CSC108H Winter 2023 Worksheet: String Methods

On the back of this page is a help sheet for type `str` similar to what you will be given on the midterm test. Using that sheet as a reference, answer the following questions.

1. Consider this code

   ```
   wish = 'Happy Birthday'
   ```

   Assuming the code above has been executed, circle the expression(s) that produce `'happy birthday'`.

   (a) `wish[0].lower() + wish[6].lower()`
   (b) `wish.swapcase()`
   (c) `wish[0].lower() + wish[1:6] + wish[6].lower() + wish[7:]`
   (d) `wish.lower()`

2. Consider this code

   ```
   robot = 'R2D2'
   ```

   Assuming the code above has been executed, circle the expression(s) that produce `True`.

   (a) `robot.isupper()`
   (b) `robot.isalpha()`
   (c) `robot.isalnum()`
   (d) `robot.isdigit()`

3. Consider this code

   ```
   lyrics = '''O Canada!
   Our home and native land!
   True patriot love in all of us command.'''
   ```

   Circle the expression that produces the index of the second exclamation mark.

   (a) `lyrics.find('!')`
   (b) `lyrics.find('!').find('!')`
   (c) `lyrics.find('!', lyrics.find('!'))`
   (d) `lyrics.find('!', lyrics.find('!') + 1)`

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Short Python help descriptions:

```
str:
  x in s --> bool
    Produce True if and only if string x is in string s.
  str(x: object) -> str
    Convert an object into its string representation, if possible.
  S.count(sub: str[, start: int[, end: int]]) -> int
    Return the number of non-overlapping occurrences of substring sub in
    string S[start:end].  Optional arguments start and end are interpreted
    as in slice notation.
  S.find(sub: str[, i: int]) -> int
    Return the lowest index in S (starting at S[i], if i is given) where the
    string sub is found or -1 if sub does not occur in S.
  S.index(sub: str) -> int
    Like find but raises an exception if sub does not occur in S.
  S.isalnum() -> bool
    Return True if and only if all characters in S are alphanumeric
    and there is at least one character in S.
  S.isalpha() -> bool
    Return True if and only if all characters in S are alphabetic
    and there is at least one character in S.
  S.isdigit() -> bool
    Return True if and only if all characters in S are digits
    and there is at least one character in S.
  S.islower() -> bool
    Return True if and only if all cased characters in S are lowercase
    and there is at least one cased character in S.
  S.isupper() -> bool
    Return True if and only if all cased characters in S are uppercase
    and there is at least one cased character in S.
  S.lower() -> str
    Return a copy of the string S converted to lowercase.
  S.lstrip([chars: str]) -> str
    Return a copy of the string S with leading whitespace removed.
    If chars is given and not None, remove characters in chars instead.
  S.replace(old: str, new: str) -> str
    Return a copy of string S with all occurrences of the string old replaced
    with the string new.
  S.rstrip([chars: str]) -> str
    Return a copy of the string S with trailing whitespace removed.
    If chars is given and not None, remove characters in chars instead.
  S.split([sep: str]) -> list of str
    Return a list of the words in S, using string sep as the separator and
    any whitespace string if sep is not specified.
  S.strip([chars: str]) -> str
    Return a copy of S with leading and trailing whitespace removed.
    If chars is given and not None, remove characters in chars instead.
  S.swapcase() -> str
    Return a copy of S with uppercase characters converted to lowercase
    and vice versa.
  S.upper() -> str
    Return a copy of the string S converted to uppercase.
```