Module 3 Summary: Python Programming Fundamentals

Congratulations! You have completed this module. At this point, you know that:

- Python conditions use “if” statements to execute code based on true/false conditions created by comparisons and Boolean expressions.
- Comparison operations require using comparison operators equal to "=", greater than ">", less than "<".
- An exclamation mark "!" is used to define inequalities of a variable.
- You can compare integers, strings, and floats.
- Python branching directs program flow by using conditional statements (for example, if, else, elif) to execute different code blocks based on conditions or tests.
- You can use the "if" statement with conditions to define actions if true.
- To perform actions based on true or false output, you can use the "else" statement with conditions.
- The elif statement allows for additional checks only if the initial condition is false.
- To execute various operations on Boolean values, we use Boolean logic operators.
- Python loops are control structures that automate repetitive tasks and iterate over data structures like lists or dictionaries.
- The range() function generates a sequence of numbers with a specified start, stop, and step value for loops in Python.
- A for loop in Python iterates over a sequence, such as a list, tuple, or string, and executes a block of code for each item in the sequence.