Cheatography

Python Cheat Sheet

by Anon123 via cheatography.com/25787/cs/6921/

Vocabulary

variable	something that can change
string	a list of characters
integer number	pos/neg natural numbers and zero
floating point	decimal number
length	the length of the string
Modulo	Finds the remainder
Boolean	True/False
Syntax	Grammar/Structure of language
range (1,10)	the numbers 1-9
range(10)	the numbers 0-10

Conditionals

If..... :then..... else.....	If the statement is true then do command under then else do command under else
while.....	While **this** is true loop the command under the conditional
While True	loops forever
for **each item** in **name of list**	For every item in the list repeat the command under the loop that many times. (a string is a list too)

Naming Conventions

Rules for naming variables:

- letters
- numbers
- underscores (_)
- can start with **letters** or **underscores** ONLY
- NO SPACES

Valid names:

- _mystr
- my3

Hello_there

Invalid names:

- **3**my= "hi" -- cannot start with number
- first name = "hi" -- no spaces allowed
- first-name -- dashes are not accepted

Lists

```
#this is how you maek a list in
python
shoppi nglist = ['coke zero',
'bacon', 'water', 'jelly',
'gummy bears']
print (shopp ing list)
print (shopp ing lis t[0])
#prints the first item of the
list
list_num = 0
while list_num < len(sh opp -
ing list):
        print ("Li st: ",
shoppi ngl ist [li st_ num])
        lis t_num =list_ num+1

#for loop--> same as the above
       #For every item in that
list we're going to print it.
for item in shoppi nglist:
        print (item)
numbers = range(1,5)
#print up until less then the
last number.
for item in numbers:
        print (item)
# a string is a list of charac -
ters, letters, numbers, etc.
mystr = " hel lo"
for letter in mystr:
        print (letter)
```

Adding strings number

```
mystring = ""
count = 0
while count < 5:
        mys tring = mystring +
str(count)
        print (mystring)
        count = count + 1
```

Symbols

Symbols (cont)

//	divide and quotient is integer
**	exponent
%	modulo: the remainder
[...]	The position of the item in the list or the letter in a word

Multiplication & Exponents

string * string	CRASH!!!
string * number	combines the strings multiple time
number * number	math (multiply)
string ** number	CRASH!!!
number ** number	Exponent(Math)
string ** number	CRASH!!!

Even/odd using counters

```
even_value = 0
odd_value = 0
while True:
         use r_input = input( " -
Enter a positive number: ")
         number = int(us er_ -
input)
        if number < 0:
                print ("There
were ", even_value ,"even
numbers and there were " ,
odd_value ,"odd number s.")
                break
        if number % 2 == 0:
                eve n_value =
even_value + 1
         else:
                odd _value =
odd_value +1
```

Addition

string + string	squishes them together
string + number	crash
number + number	math(addition)

Area of circle

==	equal to
!=	not equal to
<	less than
<=	less than or equal to
>	greater than
>=	greater than or equal to
+	add
-	subtract
*	multiply
/	divide and quotient is float

```
def areaofCircle(r):
        if r <= 0:
                return " Error:
invalid radius "

        pi = 3.1415
```

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Area of circle (cont)

```
>    area = pi(r*2)
   return (area)
user_radius = input('Enter the radius: ')
radius = float(user_radius)
print("The area of the circle is", areaofCir-
cle(radius))
```

fibonacci

```
num1= 0
num2=1
mystr = '0'
while num1 + num2 < 89:
        Fib onacci = num1 +num2

        num1= num2

        num 2=F ibo nacci
        mystr= mystr+ " ," +
str(num1)
print (mystr)
```

Functions

Functions

print()	displays information on the screen
input()	receives info from the user
int()	converts the value into an integer
str()	converts the value to a string
float()	converts the value to a floating point
len()	The length of the string
#	One line comment not include in code
'''	Multi-line comment
def name(vari-able):	defines a block as in subbing the name for lines of commands. The variable in the parentheses can be replaced by inputing the desire value into those parent-heses.
range (100)	range of numbers from 0 to one less then that.

Spelling a string out in reverse code

```
word = input("Type in an word:
")
reverse = " "
for letter in word:
        reverse = letter +
reverse
print ("Re verse: ", reverse)
```

This prints the true or false value using boolean

```
print(True)
print (2<3)
print (2 != 2)
```

Countdown Code

```
user_number = input("Please
enter a number: ")
number = int(us er_ number)
countd own _string = " "
while number > 0:
        cou ntd own _string =
countd own _string + " " +
str(nu mber)
        number = number-1
print (count dow n_s tring)
```

palindrome and efficient loops

```
def isPali ndr ome (word):



        let ter_num =0
        while letter_num <
len(wo rd) -1- let ter _num:

                if word[l ett -
er_num] == word[l en( wor d)- 1-
l ett er_ num]:
                        let -
ter_num = letter_num +1

                else:
                        return
False
        return True

while True:
        use r_input = input( " -
Please type in a word: ")
       if user_input == " qui -
t":
                break
        #print (isPal ind rom -
e(u ser _in put))
        myvalue = isPali ndr -
ome (us er_ input)
       if myvalue == True:
                print (user_ -
input + " is a palind rom e.")
       elif myvalue == False:
                print (user_ -
input + " is not a palind rom -
e.")
```

list loops #2

```
def calc(num1, num2, operation):

       if operation == " sum ":
                return sum(num1,
num2)
       elif operation == " pro -
duc t":
                return produc -
t(num1, num2)
       elif operation == " dif -
f":
                return
diff(num1, num2)
       elif operation == " -
div ":
                return div(num1,
num2)

def sum(a, b):
        return a+b
def product(a, b):
        return a*b

def diff (a, b):
        return a-b


def div(a, b):
       if b == 0:
                return ("Er -
ror ")
       elif b != 0:
                return a/b


print (calc( 1,2 ,"su m"))
print (calc(4,2, " dif f"))
print (calc (9,0, " div "))
print (calc (2,12, " pro duc -
t"))
calc(1, 2, " sum ")
```

```
word = input("Type in an word:
")
reverse = " "
for letter in word:
        reverse = letter +
reverse
" " "
letter_num = 0
reverse = ''
while letter_num < len(word):
        reverse = (word[ let -
ter _num] + reverse)
        let ter_num = letter_num
+ 1
" " "

print ("Re verse: ", reverse)
```


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