

- 1) Installation of Python and third party packages
- 2) Introduction to variable / Variable Naming Rule Conventions
An assignment statement is written in the following general format:
variable = expression

To experiment with variables, you can type assignment statements in interactive mode, as shown here:

```
>>> width = 10
>>> length = 5
```

- 3) print command
- 4) Use of Comments #
- 5) Variable reassignment/String variable
- 6) Problem to Perform
WAP program which shows the your name, reg. no. and university name using the variables
- 7) Use of type() function
- 8) Data Conversion functions i.e int and float The input function always returns the user's input as a string, even if the user enters numeric data.
- 9) Performing Calculations using python
- 10) Floating Point and Integer Division 5/2,5//2
- 11) Operator Precedence

First, operations that are enclosed in parentheses are performed first. Then, when two operators share an operand, the operator with the higher precedence is applied first. The precedence of the math operators, from highest to lowest, are:

1. Exponentiation: **
2. Multiplication, division, and remainder: * / // %
3. Addition and subtraction: + -
Eg. 2**3/4+6

- 12) Grouping With parenthesis
- 13) Remainder Operator leftover = 17 % 3
Convert Algebraic Expression Into Python

Algebraic Expression

$$y = 3\frac{x}{2}$$

$$z = 3bc + 4$$

$$a = \frac{x + 2}{b - 1}$$

$$P = \frac{F}{(1 + r)^n}$$

- 14) Mixed Type Operation
l=2+2.0

- When an operation is performed on two int values, the result will be an int.
- When an operation is performed on two float values, the result will be a float.
- When an operation is performed on an int and a float, the int value will be temporarily converted to a float and the result of the operation will be a float. (An expression that uses operands of different data types is called a *mixed-type expression*.)

- 15) Specifying an item separator
Print('one', 'two', 'three')
Print('one', 'two', 'three', sep='put anything which act as separator')

- 16) Escape characters
`print('mon\ttues\twed')`
`Print('i\'m ready to start')`
`Print('hello\\honey')`
 Contraction

Escape Character	Effect
<code>\n</code>	Causes output to be advanced to the next line.
<code>\t</code>	Causes output to skip over to the next horizontal tab position.
<code>\'</code>	Causes a single quote mark to be printed.
<code>\"</code>	Causes a double quote mark to be printed.
<code>\\</code>	Causes a backslash character to be printed.

- 17) Displaying the multiple items with the + operator
`Print('this is' + 'one string')`
- 18) Inserting comma separator
`print(format(12345.6578, ',.2f'))` # decimal notations
 output 12,345.6578
`print(format(123456.333,'e'))` Scientific notations
- 19) Minimum Spaces width
`print ('the number is', format(123456.3333, '12,.2f'))`
 variable possible

Problems to solve

Celsius to Fahrenheit Temperature Converter

Write a program that converts Celsius temperatures to Fahrenheit temperatures. The formula is as follows:

$$F = \frac{9}{5}C + 32$$

The program should ask the user to enter a temperature in Celsius, and then display the temperature converted to Fahrenheit.

Land Calculation

One acre of land is equivalent to 43,560 square feet. Write a program that asks the user to enter the total square feet in a tract of land and calculates the number of acres in the tract. Hint: Divide the amount entered by 43,560 to get the number of acres.