtime, semantic). Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Decomposition | The first step in the computational thinking process. During this step, users break down a complex problem or system into smaller parts that are more manageable and easier to understand. Source: <i>Introduction to Computational Thinking WBT (COMPT1000)</i> |
| Decrement | An update that decreases the value of a variable. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Def | A statement that defines a function or method. Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/ |
| Default value | The value given to an optional parameter if no argument is provided. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Defaultdict | A data structure within the Collections Library. It is a dictionary subclass that calls a factory function to supply missing values. Source: <i>Source: Fundamentals of Problem Solving Using Python II Course, Lesson 7</i> |
| Definition | A piece of source code or text that binds a name to a precise "definite" meaning. A definition may implicitly also declare the name at the same time or bind more information to an already defined name. Source: http://cse.csusb.edu/dick/cs202/glossary.html |
| Delimiter | A character or string used to indicate where a string should be split. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Dictionary | A mapping from a set of keys to their corresponding values. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Edit mode | A setting within Jupyter Notebook. When a cell is in edit mode, you can type into the cell, like a normal text editor. Source: http://jupyter-notebook.readthedocs.io/en/stable/examples/Notebook/Notebook%20Basics.html |
| Element | One of the values in a list (or other sequence), also called items. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| "Else" expression | An alternative statement that is executed if the result of a previous test condition evaluates to false. Source: https://www.techopedia.com/definition/23974/else-statement |
| Empty string | A string with no characters and length 0, represented by two quotation marks. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |

| Term/Acronym | Definition |
|--------------------------|---|
| Evaluate | To simplify an expression by performing the operations in order to yield a single value. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Exception | An error that is detected while the program is running. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Executable | Another name for object code that is ready to be executed. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Expression | A piece of syntax that can be evaluated to some value. In other words, an expression is “an accumulation of expression elements like literals, names, attribute access, operators or function calls which all return a value.” Source: https://docs.python.org/2/glossary.html |
| Filter | A processing pattern that traverses a list and selects the elements that satisfy some criterion. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Flag | A Boolean variable used to indicate whether a condition is <i>True</i> . Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Float | A short floating point data type. Source: http://cse.csusb.edu/dick/cs202/glossary.html |
| Floating-point | A type that represents numbers with fractional parts. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Floor division | The operation that divides two numbers and chops off the fraction part. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Flow of execution | The order in which statements are executed during a program run. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| “For” loop | A conditional iterative statement which is used to check for certain conditions and then repeatedly execute a block of code as long as those conditions are met. Source: https://www.techopedia.com/definition/19415/for-loop |
| Function | A named sequence of statements that performs some useful operation. Functions may or may not take arguments and may or may not produce a result. Also known as procedure. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Function call | A statement that executes a function. It consists of the function name followed by an argument list. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |

| Term/Acronym | Definition |
|----------------------------|---|
| Generalization | The process of replacing something unnecessarily specific (like a number) with something appropriately general (like a variable or parameter). <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| GeoJSON | An open standard format designed for representing simple geographical features, along with their non-spatial attributes. GeoJSON is a subset of JSON. <i>Source: Fundamentals of Problem Solving Using Python I Course, Lesson 7</i> |
| Glob Library | A Python library that finds all the pathnames matching a specified pattern. <i>Source: https://docs.python.org/3/library/glob.html</i> |
| Global variable | A variable defined outside a function. Global variables can be accessed from any function. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Hard-coding | Hard-coding is when you type explicit values in your code. <i>Source: Fundamentals of Problem Solving Using Python I Course, Lesson 6</i> |
| High-level language | A programming language, like Python, that is designed to be easy for humans to read and write. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Histogram | A histogram is a type of graph that is widely used in mathematics, especially in statistics. The histogram represents the frequency of occurrence of specific phenomena which lie within a specific range of values, which are arranged in consecutive and fixed intervals. <i>Source: https://www.techopedia.com/definition/14410/histogram</i> |
| “If” statement | A statement that conditionally executes a block of code, along with else and elif (a contraction of else-if). <i>Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/</i> |
| Immutable object | An object with a fixed value. <i>Source: https://docs.python.org/2/glossary.html</i> |
| Import statement | A statement that reads a module file and creates a module object. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Increment | An update that increases the value of a variable (often by one). <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Indentation | Used to delimit blocks in Python, rather than curly braces or keywords. Python uses white-space indentation. <i>Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/</i> |

