Fairfield UNIVERSITY

CPSC 1101
Introduction to Computing

School of Engineering & Computing

Dept. of Computer Science & Engineering

Dr. Sidike Paheding

Class Itinerary

- Lecture
- Reading assignment: **Chapter 2: 44 - 65**

Literals

- To code a ***literal value*** for a string, enclose the characters of the string in single or double quotation marks. This is called a *string literal*.
- To code a literal value for a number, code the number without quotation marks. This is called ***numeric literal***.

Let’s combine variables

Combine Variables

```
var1 = “hello”
var2 = “ world”
print(var1 + var2)

var1 = 20
var2 =22
print(var1 + var2)

var1 = “Python”
print(“I love “ + var1 +”!”)
```

The ‘str()’ function

The str() function returns the string version of the given object

```
var1 = 7
var2 = “ days in the week”
print(var1 + var2) #. TypeError: unsupported operand type(s) for +: ‘int’ and ‘str’

# converting the ‘int’ value to a string & printing
var1 = 7
var2 = “ days in the week”
print(str(var1) + var2)
```

Strings

- The strip() removes whitespace at the beginning and at the end of the string.
  - a = "   Hello!"
  - print(a.strip()) # returns "Hello!"
- The len() method returns the length of a string
  - print(len(a))
- The lower() method returns the string in lower case
  - print(a.lower())
- The upper() method returns the string in upper case
  - print(a.upper())
- The replace() method replaces a string with another string
  - print(a.replace(“ll", “r"))
- str(): returns a string

Negative indices...

In a negative mood ?
Python's there for you !

```
  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18
s = 'harvey eats toomuch'
-19 -17 -15 -13 -11 -9  -7  -5  -3  -1
   -18 -16 -14 -12 -10 -8  -6  -4  -2
```

Negative indices count ***backwards*** from the end!

`s[-1]` is `'h'`

`s[-18]` is

`s[-7]` is

`s[-0]` is

Fairfield UNIVERSITY

Accessing string characters by index

- message = "Hello out there!"
- message[0] # "H"
- message[1] # "e"
- message[-1] # "!"
- message[16] # IndexError: string index out of range
- message[0] = "J" # TypeError: string is immutable

String slicing

- string[start:end:step]
  - a = "Hello out there!"
  - a[0:5:2] # 'Hlo'
  - a[:5] # "Hello" : get the first five characters
  - a[6:9] # "out"
  - a[10:] # "there!"
  - a[:-1] # "Hello out there"

String slicing

- a = "HelloWorld"
- a [:3] # index string to get the first three characters

  Hel

- a [::2] # get every other letter

  Hlool

- a[::-1] # reverse the string

  dlroWolleH

- a[:6:2] # every other letter in the first 6 characters

  Hlo

String repetition

- print("=" * 20) #====================
- print("A cat! " * 2) # "A cat! A cat!"

The function “input()”

- It is a built-in function in Python
- It allows to gather information from the user
- It pauses the program and awaits for the information

Example

```
print(“What is your name ?”)
name = input()
print(“Hi”, name, “!”)
```

Exercise 1

- Write a python program that:
  - Displays a welcome message about entering 3 test scores and your program will calculate the average grade
  - Get the three scores from the user
  - Calculate the average
  - Format and display the result

Exercise 2

- Write a python program that:
  - Asks the user for their name
  - Prints the length (i.e. number of character) of the name (function to use: len())
  - Prints the last 2 characters of the name

Exercise 3

- Ask the user to input a string. Split the string into two halves and print both halves.

Fairfield UNIVERSITY

Thank you for participating in CPSC 1101 - Intro to Computing.

Are there any questions?

spaheding@fairfield.edu