## Python refresher

REPL

read eval print loop

Cpython

jython (java virtual machine)

data science

ML

AI

cloud computing

devops

automation

testing

embedded

web (django, flag)

~~cyber security~~

## data

### data types

### int

### float

### complex

### bool

True

False

### str

double or single quotes

index

negative index

slicing

upper range not included

no exceptions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| c | o | r | o | n | a |
| 0 | 1 | 2 | 3 | 4 | 5 |
| -6 | -5 | -4 | -3 | -2 | -1 |

immutable

functions: upper, lower

title, capitalize,

replace

find, count

isalpha, isdigit, is alnum

### docstrings:

multilines

triple quotes

""" """

''' '''

\_\_doc\_\_

### comments:

# single line comments

""" """ **used** like multiline comments

### keywords:

False await else import pass

None break except in raise

True class finally is return

and for lambda try

as def from while nonlocal

assert del global not with

async elif if or yield

continue

## functions:

### general

print

len

type

### cast:

int

float

str

list()

tuple()

set()

range()

### user defined

def

can pass 0 to n number of values

can return 0 to n number of values

no function overloading

single definition (latest) exists

default values

named arguments

variable num of arguments: args

variable n um of keyword arguments: kwargs

global

recursion

nesting

### 

## operators:

### arth:

+

-

\*

/

% modulo

=

// floor division

\*\* power (exponent)

### logical:

and

or

not

### bitwise:

<<

>>

^

&

|

~

### relational (comparison)

<

>

<=

>=

==

!=

### identity

is

is not

### membership

in

not in

### 

### False

0

0.0

None

False

''

{}

[ ]

## Data structures

### list:

sequences

of any type

index

negative index

slicing

mutable

functions:

index, count

append, insert

pop, remove, clear

sort, reverse

### tuples:

sequences

of any type

index

negative index

slicing

immutable

functions:

index, count

### set:

sequences

no duplicates

unordered

immutable members

by itself set is mutable

no nest

### dict:

key: value pair

unordered

key:

immutable

no duplicates

values:  
 anything

mutables

nesting

by themselves dict is mutable

functions:

get

update

values, keys

items

pop

## control statements

### if else

if

elif

else

pass

while

for

else

## modules

1. import colours

colours.blue()

colours.green()

colours.yellow()

1. from colours import blue, green

blue()

green()

~~yellow()~~

1. from colours import \*

blue()

green()

yellow()

1. import colours as c

c.blue()

c.green()

c.yellow()

1. from colours import blue as b

b()

for reloading:

import importlib

importlib.reload(colours)

## files:

open

close

read()

read(n)

readline

readlines

write

seek

tell

readable()

writable()

closed

modes:

r read

w write (always a new file)

a append

r+ read & write

rb read in binary mode

## OOP

class

self

\_\_init\_\_

inheritance

encapsulation

\_\_ (double underscores)

polymorphism

operator overloading

magic methods

C++ operator , function

java function

python operator

\_\_init\_\_

\_\_del\_\_

\_\_repr\_\_

\_\_call\_\_

\_\_add\_\_

@classmethod

@staticmethod

## regex:

search pattern

https://regex101.com

metacharacters:

^ line starts with

$ lin ends with

[ ] set of characters

[^ ] invert of [ ]

. single character

\* zero or more occurrences of the pattern left to it

+ one or more occurrences of the pattern left to it

? zero or one occurrences of the pattern left to it

{x, y} atleast x times, max y times

{2, 4}

( ) group sub patterns

\d digits

\D non digits

\s whitespace

\t \n \r space \v

\S non whitespace

\w alphanumeric characters including underscores

[a-zA-Z0-9\_]

re

match

findall

split

sub

subn

parked topics:

~~list comprehensions~~

bitwise operations

XML

YAML

REST API

date & time

globals() locals()

python + C

python + DLL

modules & packages:

package

update path

fetch from online

\_\_main\_\_

time.time()

timeit