**CIST 0150: Fundamentals of Programming**

Week 2 (Jan 17 – Jan 24, 2024)

1. **Run the below in Python interactive shell/ REPL and explain your observation**
   1. **In a print statement, what happens if you leave out one of the parentheses, or both?**

* Leave out one of the parentheses:
  + Editor displays an ellipsis
  + The string is unfinished because the parentheses are not closed.
* Leave out both of the parentheses:
  + Syntax error occurs (Missing parentheses in call to ‘print’)
  + Parentheses are required to execute a function
  1. **If you are trying to print a string, what happens if you leave out one of the quotation marks, or both?**
* Leave out one of the quotations:
  + Syntax error occurs (unterminated string literal)
  + Strings must start and end with quotations (if one is missing the string is not defined)
* Leave out both of the quotations:
  + NameError: name is not defined
  + If both are left out it is not interpreted as a string (interpreted as a an undefined variable)
  1. **In math notation, leading zeros are ok, as in 09. What happens if you try this in Python?**
* SyntaxError: leading zeros in decimal integer literals are not permitted; use an 0o prefix for octal integers.
* Integers with leading zeros are treated as octal integers (base 8) in python, but must have a “0o” prefix.
  1. **What happens if you have two values with no operator between them? Ex: 4 5**
* SyntaxError: invalid syntax
* Without an operator, the interpreter does not know what to do with the numbers.

1. **Write a program to calculate the average of two numbers and save it in a file named circle\_area.py**
   1. **Area of circle**
   2. **Take radius as user input**
   3. **Take pi = 3.14**
   4. **Calculate the area of a circle and assign the value to a variable name of area\_of\_circle**
   5. **Print area\_of\_circle variable**