

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
% (Modulo)	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 base hight

user_base = float( input( " Enter the base of the
triangle: "))

user_h eight = float( input( " Enter the hight of
the triangle: "))

print ("The area of the triangle is", areaOf Tri -
ang le( use r_base, user_h eight))

def volume OfP ris m(area, high) :
    return area * high

user_p ris m_high = float( input( " Enter the
hight of the prism: "))

print ("The volume of the prism is", volume OfP -
ris m(a rea OfT ria ngl e(u ser _base, user_h -
eight), user_p ris m_h igh))
```

Reverse Word

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

    while int(index) < len(word):
        reverse = word[i ndex] + (reverse)
        index = int(index) + 1
    print ("Re verse: ", reverse)
```

Sort fruit list

```
fruits = [] #an empty list
for number in range(5):
    use r_fruit = input( " Please enter a
fruit")
    fru its.ap pen d(u ser _fruit)
print ("Size of fruit list is", len(fr uits))
fruits.sort()
for fruit in fruits:
    print ("Fruit: ", fruit)
```



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Countdown Machine

```
number = int(input("What number do you want to
count down? "))
countdown_string = ' '
while number > 0:
    countdown_string = 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) + decora-
tion)
    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 Palind-
rome!")
    else:
```



Palindrome (cont)

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

Sort word per line

```
mystr = "Hello"
letter_num = 0
while letter_num < len(my str):
    print (mystr [le tte r_num])
    let ter_num = letter_num + 1
```

Convert decimal to binary

```
user_number = ' '
while user_n umber != ' 0 ' :
    use r_n umber = input ("Enter a number to
convert to binary ")
    number = int(us er_ number)
    bin ary _string = ' '
    while (number > 0):
        rem ainder = number%2
        bin ary _string = str(re mai nder)+
binary _string
        number = number//2
    print ("Binary string is", binary _st ring)
```

Area of Circle by Function

```
def areaOfCircle(r):
    pi = 3.1415
    area = pi * 2
    return area
user_r adius = input( " Enter the radius of the
circle: ")
radius = float( use r_r adius)
print( "The area of the circle is", areaOf Cir -
cle (ra dius))
```

Guess word game

```
import random
guesslist = ['grape', 'orange', 'chlor opl ast',
'ribos ome', 'lipst ick']
chance = 3
score = 0
print (guess list)
while chance != 0:
    ran dom _item = random.ch oic e(g ues -
slist)
    use r_input = input( " Please guess a
word: ")
    if user_input == random _item:
        print ("That's correc t!")
        score = score + 100
        print ("Sc ore :", score)
    else:
        if user_input not in guesslist:
            print ("Sorry, that isn't
even in the list!")
            chance = chance - 1
            print ("Chance Remain -
ing :", chance)
        else:
            print ("Sorry, wrong
choice !")
            chance = chance - 1
            print ("Chance Remain -
ing :", 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)
```



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