Cheatography

python cheat sheet MUIDS Cheat Sheet

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Functions

print()	Show information that you want on the screen
int()	change number to be number integer
float()	change number to be decimal number
""" .... """	comment(many lines)
str()	a list of number, letter and symbols
#	comment(one line)
input()	receive information from user
import random + random.choic-e(list)	pick random item from the list

Random Code

```
import random
mylist = ['Dog' ,'F ish', 'Cat', 'Bear']
counter = 0
while counter < 10:
            ran dom _item = random.choice (mylist)
            print (rando m_item)
            counter = counter + 1
```

Print Code

```
name = "nae CHUTIMA"
print (name.u pp er())
print (name.l ow er())
print (name.c ap ita lize())
print (name.t it le())
```

number to binary code

```
user_number = ""
while user_n umber != " 0":

        use r_n umber = input ( " enter a number " )

        number = int(us er_ - number)
        bin ary _string = " "
while (number > 0 ):#the number is greater than 0
        rem ainder = number % 2
        bin ary _string = str( remainder )+ binary _string
        number = number//2
        print (number)

        print ( " binary string is ", binary _string )
```

Count down code

```
#create a program that receives a number from the user and count down from that number on the same line
#recive the number from the user as a string
user_n umber= input( " enter number ")
#convert the user number to an integer
number = int(us er_ number)
```

Count down code (cont)

```
> #setup the countdown string
countdown_string = ""
while number > 0:
    #add the number to the string
    #subtract 1 from the number
    countdown_string = countdown_string + str(number) + ""
    number = number-1
print (countdown_string)
#output should look like this
# if the user enter 5:
#5 4 3 2 1
#print (countdown_string)
```

The loop not go forever

```
gameover = 0
while( gam eover == 0):
        print ("he llo ")
        gam eover = 1
```

print number in separate line in list mylist

```
mylist = [1,2,3,4,5]
for number in mylist:
        print (number)
```

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using a while loop to print each item in list

```
wlist = [2,4,5,6,7,8]
index = 0
while index < len(wl ist):
        print (wlist [in dex])
        index = index +1
```

Definition Area

```
def areaOfTriangle
(base,height):
        return baseheigh 0.5
base = float( inp ut( 'Enter the
base of the triang le'))
height = float( inp ut( inp -
ut( 'Enter the height of the
triangle: '))
print('The area of the triangle
is',ar eaO fTr ian gle (ba se, -
hei ght))
def volume OfPrism (area, -
height)
        return areaOf Prism*
height
base = float( inp ut( 'Enter the
area of the prism'))
height = float( inp ut( inp -
ut( 'Enter the height of the
prism: '))
```

Import random

```
import random
#create list
mylist = ['nadia' , 'nat' ,
'lily' , 'eye']
#print (my lis t[0])
# select a random item from the
list
```

Import random (cont)

```
> counter = 0
while counter < 10:
   random_item = random.choice(mylist)
   print (random_item)
   counter = counter + 1
```

The loop not go forever (copy)

```
gameover = 0
while( gam eover == 0):
        print ("he llo ")
        gam eover = 1
```

Addition

string + string	combine together
string + number	crash
number + number	math - addition

Multiplication and Exponents

string * number	combine that string
string* string	crash
number * number	math - multiply
string ** string	crash
number ** number	math - exponent
string ** number	crash

Area of Circle Code

```
while True:

        use r_r adius =
input( "What is the radius ?")
        radius = float( use -
r_r adius)
       pi = 3.1415
        area= pradius * 2
        print ("The area of the
circle is", area)
```

code

```
mystring = "hello"
print (mystring)
firstname = input( "what is your
first name?")
lastname = input( "what is your
last name?")
fullname = firstname + " " +
lastname
print (fullname)
letter number = int(input( "
what is letter number? " ))
if letter number >le n(f ull -
name):
        print ( " invalid letter
number, try again! " )
else:
        letter = ( fullna me[ -
let ter number] )
        print (letter)
        num ber letter =
int(input( "how many times to
print letter " ))
       if number letter >100:
              print ( " too many
letters to print! " )
        else:
                print (letter *
number letter )
```

list code

```
shoppinglist = ['tshirt' ,
'pants' , 'socks']
for myvariable in shoppi nlist:
        print (myvar iable)
print (shopp ing lis t[1])
for number in range(5):
        print (number)
```

