Intro To Python

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Outlines of the Day

- Creating Strings
- Operations on Strings
- Creating a Multiline String
- Getting Info From Keyboard

Creating Strings

- In Python, text is represented as a string, which is a sequence of characters (letters, digits, and symbols).

- The type whose values are sequences of characters is str.

- Creates between quotation marks (double or single)

    "Science Fiction"   # String

    'Informatics'   # Also a string

- The opening and closing quotes must match. Starting with double end with single you will get an error.

- Strings can contain any number of characters, limited only by computer memory.

- The shortest string is the empty string, containing no characters at all:

    ''

    ""

String Operations

- Python has a built-in function, *len* that returns the number of characters between the opening and closing quotes

  > >>>*len('Albert Einstein')*

  > *15*

- We can add two strings using the + operator:

  > *>>> 'Albert' + ' Einstein'*

  > *'Albert Einstein'*

- In addition to +, len, int, and float, operator * can be applied to strings.

  > *>>>'AT' * 5*

  > *'ATATATATAT'*

- Hands-on activity: 7

Multi-line Strings

- If you create a string using single or double quotes, the whole string must fit onto a single line.
- To span multiple lines, put three single quotes or three double quotes around the string instead of one of each.

    >>>'''one...

    ... two...

    ... three'''

    'one\ntwo\nthree'

- Notice that the string Python creates contains a \n sequence everywhere our input started a new line.
    - If you would like to see what are the special characters in Python: http://www.tutorialspoint.com/python/python_strings.htm

Get from Keyboard

- Another built-in function that you will find useful is raw_input(), which reads a single line of text from the keyboard.

- It returns whatever the user enters as a string, even if it looks like a number:

> >>>species = raw_input()
>
> Homo sapiens
>
> >>>species
>
> 'Homo sapiens'
>
> >>> population = raw_input()
>
> 6973738433
>
> >>> population
>
> '6973738433'
>
> >>> type(population)
>
> <class 'str'>

Cont'd

- To get int input from keyboard we have a little trick:

  >>> number = int(raw_input())

  12345

  >>> number

  12345

- Finally, raw_input can be given a string argument, which is used to prompt the user for input (notice the space at the end of our prompt):

  >>> species = input("Please enter a species: ")

  Please enter a species: Python curtus

  >>> print species

  Python curtus

Q&A Time

To Do

- There will be no assignment for today
- Tomorrow we will have first exercise day.