Vocabulary

Modulo(%)	Finding the remainder
Syntax	Grammar/ Structure of language
/	divide(float)
//	divide(integer)

Comparing Values

True or anything	True
False and anything	False

Multiplication and Exponents

string* string	Fail!!
string ** string	Fail!!
string ** number	Fail!!

Random

```
import random
int/fp/strlist = [1,2,3,4,5,6,7,8,9,0]
random_int/fp/str = random.choice(int/fp/strlist)
print(int/fp/strlist,random_int/fp/str)
#fp = float ,str = string
fplist = [4.6,3.2,7.7,6.2]
strlist = ['uik','lok','pki','roo']
mylist = [589,56.3,'suay']
random_mylist = random.choice(mylist)
print(mylist,random_mylist)
```

Palindrome function

```
user_input = input("write down
string")
print(input)
letter_num = 0
reverse = ""
while letter_num <
len(user_input):
    reverse =
user_input[letter_num] + reverse
    letter_num = letter_num + 1
print ("Reverse: ",reverse)
if reverse == user_input:
    print("This is palindrome")
else:
    print("This is not a
palindrome")
```

Guessing Game

```
import random
mylist = ['lion', 'cheetah',
'panther', 'cougar', 'leopard']
random_item =
random.choice(mylist)
Chances = 5
Score = 0
while Chances > 0:
    print("Words:['lion',
'cheetah', 'panther', 'cougar',
'leopard']")

    user_guess = input("Guess a
word: ")
    if user_guess == random_item:
        print("That's
correct!")
        Score = Score+100
        print("Chances
remaining",'',Chances)
        random_item =
random.choice(mylist)
```

Guessing Game (cont)

```
        print("Score
is",'',Score)
    else:

        if user_guess in mylist:
            print("Sorry, wrong
choice!")
            Chances = Chances -
1
            print("Chances
remaining",'',Chances)
            print("Score
is",'',Score)
        else:
            print("Sorry, that
is not even in the list!")
            Chances = Chances -
1
            print("Chances
remaining",'',Chances)
            print("Score
is",'', Score)
if Chances == 0:
    print("Gameover",'',"The word
is",'',random_item)
    print("Final score
is",'',Score)
```

Printing Value

```
print("hello", "there") #displays hello there
print("hello" + "there") #displays hellothere
```

Combining Strings (Concatenation)

```
"hi" + "there" == "hithere"
"hi" * 5 == "hihihihihi"
```

List

```
mylist.append(5) #add at the end of the list
```

Range

```
for num in range(100):
 print (num) # prints all numbers
from 0 - 99
for num in range(5, 50):
 print(num) #prints all numbers
from 5 - 49
```

in

```
if user_guess in mylist:
        print("Sorry, tht's wrong")
    else:
        print("Sorry It is not in
choice")
```

Comment

```
# comment
"""
Double quote
for 2 line comment
"""
''' Single quote - Multi-line comment, '''
```

Find the area of prism

```
def volumeofprism(b,h,l):
    volume = areaofTriangle(b,h) *
l
    return volume
user_length = float(input('Enter
the length of the prism: '))
print ("The volume of the prism
is",
volumeofprism(user_base,user_height
,user_length))
```

Print even number

```
num = 2
while 1 < num and num <101 :
    print(num)
    num = num + 2
```

Function Largest Value

```
def max3 (num1,num2,num3):
    if num1>num2 and num1>num3:
        largestvalue = num1
    elif num2>num3 and num2>num1:
        largestvalue = num2
    else:
        largestvalue = num3
    return largestvalue
print (max3(9,100,25))
print (max3(69,85,1))
print (max3(75,9,33))
def maxlist (list):
    largestvalue = list [0]
    for item in list:
        if item > largestvalue:
            largestvalue = item
    return largestvalue
mylist = [1,2,3,4,103,100,89,57]
print (maxlist(mylist))
```

Palindrome2

```
def isPalindrome(word):
    letter_num = 0
    reverse = ""
    while letter_num <
len(user_word):
        reverse =
user_word[letter_num] + reverse
        letter_num = letter_num +
1


    if word == reverse:
        return True
    else:
        return False
while True:
    user_word = input("Enter the
word")
    word = len(user_word)
    print(word)
    if user_word == "quit":
        break
    if isPalindrome(user_word):
        print(user_word, "is a
palindrome")
    else:
        print(user_word, "is not a
palindrome")
```

Capital letter

```
name = "tim GIRARD"
print (name.upper()) → TIM GIRARD
print (name.lower()) → tim girard
print (name.capitalize()) → Tim girard
print (name.title()) → Tim Girard
```

Naming Conventions

```
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
```

Countdown Number

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

Reverse Number

```
word = input("enter the word")
letter_num = 0
reverse = ""
while letter_num < len(word):
    reverse = word[letter_num] +
reverse
```

Reverse Number (cont)

```
    letter_num = letter_num + 1
print ("Reverse: ",reverse)
```

Convert to Binary String

```
user_number = input ("Please enter
the number")
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)
```

Sort word per line

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

Define: function area of circle

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

Definition

```
def printdefinitions(word):
    if word == "Variable":
        print ('lo')
    elif word == "Function":
        print ('fun')
    elif word == "Parameter" or
word == "Argument":
        print ('para')
    elif word == "Function call":
        print ('call')
    elif word == "String":
        print ("stri")
    else:
        print ("Unknown Word")
    return
while True:
    user_input = input ("Enter the
word:")
    printdefinitions(user_input)
```

By **Rawisara**

cheatography.com/rawisara/

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