

## CS 150 Fall 2022 – Quiz 3 “Cheat Sheet”

### Numeric Operators

**+**, **-**, **/**, **\***: Addition, subtraction, division, multiplication

**//**: Floor division: Round division result down to nearest whole number

**%**: Modulus: Evaluate to remainder of division

- Range

**range(stop)**: Equivalent to `range(0, stop, 1)`

**range(start, stop[, step])**: Create sequence of integers from inclusive **start** to exclusive **stop** by **step**

- Slicing

**seq[start[:stop[:step]]]**: Slice sequence **seq** from inclusive **start** to exclusive **stop** by **step**

### Input/Output

- Reading input from the user

**input(message)**: Displays message to the user and returns what the user typed as a string

### Strings

- The following functions are built-in

**len(string)**: Returns the number of characters in the string

**int(string)**, **float(string)**: Converts numeric string to int or float

**str(object)**: Converts object, e.g. int or float to a string

**sorted(string)**: Returns the characters of the string as a list in sorted order

- String object methods

**upper()**, **lower()**, **capitalize()**: Returns a new upper or lower-cased, or 1<sup>st</sup> letter upper-cased string

**find(some\_string)**: Returns the first index that **some\_string** occurs at in the string or -1 if not found

**find(some\_string, index)**: Same as above, but starts searching at index

**replace(old, new)**: Return a copy of the string with all occurrences of old substituted with new

**startswith(prefix)**: Returns **True** if the string starts with prefix, **False** otherwise

**endswith(suffix)**: Returns **True** if the string ends with suffix, **False** otherwise

**strip()**: Returns a copy of the string with only the leading and trailing whitespace removed

**split()**: Return a list of the words in the string using whitespace as the delimiter

- String operators

**string1 + string2**: Returns a new string that is the concatenation of string1 and string2

**string \* int**: Returns a new string that is string repeated int times

**substr in string**: Returns **True** if substr is a substring of string, **False** otherwise

### Modules

- **random** module

**randint(a, b)**: Return a random integer  $N$  such that  $a \leq N \leq b$

**uniform(a, b)**: Return a random floating point number  $N$  such that  $a \leq N \leq b$

- **math** module

**sqrt(num)**: Return the square root of num