Spring 2022 CS 1110 Prelim 2 Reference Sheet

This is a comprehensive reference sheet that might include functions or methods not needed for your prelim.

String methods	
`s[i:j]`	Returns: if `i` and `j` are non-negative indices and `i` ≤ `j-1`, a new string containing the characters in `s` from index `i` to index `j-1`, or the substring of `s` starting at `i` if `j` ≥ `len(s)`
`s.count(s1)`	Returns: the number of times `s1` occurs in string `s`
`s.find(s1)`	Returns: index of first occurrence of string `s1` in string `s` (-1 if not found)
`s.find(s1,n)`	Returns: index of first occurrence of string `s1` in string `s` STARTING at position n. (-1 if `s1` not found in `s` from this position)
`s.index(s1)`	Returns: index of first occurrence of string `s1` in string `s`; raises an error if `s1` is not found in `s`.
`s.index(s1,n)`	Returns: index of first occurrence of string `s1` in string `s` STARTING at position n; raises an error if `s1` is not found in `s` from this position
`s.isalpha()`	Returns: `True` if `s` is *not empty* and its elements are all letters; it returns `False` otherwise.
`s.isdigit()`	Returns: `True` if `s` is *not empty* and its elements are all numbers; it returns `False` otherwise.
`s.islower()`	Returns: `True` if `s` is has at least one letter and all letters are lower case; returns `False` otherwise (*e.g.*, 'a123' is `True` but '123' is `False`).
`s.isupper()`	Returns: `True` if `s` is has at least one letter and all letters are upper case; returns `False` otherwise (*e.g.*, 'A123' is `True` but '123' is `False`).
`s.lower()`	Returns: a copy of `s`, all letters converted to lower case.
`s.join(slist)`	Returns: a string that is the concatenation of the strings in list `slist` separated by string `s`
`s.replace(a,b)`	Returns: a *copy* of `s` where all instances of `a` are replaced with `b`
`s.split(sep)`	Returns: a list of the "words" in string `s`, using `sep` as the word delimiter (whitespace if `sep` not given)
`s.strip()`	Returns: copy of string `s` where all whitespace has been removed from the beginning and the end of `s`. Whitespace not at the ends is preserved.
`s.upper()`	Returns: a copy of `s`, all letters converted to upper case.

List methods	
`lt[i:j]`	Returns: if `i` and `j` are non-negative indices and `i` ≤ `j-1`, a new list containing the elements in `lt` from index `i` to index `j-1`, or the sublist of `lt` starting at `i` if `j` ≥ `len(s)`
`lt.append(item)`	Adds `item` to the end of list `lt`
`lt.count(item)`	Returns: count of how many times `item` occurs in list `lt`
`lt.index(item)`	Returns: index of first occurrence of `item` in list `lt`; raises an error if `item` is not found. (There's no "find()" for lists.)
`lt.index(y, n)`	Returns: index of first occurrence of `item` in list `lt` STARTING at position `n`; raises an error if `item` does not occur in `lt`.
`lt.insert(i,item)`	Insert `item` into list `lt` at position `i`
`lt.pop(i)`	Returns: element of list `lt` at index `i` **and also removes that element from the list** `lt`. Raises an error if `i` is an invalid index.
`lt.remove(item)`	Removes the first occurrence of `item` from list `lt`; raises an error if `item` not found.
`lt.reverse()`	Reverses the list `lt` in place (so, `lt` is modified)
`lt.sort()`	Rearranges the elements of `x` to be in ascending order.

Dictionary Operations	
`d[k] = v`	Assigns value `v` to the key `k` in `d`.
`d[k]`	If value `v` was assigned to the key `k` in `d`, `d[k]` evaluates to `v`.
`del d[k]`	Deletes the key `k` (and its value) from the dictionary `d`.

Other useful functions	
`s1 in s`	Returns: `True` if the substring `s1` is in string `s`; `False` otherwise.
`elem in lt`	Returns: `True` if the element `elem` is in list `lt`; `False` otherwise.
`y in d`	Returns: `True` if `y` is a key in dictionary `d`; `False` otherwise.
`input(s)`	prompts user for a response using string `s`; returns the user's response as a string.
`isinstance(o, c)`	Returns: `True` if `o` is an instance of class `c`; `False` otherwise.
`len(s)`	Returns: number of characters in string `s`; it can be 0.
`len(lt)`	Returns: number of items in list `lt`; it can be 0.
`len(d)`	Returns: number of keys in dictionary `d`; it can be 0.
`list(range(n))`	Returns: the list `[0 .. n-1]`