Metropolitan State University, Saint Paul, Minnesota

ICS 140 Computational Thinking with Programming

Lab 3

In this week’s section we covered the different mathematical operators in python. See the code below for several examples of different math expressions.

Text

Description automatically generated

Lines 1 – 3 assign variables a, b, and c with values.

The next 3 lines list out different expressions that mix different operations.

Then we print out the mathematical order of operations. Python follows the standard order of operations as listed above. If you need a refresher on the order of operations, check out this video from Khan academy. [Introduction to order of operations | Arithmetic properties | Pre-Algebra | Khan Academy](https://www.youtube.com/watch?v=ClYdw4d4OmA&ab_channel=KhanAcademy)

Python mathematical operands:

* The plug sign (+) and (-) are used for addition and subtraction respectively.
* The asterisk (\*) is used for multiplication.
* 2 asterisks (\*\*) are used together to raise the first value to the power of the second value.
* There are two different types of division one slash (/) returns a float or decimal value and two slashes (//) will return an integer.
* Using the modulus operator (%) divides one number by the other and gives the remainder.

The format function can be used to change the output of a number. In our example, we demonstrated how to round the number to 2 decimal places. See section 2.8 on page 68 of your textbook for more formatting examples.

For the problem below, complete the following steps:

* Create test cases with expected results based on example input
* Create Python Code
* Show Test Results

This lab will have you write a Celsius to Fahrenheit Temperature Converter. The formula for this calculation is:

F =

The program should ask the user to enter the temperature in Celsius and then display the temperature in Fahrenheit. It should round the displayed temperature to 2 decimal places.

**Test Case 1**

**Example Input**

36

**Expected Result:**

96.8

**Actual Result**

96.8

**Test Case 2**

**Example Input**

0

**Expected Result:**

32

**Actual Result**

32.0

Text

Description automatically generated