COMP 141 Strings III Rhodes College

Announcements

Reminders:

2

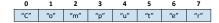
Program 6 - due Sunday (April 5th) Midterm 2 – Wednesday, April 8th

- Practice Problems on Course Website
- Solutions to Practice Problems on Moodle

1

Accessing Characters Review

Strings are stored character by character. Each character in a string is numbered by its position:



The numbers shown here above the characters are called *indices* (singular: index) or *positions*.

Negative Indices

Negative indexing can be used.
Particularly useful for getting characters near the end of a string.

0 1 2 3 4 5 6 7 -8 -7 -6 -5 -4 -3 -2 -1 "C" "o" "m" "p" "u" "t" "e" "e"

s[2] is the same as s[-6] both refer to "m"

To find last letter in string use: s[-1]

3

1

String Indices

- Two ways to use square brackets
 - 1 number inside -> gives you 1 character of a string
 - s[0] gives you the first character in s
 - If s = "Computer", s[0] gives you 'C'
 - 2 numbers inside (separated by a colon) -> gives you a substring or string slice

String Slicing

- <u>Slice</u>: span of items taken from a sequence, known as substring
 - Slicing format: string[start : end]
 - Expression will return a string containing a copy of the characters from start up to, but not including, end
 - If start not specified, 0 is used for start index
 - If end not specified, len(string) is used for end index
 - Slicing expressions can include a step value and negative indexes relative to end of string

5

6

More String Methods

Table 9-3 Search and replace methods

Method	Description
endswith(substring)	The substring argument is a string. The method returns true if the string ends with substring.
find(substring)	The substring argument is a string. The method returns the lowest index in the string where substring is found. If substring is not found, the method returns -1.
replace(old, new)	The old and new arguments are both strings. The method returns a copy of the string with all instances of old replaced by new.
startswith(substring)	The substring argument is a string. The method returns true if the string starts with substring.

Using the find method

```
filename = "First Last_assignsubmission_file_lastname_firstname_prg6.py"
    print(renameFile(filename))

def renameFile(filename):
    ind = fileName.find("file_")
    fileName = fileName[ind+5:]
    return fileName
main()

Output:
    lastname_firstname_prg6.py
```

7

2

Testing, Searching, and Manipulating Strings

- You can use the in operator to determine whether one string is contained in another string
 - General format: string1 in string2

9

- string1 and string2 can be string literals or variables referencing strings
- Similarly you can use the not in operator to determine whether one string is not contained in another string

In-Class Lab

Lab is on course website Solutions to some of the problems are in the Box folder – strings3lab.py

10

10