Cheatography

earn Cheat Sheet

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Addition

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

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
Float number	The number in decimal
Syntax	Grammar or Structure of language
Modulo	Find the remainder
Boolean	True or False

Countdown Code

```
user_number = input("Please enter a
number: ")
number = int(user_number)
countdown_string = ""
while number > 0:
    countdown_string =
countdown_string + " " +
str(number)
    number = number-1
print (countdown_string)
```

Spelling a string out in reverse code

```
word = input("Type in a word: ")
reverse = ""
for letter in word:
     reverse in word:
print ("Reverse: ", reverse)
```

def areaOfCircle

```
def areaOfCircle(r):
    if r <= 0:
        return "Error: invalid
radius"
    pi = 3.1415
    area = pi  r *2
    return area
user_radius = float(input("Enter
the radius: "))
print('The area of the circle is',
areaOfCircle(user_radius))
```

Reverse

```
reverse = ""
letter_num = 0
word = input('type in a word: ')
while letter_num < len(word):
    reverse = word[letter_num] +
reverse
    letter_num = letter_num + 1
if reverse == word:
    print ('it is palindrome')
else:
    print ('it is not palindrome')
```

Maxvalue

```
def max2(num1, num2):
    maxvalue = num1
    if num2 > maxvalue:
        maxvalue = num2
    return maxvalue
print(max2(8,99))
print(max2(5,6))
def max3(num1, num2, num3):
    maxvalue = num1
    if num2 > maxvalue:
        maxvalue = num2
    if num3 > maxvalue:
        maxvalue = num3
    return maxvalue
print(max3(1,2,3))
```

Maxvalue (cont)

```
print(max3(4,5,6))
def maxlist(list):
    maxvalue = mylist[0]
    for item in list:
        if item > maxvalue:
            maxvalue = item
    return maxvalue
mylist = [1,5,9,10,13]
print(maxlist(mylist))
```

print all elements in mylist using loop

```
#for loop solution
mylist = [1,2,3,4,5]
for num in mylist:
    print(num)
#while loop solution
mylist = [1,2,3,4,5]
num = 0
while num < len(mylist):
    print(mylist[num])
    num = num + 1
```

Math

= =	equal to
! =	no equal to
<	less than
>	more than
<=	less than or equal to
>=	more than or equal to
%	Modulo, Find the remainder
**	exponent
+	add
-	subtract
*	multiple
/	divide and quotient is float
//	divide and quotient is integer

Conditionals

if...	If the statement is true then do
then...	Command under then else do
else...	Command under else
while...	While that is true loop the command under the conditional loops forever
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 list too)

Naming Conventions

Rules for naming variable:

-letter

-numbers

-underscores (_)

-can start with letters or underscores only

-no spaces

Valid names:

- _mystr

- my3

- Hello_there

Invalid names:

- 3my = "hi" --cannot start with number

- first name = "hi" --no spaces allowed

- first-name -- dashes are not accepted

Function

```
def printDefinitions(word):
    if word == "variable":
        print ("""A variable is something in the memory that we can change""")
    elif word == "function":
```

Function (cont)

```
        print ("""A function is to define the box of code""")
    elif word == "parameter":
        print ("""A parameter is value you give to the function""")
    elif word == "argumant":
        print ("""A argument is set of something that give to the function""")
    elif word == "function":
        print ("""A function call is when you call the function and it will run""")
    elif word == "string":
        print ("""A string is something you want to put""")
    else:
        print ("unknown word")
    return
while True:
    user_input = input("Enter words: ")
    printDefinitions(user_input)
```

Receive input from the user a float and print half

```
user_input = input("Enter a number: ")
user_input = float(user_input)
print(user_input / 2)
```

Multification function

```
def multiplicationTable():
    user_input = input("Enter a number: ")
    num = int(user_input)
    count = 1
    while count <= 10:
        print(num, " ", count, "=", numcount)
        count = count + 1
```

printFibonacci between0-50using loop

```
0,1,1,2,3,5,8,13,...(■■■■■■■■■■■■■■)
num1 = 0
num2 = 1
fibonacci = num1 + num2
myoutput = "0,1"
while fibonacci: < 50:
    myoutput = myoutput + "," + str(fibonacci)
    num1 = num2
    num2 = fibonacci:
    fibonacci: = num1 + num2
print(myoutput)
```

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

Multiplication and Exponents

string*string	crash
string*number	combines the strings multiple time
number*number	math (multiply)
string**number	crash

Multiplication and Exponents (cont)

number**number	exponent (math)
string**number	crash

Printing True or False value using boolean

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

Random

```
import random
intlist = [10,20,30,40,50]
random_int =
random.choice(intlist)
print = (random_int)
fplist = [1.1,2.2,3.3,4.4,5.5]
random_fp = random.choice(fplist)
print = (random_fp)
strlist = ['earn','pim','milly']
random_str =
random.choice(strlist)
print = (random_str)
mylist = ['earn',10,1.1]
random_mylist =
random.choice(mylist)
print = (random_mylist)
myvar1 = 1
myvar2 = 2
myvar3 = 3
random_var = [myvar1, myvar2,
myvar3]
print = (random_var)
```

Triangle And Prism

```
def areaOfTriangle(b, h):
    area = 1/2 b h
    return area
user_base = float(input('Enter the
base of the triangle: '))
user_height = float(input('Enter
the height of the triangle: '))
```

Triangle And Prism (cont)

```
print ('The area of the triangle
is', areaOfTriangle(user_base,
user_height))
def volumeOfPrism(b, h, l):
    volume = areaOfTriangle(b, h) *
l
    return volume
user_lenght = float(input('Enter
the lenght of the prism: '))
print ('The volume of the prism
is', volumeOfPrism(user_base,
user_height, user_lenght))
```

palindrome

```
reverse = ""
letter_num = 0
word = input('type in a word: ')
while letter_num < len(word):
reverse = word[letter_num] +
reverse
letter_num = letter_num + 1
if reverse == word:
print ("it is palindrome")
else:
print ("it is not palindrome")
```

print even numbers from 1 to 100 using while loop

```
num = 0
while num < 100:
    num = num + 2
    print (num)
```

print all items in mylist using loop

```
mylist = ['cokezero', 'bacon',
'pepsi']
for item in mylist:
    print(item)
```