

Python Cheat Sheet

by pao361 via cheatography.com/140352/cs/29763/

Rules

Python relies on proper indentation.

For example:

age = 18

if age >=18:

print("Be sure to vote")

else

print("Sorry, too young")

Naming Rules

A variable name: MUST begin with a letter or underscore(_)

CANNOT contain spaces, punctuation or special characters others than the underscore

CANNOT begin with a number

CANNOT be the same as a reserved keyword in Python such as print, True, else, etc.

A variable name is case sensitive

built-in functions

Dane in re	
print()	this outputs something to the screen
input()	ask for input from the program user
str()	converts a variable to a string data type
int()	convert a variable to an int data type
float()	convert a variable to a float(decimal) data type

Comparison Operators

== Equal to
!= Not equal to
> Greater than
< Less than

>= Greater than or equal to

<= Less than or equal to

Basic Math Operators

Addition

Subtraction

* Multiplication

/ Division

% division remainder

** Exponent

Data Types

str string(characteres typically words, sentences)

int integer(0,5,133)

float decimal number(1.23,623.664)

list a collection of variables (mango, banana, oranges)

bool boolean value (True, False)

Special Characters

\n new line

\t tab

LOCAL/GLOBAL Variables

LOCAL Variable created within a function and only can be used by the function that defines them

LOCAL/GLOBAL Variables (cont)

GLOBAL Variable defined outside of a function and can be accessed by any function without passing them to the function. Read-only

and cannot be modified

Boolean Operators

not x x and y x or y

try and except

try:

code statements

except: #for all exceptions

code statements

try:

code statements

except ValueError: #Specific error type

code statements

Concatenate using "+" or "f"

combining strings

myName = "Name"

print("Hello " + myName)

print(f"Hello {myName}")

string and a numeric value

age= 22

print("Your age: " + age)
print(f"Your age: {age}")

Capital and lowercase letters

hello = "hello world"

print(hel lo.u pp er())

will print HELLO WORLD

print(hel lo.l ow er())

will print hello world

print(hel lo.c ap ita lize())

C

round()

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rounds a number

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Capital and lowercase letters (cont)

> # will print Hello world

Control loops

break breaks out of your loop causing

the program to move to the next

line after the loop

continue while skip this round of the loop

and go into the next loop

iteration

Statements

If Statement

if expression:

statements

elif expression:

statements

else:

statements

While Loop

while expression:

statements

For Loop

for var in collection:

statements

Counting For Loop

for in range(start, end[, step]):

statements

(start is included; end is not)

if statements

```
if myAge < 18:
    pri nt( "Too young") #If
TRUE prints this
elif my Age <21:
    pri nt( "Go ahead") #If
TRUE prints this
else:
    pri nt( " Bye !") #if</pre>
```

While loops

#while loops run as long as, or
while, a certain condition is
true

while True:

#do something

else:

#do something

#Example:

curren t_n umber = 1 #set the
first value

#check the value of curren t_n umber and see if it is less
than or equal to 5
while curren t_n umber <=5:
 pri nt(cur ren t_n umber)
#print out the value of the
variable</pre>

cur ren t_n umber += 1
#add one to the variable

The loop will run again until the current_value variable becomes 6 and then it will stop. Use break and continue to control loop

for loops

colors = ['red', 'green',

write() method example

**Opening in append mode will add the new data to the end of the file" with open ("filename.txt, "a") as File: File.write("Hello\n")

Read methods

read() read the entire file and return its contents as a string

readlines() read the entire file and return its contents as a list

readline() read the next line in the file and returns its content as a string

read() adn readlines() work best for smaller files. readline() for larger files.

Function Definition

Function named blocks of code that are designed to do a specific task def name(arg1, arg2, ...):

code statements

return expr

return: stores the variable
It can be with arguments or without it

Functions Example

Function definition with NO arguments/parameters

def helloWorld():
 print("Hello, world!")

Function definition WITH arguments/parameters

def helloUser(*firstName*): print("Hello", *firstName*) Calling a function

helloWorld()

LISTS/TUPLE

List [Collection of items in a particular] order. List indexes start at 0

Tuple It is a list but Unable to be changed

()



FALSE prints this

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Lists functions	s Example
fruits =	['apple', 'banana', 'orange']
print(fruits)	Output an entire list
print(fru- its[2])	Output an element in a list: orange
fruits[0] = 'grapes'	Modifying an element in a list: apple by grapes
fruits.ap- pend('pear')	Adding an element to the end of a list
fruits.in- sert(0, 'mango')	adding a list element in a specific position
fruits.re- move('ban- ana')	removing a list element
fruits.pop(0)	removing a specific list element
fruits.pop()	removing the last list element
del fruits	removing an entire list
fruits.clear()	emptying a list
findApple = (fruits.coun- t("apple"))	count for specific item
fruits. reverse()	reverse the order of list
fruits.sort()	sort the list. fruits.sort(key- =str.lower) to make sure everything is in lowercase

Lists functions Example (cont)		
sorted	If you want the list to remain the	
_fruits	same positions, you can use the	
=	sorted to create a copy of the	
sorted	sorted list without impacting the	
(fruits)	original list	

Types of	f files
Text files	each line ends with a new line character (\n) or a carriage return character (\r) on Windows systems
Binary files	Are intended to be read by other programs, not humans. common types are: program files, image files, audio files, video files, database files and compressed files.

File fuctions		
open(filename,	mode is an optional	
mode)	argument that	
	specifies how you	
	want to open the	
	file. r = read, a =	
	append, w = write,	
	b = binary.	
filename.close()	close an open file	
	object	
print(filename.read())	output the content	
	of the file	

File fuctions (cont)				
with	automatically close a file			
open(filename)	if an exception happens.			
as <i>newfil-</i>	Also, it allows to assign a			
ename:	name to the file object in			
	the same line of code and			
	ends with a colon:			
	creating a code block			
write() method	use write mode when you			
	are creating a new file,			
	not when you are working			
	with an existing file of			
	data, Open the file in			
	append mode ("a") if you			
	wish to add to an existing			
	file.			
A file path must be included if the file is not				

in the same directory as the Python

program



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