| Term/Acronym | Definition |
|--|---|
| Index | An integer value used to select an item in a sequence, such as a character in a string. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Infinite loop | A loop in which the terminating condition is never satisfied. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Initialization | An assignment that gives an initial value to a variable that will be updated. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Input | Data supplied to some program, subprogram, OS, machine, system, or abstraction. Source: http://cse.csusb.edu/dick/cs202/glossary.html |
| Instance | An object that belongs to a class. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Integer | A type that represents whole numbers. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Interface | A description of how to use a function, including the name and descriptions of the arguments and return value. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Interpret | To execute a program in a high-level language by translating it one line at a time. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Interpreter | A program that translates a single instruction of a program and executes it before moving on to the next one. Source: http://cse.csusb.edu/dick/cs202/glossary.html |
| Item | One of the values in a sequence. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Iterable | An object capable of returning its members one at a time. Source: https://docs.python.org/2/glossary.html |
| JavaScript Object Notation (JSON) | A lightweight, language-independent data-interchange text format that is easy for humans to read and write and easy for machines to parse and generate. Source: <i>Fundamentals of Problem Solving Using Python I Course, Lesson 7</i> |
| Jupyter Notebook | An open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text. Source: Jupyter.org |

| Term/Acronym | Definition |
|---------------------------|---|
| Kernel | A kernel provides programming language support in Jupyter. IPython is the default kernel. Additional kernels include R, Julia, and many more. Source: http://jupyter.readthedocs.io/en/latest/glossary.html |
| Key | An object that appears in a dictionary as the first part of a key-value pair. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Key-value pair | The representation of the mapping from a key to a value. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Keyword | A reserved word that is used by the compiler to parse a program; you cannot use keywords like <i>if</i> , <i>def</i> , and <i>while</i> as variable names. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Keyword argument | An argument that includes the name of the parameter as a keyword. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Library | A collection of code that defines certain methods and may also define the nature of special data types. Source: <i>Fundamentals of Problem Solving Using Python I Course, Lesson 1</i> |
| List | A sequence of values. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Local variable | A variable defined inside a function. A local variable can only be used inside its function. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Logical operator | One of the operators that combines Boolean expressions: and, or, and not. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Lookup | A dictionary operation that takes a key and finds the corresponding value. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Loop | A part of a program that can execute repeatedly. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Low-level language | A programming language that is designed to be easy for a computer to execute; also called “machine language” or “assembly language.” Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Markdown cell | An element within Jupyter Notebook. In markdown cells, you can document the computational process in a literate way, alternating descriptive text with code, using <i>rich text</i> , using markdown text. Source: http://jupyter-notebook.readthedocs.io/en/stable/notebook.html |

| Term/Acronym | Definition |
|----------------------------|--|
| Map | A processing pattern that traverses a sequence and performs an operation on each element. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Mapping | A relationship in which each element of one set corresponds to an element of another set. For example, a list is a mapping from indices to elements. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Matplotlib Library | A Python 2D plotting library which produces publication quality figures in a variety of hardcopy formats and interactive environments across platforms. Source: https://matplotlib.org/index.html |
| Metacharacter | A special character in a program or data field that provides information about other characters. A metacharacter can express an idea about how to process the characters that follow the metacharacter, as the backslash character sometimes is used to indicate that the characters following it are to be treated in a special way. Source: https://whatis.techtarget.com/definition/metacharacter |
| Method | A function that is associated with an object and called using dot notation. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Module | A file that contains a collection of related functions and other definitions. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Modulus operator | An operator, denoted with a percent sign (%), that works on integers and yields the remainder when one number is divided by another. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Multiple assignment | Making more than one assignment to the same variable during the execution of a program. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Mutable object | An object that can change its value. Source: https://docs.python.org/2/glossary.html |
| NaN | A value in Pandas that stands for “Not a Number.” It represents missing data, similar to the Python None type and JSON null value. Source: <i>Fundamentals of Problem Solving Using Python II Course, Lesson 1</i> |
| Natural language | Any one of the languages that people speak that evolved naturally. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Namespace | The place where a variable is stored. Source: https://docs.python.org/2/glossary.html |