Random code 2

```
import random
intlist = [1,2,3,4]
random_int = random.ch oic e(i -
ntlist)
print( int lis t,r and om_int)
fplist = [1.0, 2.0, 3.0, 4.0]
random_fp = random.ch oic e(f -
plist)
print( fpl ist ,ra ndo m_fp)
strlist =['boo k', 'pe n', 'ba -
g', 'pe ncil']
random_str = random.ch oic e(s -
trlist)
print (strli st, ran dom _str)
mylist = [1, 1.0, 'beagle' ]
random _item = random.ch oic -
e(m ylist)
print( myl ist ,ra ndo m_item)
myvar1 = 1
myvar2 = 2
myvar3 = 3
varlist =[myvar1, myvar2,
myvar3]
random_var = random.ch oic e(v -
arlist)
print( var lis t,r and om_var)
```

print fifth character from the variable myword

```
myword = "hellothere"
print ( myword[4] )
```

convert input to a integer multiply by 10

```
while True:
        use r_n umber =
input( " Enter the number ")
        number = int(us er_ -
num ber)*10
        pri nt( number)
```

convert input to a integer multiply by 10

```
while True:
        use r_n umber =
input( " Enter the number ")
        number = int(us er_ -
num ber)*10
        pri nt( number)
```

palindrome

```
while True:
       def palind rom e(w ord):
                reverse = " "
                myr esult = " "
               for letters in
word:
                        reverse
= letters + reverse
               if word ==
reverse :
                        return
True
                else:
                        return
False
                        reverse
= " "
       word = input( " please
enter a word: ")
```

palindrome (cont)

```
>    if word == "quit":
      break
   theresult = palindrome(word)
   print("This word has",len(word),"letter")

   if theresult == True:
     print(True,",word + str('It is a palind-
rome'))
   else:
     print(False,",word +str('It is not a
palindrome'))
```

Math

==	equal to
!=	no equal to
<	less than
>	more than
<=	less than or equal to
>=	more than or equal to
%	modulo, Find the remainder

VOCABULARY

variable	hold a value and can be change
string	a list of character such as number, letter and symbols
integer number	whole number or counting number

VOCABULARY (cont)

float number	the number in decimal
syntax	grammar or structure of lauguage
value	the number or string can be store in valuable
module	the text for storing for python code or find the remainder
input	gain information from user
print	to show information on the screen
syntax error	make impossible to the parse
boolean	true/false

Random Choice Code

```
import random
mylist = ['beag le' ,'p ome -
ran ian ',' pug ',' gol -
den ',' chi hua hua']
score = 0
chances = 3
start_over = 0
random _item = random.ch oic -
e(m ylist)
while chances > 0:
        sta rt_over = 0
        ran dom _item =
random.ch oic e(m ylist)

        while start_over < 1:
```

Random Choice Code (cont)

```
>       print ("-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
=-=-")
        print ("Guessing Game")
        print ("-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
=-=-")
        print("words:", mylist)
        guess = input("Guess a word: ")
        if (guess in mylist):

            if(guess == random_item ):
                print("That's correct!")
                score = score + 100
                print("Score:", score)
                start_over = 2
            else:
                print("Sorry, wrong choice! ")
                chances = int(chances) -1
        else:
            print("Sorry, that is not even in the
list")
            chances = int(chances) -1
        if(chances > 0):
            print("Chances remaining:",c-
hances)
        else:
            start_over = 2
            print("Game Over! The word was ",
random_item)
            print("Chance remaining:", chances)
            print("Final score:", score)
```

using loop to print out each item in list

```
forlist = ['hi','hello','bye']
for word in forlist:
        pri nt( word)
```

create list

```
# create a function that allows
a user to create a list
#function name: word
#param ater: word
#return the list
def createList (quitw ord):
        mylist = [] #create an
empty list
        while True:
                #get the item
from the user
                item =
input( 'Please enter a list
item')
                # when the user
enters an item that is equal to
quitword
                if item ==
quitword:
                        return
mylist
                # check if the
list already in the list
                 dup lic ateword
= False
                # figure out if
the word is already in the list
                for word in
mylist:
                        if item
== word:
                                -
dup lic ateword = True
                if duplic ateword
== True
                         print
('Dupl icate word!')
```

create list (cont)

```
>       else:
          # add this item to the end of the list
          mylist.append(item)
#function call
mylist = creatList("stop")
print(mylist)
```

Definition in each word

```
def printDefinitions(word):
       if word == " var iab le":
            pri nt( " " "
         'A variable is things
that able to change'
            " " ")
       elif word == " fun cti -
on":
            pri nt( " " "
            "A function is to
help to use a code"
            " " ")
       elif word == " var iab -
le":
            pri nt( " " "
           'A variable is the
things that help you to change'
            " " ")
       elif word == " return
variab le":
               pri nt( " " "
              'A return
variable is something that
return the function back to you'
             " " ")
       elif word == " arg ume -
nt":
```

Definition in each word (cont)

```
>       print("""
      'A argument is something that give the
function to you'
      """)
   elif word == "parameter":
      print("""
      'A parameter is something that give
function'
      """)
   elif word == "string":
      print("""
      'A string is the text, number or anything
that is list the characters'
       """)
   else:
      print("""
     'unknown word'
      """)
user_word = input( "Enter a word to define:
")
printDefinitions(user_word)
```