Cheatography

Nancy's Python Cheat Sheet

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Naming Convention

Rule for giving name
- letter
- numbers
- underscore _
Valid name
- _myStr
- my3
- Hello_there Invalid name
- 3my=”hi” -- cannot start with number
- first name=”hi”
- first-name
- first+name

Symbol

==	Equal
!=	Not equal
>=	More than or equal
<=	Less than or equal
% (Madulo)	Find the remainder

Multiplication and Exponents

string * number	Combine that string
string* string	CRASH!
number * number	Multiply (Math)
string ** string	CRASH!
number ** number	Exponent (Math)
string ** number	CRASH!

Area of Triangle

```
def areaOfTriangle(base, hight) :
    return 0.5 base hight
user_base = float(input("Enter the base of the
triangle: "))
user_height = float(input("Enter the hight of the
triangle: "))
print ("The area of the triangle is",
areaOfTriangle(user_base, user_height))
def volumeOfPrism(area, high) :
    return area * high
user_prism_high = float(input("Enter the hight of the
prism: "))
print ("The volume of the prism is",
volumeOfPrism(areaOfTriangle(user_base, user_height),
user_prism_high))
```

Reverse Word

```
while True:
    word = input("Please enter a word")
    index = 0
    reverse = ' '

    while int(index) < len(word):
        reverse = word[index] + (reverse)
        index = int(index) + 1
    print ("Reverse: ", reverse)
```

Sort fruit list

```
fruits = [] #an empty list
for number in range(5):
    user_fruit = input("Please enter a fruit")
    fruits.append(user_fruit)
print ("Size of fruit list is", len(fruits))
fruits.sort()
for fruit in fruits:
    print ("Fruit: ", fruit)
```

Countdown Machine

```
number = int(input("What number do you want to count down? "))
countdown_string = ' '
while number > 0:
    countdown_number = countdown_string + str(number) + " "
    number = number - 1

print (countdown_string)
```

Area of Circle

```
user_radius = input("What is a radius of a circle?")
radius = float(user_radius)
pi = float(3.1415)
area = pi *(radius*2)
print ("The area of the circle is", area)
```

Create List

```
create a function name: createList
argument: quitword
return: a list
def createList(quitword):
    mylist = [] #empty list
    while True: #loop forever
        user_word = input("Please enter a list item: ")
        if user_word == quitword:
            return mylist #returns the list and exits the function
        duplicateword = False
        for item in mylist:
            if user_word == item:
                duplicateword = True
        if (duplicateword == True):
            print ("Duplicate Word!")
        else:
            mylist.append(user_word) #Adds the user_word to the end of the list
```

Create List (cont)

```
userlist = createList('stop') #Function Call
print (userlist)
```

Function (Ex.)

```
def myprint2(text, decoration): #Text and decoration is a parameter
    print (decoration + str(text) + decoration)
    return
myprint2("Hello", "+++++")
myprint2("Hello", "-=-=-=-=-=")
myprint2("Hello", "<<<<<")
```

```
+++++Hello+++++
-=-=-=-=Hello-=-=-=-=
<<<<<Hello<<<<<
```

Palindrome

```
def isPalindrome(word):
    index = 0
    reverse = ''
    while int(index) < len(user_word):
        reverse = user_word[index] + (reverse)
        index = int(index) + 1
    if user_word == reverse:
        return True
    else:
        return False
while True:
    user_word = input("Please enter a word: ")
    if user_word == "quit":
        break

    print("Length of the", user_word, "is", len(user_word))

    Palindrome = isPalindrome(user_word)
    if Palindrome == True:
        print (user_word, "is a Palindrome!")
    else:
```

Palindrome (cont)

```
        print (user_word, "is not a Palindrome")
```

Sort word per line

```
mystr = "Hello"
letter_num = 0
while letter_num < len(mystr):
    print (mystr[letter_num])
    letter_num = letter_num + 1
```

Convert decimal to binary

```
user_number = ' '
while user_number != ' 0 ' :
    user_number = input ("Enter a number to convert to
binary")
    number = int(user_number)
    binary_string = ' '
    while (number > 0):
        remainder = number%2
        binary_string = str(remainder)+ binary_string
        number = number//2
    print ("Binary string is", binary_string)
```

Area of Circle by Function

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

Guess word game

```
import random
guesslist = ['grape', 'orange', 'chloroplast',
'ribosome', 'lipstick']
chance = 3
score = 0
print (guesslist)
while chance != 0:
    random_item = random.choice(guesslist)
    user_input = input("Please guess a word: ")
    if user_input == random_item:
        print ("That's correct!")
        score = score + 100
        print ("Score:", score)
    else:
        if user_input not in guesslist:
            print ("Sorry, that isn't even in the
list!")
            chance = chance - 1
            print ("Chance Remaining:", chance)
        else:
            print ("Sorry, wrong choice!")
            chance = chance - 1
            print ("Chance Remaining:", chance)
if chance == 0:
    print ("The word was", random_item)
    print ("The score is", score)
```

Convert binary to decimal

```
num = str(int(input("Enter a binary to convert to
decimal ")))
dec = int(num, 2)
print ("The decimal number is", dec)
```