| Term/Acronym | Definition |
|---------------------------|---|
| Nested conditional | A conditional statement that appears in one of the branches of another conditional statement. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Nested list | A list that is an element of another list. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| None | A special value returned by functions that have no return statement or a return statement without an argument. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Null | A JSON data type. It is an empty value, using the word null. Source: <i>Fundamentals of Problem Solving Using Python I Course, Lesson 7</i> |
| Object | Any data with state (attributes or value) and defined behavior (methods). Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/ |
| Operand | One of the values on which an operator operates. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Operator | A special symbol that represents a simple computation like addition, multiplication, or string concatenation. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| OrderedDict | A data structure within the Collections Library. It is a dictionary subclass that remembers the order entries were added. Source: <i>Source: Fundamentals of Problem Solving Using Python II Course, Lesson 7</i> |
| Override | To replace a default value with an argument. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Pandas Library | A Python library that provides fast, flexible, and expressive data structures designed to make working with structured (tabular, multidimensional, potentially heterogeneous) and time series data both easy and intuitive. Pandas stands for “Python Data Analysis Library.” Sources: https://pypi.org/project/pandas/ https://towardsdatascience.com/a-quick-introduction-to-the-pandas-python-library-f1b678f34673 |
| Parameter | A name used inside a function to refer to the value passed as an argument. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Parse | To examine a program and analyze the syntactic structure. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |

| Term/Acronym | Definition |
|-----------------------------|--|
| Pattern Recognition | The second step in the computational thinking process. During this step, users identify similarities, differences, trends, or other defining characteristics in or across code. <i>Source: Introduction to Computational Thinking WBT (COMPT1000)</i> |
| Pickle Library | A Python library that translates almost any type of object into a string suitable for storage in a database, and then translates strings back into objects. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| POSIX Time/UNIX Time | A time format that stores time as a large integer of seconds since midnight of January 1st, 1970. This point in time is known as the epoch, and as such we can also refer to POSIX time as "epoch time." <i>Source: Fundamentals of Problem Solving Using Python II Course, Lesson 6</i> |
| Pprint Library | A Python library that provides a capability to "pretty-print" arbitrary Python data structures in a form which can be used as input to the interpreter. <i>Source: https://docs.python.org/3/library/pprint.html</i> |
| Programmatic coding | Using variables wherever possible in your code, in lieu of actual values. <i>Source: Fundamentals of Problem Solving Using Python I Course, Lesson 6</i> |
| Print statement | An instruction that causes the Python interpreter to display a value on the screen. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Problem solving | The process of formulating a problem, finding a solution, and expressing the solution. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Program | A set of instructions that specifies a computation. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Programming language | A computer language engineered to create a standard form of commands. These commands can be interpreted into a code understood by a machine. <i>Source: https://www.techopedia.com/definition/24815/programming-language</i> |
| Prompt | Characters displayed by the interpreter to indicate that it is ready to take input from the user. <i>Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf</i> |
| Python | A multiparadigm, general-purpose, interpreted, high-level programming language. <i>Source: https://www.techopedia.com/definition/3533/python</i> |

| Term/Acronym | Definition |
|--|---|
| Reference | The association between a variable and its value. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Regular Expression (re) Library/RegEx Library | A Python library that regular expression matching operations. A regular expression is a special sequence of characters that helps you match or find other strings or sets of strings, using a specialized syntax held in a pattern. Sources: https://docs.python.org/3/library/re.html https://www.tutorialspoint.com/python/python_reg_expressions.htm |
| Relational operator | One of the operators that compares its operands: ==, !=, >, <, >=, and <=. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Response | A data type defined by the Requests Library. Source: <i>Fundamentals of Problem Solving Using Python II Course, Lesson 5</i> |
| Return value | The result of a function. If a function call is used as an expression, the return value is the value of the expression. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Rules of precedence | The set of rules governing the order in which expressions involving multiple operators and operands are evaluated. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Runtime Error | An error that appears after the program has started running. These errors are also called exceptions because they usually indicate that something exceptional (and bad) has happened. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Scope | Defines the visibility of a name within a block. Source: https://stackoverflow.com/questions/22042619/what-does-scope-mean |
| Script | A program stored in a file (usually one that will be interpreted). Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Search | A pattern of traversal that stops when it finds what it is looking for. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Semantics | A term for the ways that data and commands are presented. Source: https://www.techopedia.com/definition/687/semantics-computing |
| Semantic error | An error in a program that makes it do something other than what the programmer intended. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |

| Term/Acronym | Definition |
|---------------------------|---|
| Series | A one-dimensional labeled array capable of holding data of any type (integer, string, float, python objects, etc.), in the Pandas Library. Source: https://www.tutorialspoint.com/python_pandas/python_pandas_series.htm |
| Sequence | An ordered set; that is, a set of values where each value is identified by an integer index. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Set | An unordered set that contains no duplicates Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/ |
| Slice | A part of a string specified by a range of indices. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Source code | A program in a high-level language before being compiled. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Statement | A section of code that represents a command or action. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Str | A character string: an immutable sequence of Unicode codepoints. Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/ |
| String | A type that represents whole numbers. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Structure | A finite collection of named items of data of different types. Source: http://cse.csusb.edu/dick/cs202/glossary.html |
| Syntax | The rules that specify the correct combined sequence of symbols that can be used to form a correctly structured program using a given programming language.. Source: https://www.techopedia.com/definition/3959/syntax |
| Syntax error | An error in a program that makes it impossible to parse (and therefore impossible to interpret). Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Temporary variable | A variable used to store an intermediate value in a complex calculation. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Timedelta Object | A duration expressing the difference between two date, time, or datetime instances to microsecond resolution. It is an object in the Datetime Library. Source: <i>Fundamentals of Problem Solving Using Python II Course, Lesson 6</i> |

| Term/Acronym | Definition |
|-------------------------|---|
| Traceback | A list of the functions that are executing, printed when an exception occurs. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Tuple | An immutable sequence of elements. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Tuple assignment | An assignment with a sequence on the right side and a tuple of variables on the left. The right side is evaluated and then its elements are assigned to the variables on the left. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| TXT File | A text file is a type of digital, non-executable file that contains letters, numbers, symbols and/or a combination. It enables the creation and storage of text without any special formatting. https://www.techopedia.com/definition/9707/text-file |
| Type | The category of values. The types we have seen so far are integers (type <i>int</i>), floating-point numbers (type <i>float</i>), and strings (type <i>str</i>). Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Update | An assignment where the new value of the variable depends on the old. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Value | One of the basic units of data, like a number or string, that a program manipulates. - or - An object that appears in a dictionary as the second part of a key-value pair. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Variable | A name that refers to a value. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| Void function | A function that doesn't return a value. Source: http://www.greenteapress.com/thinkpython/thinkpython.pdf |
| “While” loop | A statement that executes a block of code as long as its condition is true. Source: http://www.pythonforbeginners.com/cheatsheet/python-glossary/ |
| Wildcard | A character that can be substituted for either a single character or a string of characters. Source: https://www.techopedia.com/definition/1862/wildcard-character |

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