

function

```
def nameOfFunction():
    print ('This function has no parameters')
    print ('This function has no return value')
    return # no value, just exits the function
#function call
nameOfFunction()
#function with 1 parameter/argument
def testFunction(param):
    print ('This function has 1 parameter')
    print (param)
#function call
testFunction ("this is the parameter value")
#function with 2 parameters and a return
value
def function3(param1, param2):
    print('This function has 2 parameters')
    return param1 + param2 # return value
#function call and store the result in a
variable
returnValue = function3(2, 3)
print (returnValue)
```

Countdown

```
user_number = input("What is the
number?" )
number = int(user_number)
countdown_string =' '
while number > 0:
    countdown_string = countdown_string +
str(number)
    number = number-1
print(countdown_string)
```

Countdown

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while number > 0:
    countdown_string = countdown_string +
str(number)
    number = number-1
print(countdown_string)
```

one word per line

```
mystr = input(" Please enter your word")
letter_num = 0
while letter_num < len(mystr):
    print (mystr[letter_num])
    letter_num = letter_num + 1
```

one word per line

```
mystr = input(" Please enter your word")
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while letter_num < len(mystr):
    print (mystr[letter_num])
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```

Function of name

```
mystr = "hello THERE"
print (mystr.upper()) > HELLO THERE
print (mystr.lower()) > hello there
print (mystr.capitalize()) > Hello there
print (mystr.title()) > Hello There
```

asking name

```
firstname = input("What is your first name?")
lastname = input("What is your last name?")
fullname = firstname + " " + lastname
print(fullname)
letternumber = input("What is the letter of
number?")
letternumber = int(letternumber)
if letternumber>len(fullname):
    print("Invalid letter number, try again")
else:
    print(fullname[letternumber])
times = input("How many times to print the
letter?")
times = int(times)
if times>100:
    print("Too many letters to print")
else:
    print(fullname[letternumber]*times)
Result
```

asking name (cont)

```
What is your first name? Pear
What is your last name? Tan
Pear Tan
What is the letter of number? 4
r
How many times to print the letter? 12
rrrrrrrrrr
```

List

```
myself= "hello123"
numbers = [1,2,3,4,5,6]
print(numbers)
shoppinglist = ['shoe','bags','pants','shirt']
print(shoppinglist)
mixed=[1,'Hello',2.5, True, False]
print(mixed)
letter_num = 0
while letter_num < len(mystr):
    print (mystr[letter_num])
    letter_num = letter_num + 1
for myletterisawesome in mystr:
    print(myletterisawesome)
for tientien in shoppinglist:
    print(opal)
shoppinglist. append('ties')
print(shoppinglist)
out = 0
for mrtim in shoppinglist:
    out=out + 1
print(mrtim)
print (out)
largelist = range(100)
for num in largelist:
    print(num)
```



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Symbol n vocab

variable-A value or thing that can be changed
 string-A list of character such as letter or symbol
 modulo-Find the remainder
 **-exponent
 /-divide and quotient (result) is float
 //-divide and quotient (result) is integer
 != - not equal to
 <= - less than or equal to
 >= - more than or equal to
 True or anything
 Always true
 False and anything
 False

for loop print 0 01 012 0123 01234

```
mystring = ""
for num in range(5):
    mystring = mystring + str(num)
print (mystring)
```

print thing in list while loop

```
my list = [1,2,3,4,5]
num = 0
while num<len(my list):
    print(mylist[num])
    num=num+1
```

convert binary

```
user_number = input("Please enter a 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)
Result
Please enter a number 36
Binary string is 100100
```

range

```
#creates a list of numbers from 0 to the specified
number
numberlist = range(5)
# is the same as creating the following list
numberlist2 = [0, 1, 2, 3, 4]
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
```

palindrome

```
def palindrome(word):
    letter_num = 0
    reverse = ""
    for letter_num in word:
        reverse = letter_num + reverse
    if word == reverse:
        return True
    else:
        return False
    while True:
        user_word = input("Please enter a word: ")
        if user_word != "quit":
            print("This word has",len(user_word),"letters")
            if user_word == "quit":
                break
        if palindrome(user_word) == True:
            print(user_word,"is palindrome")
        else:
            print(user_word,"is not palindrome")
```

0 01 012 0123 01234

```
expected out put
0 01 012 0123 01234
mystring = ""
count = 0
while count<5:
    mystring = mystring+str(count)
    print(mystring)
```

0 01 012 0123 01234 (cont)

```
count = count+1
```

function multiplication table 5'1-5 5'2-10

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

what is the output of the following code

```
x = false
print (x and True or 1 == 1)
ans- true
y = true
print (not y or 2<3)
and-true
```

area of triangle and prism

```
def areaOfTriangle(b,h):
    if user_base<=0:
        return "Error: invalid radius"
    if user_height<=0:
        return "Error: invalid radius"
    area = 0.5 b h
    return area
user_base =float(input('Enter the base of the triangle:'))
user_height = float(input('Enter the height of the triangle: '))
print ('The area of the triangle is',areaOfTriangle(user_base,user_height))
def volumeOfPrism(b,h,l):
    volume = bhl
    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))
```



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area of circle

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

Rules of naming var

```
# letters
# numbers
# underscore (_)
# can either start with letter or underscores
ONLY
# no space
Example
Hello_there
me2
_mynumber
Invalid names
# 3my =cannot start with number
# last name = no spaces allowed
# last-name = dashes are not accepted
```

multiplication

```
string * number - Repeat those
thing for the number of time
string * string - Crash!
number * number - Multiply like
in math
string ** number - Crash!
number ** number - Exponent in
Math
number ** string - Crash!
string + string - combine those
strings together
string + number - program will
be crash
```

print all even num 1-100 while loop

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

fibonacci from 0-50

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

ask user and is num divisible by3

```
num = int(input(input("enter a number")))
remainder = num % 3
if remainder == 0:
    print (num, "is divisible by 3")
else:
    print (num, "isn't divisible by 3")
```

ဗဟုသုတ

```
write a program that repeatedly receive
positive int from user enters a negative
integer exit the loop print how many of
numbers entered were even and odd
evencount=0
oddcount=0
while True:
    num = int(input("enter a positive integer"))
    if num<0:
        print("even number:",evencount)
        print("odd numbers:",oddCOunt)
        break
    else:
```

ဗဟုသုတ (cont)

```
if(num%2)==0
    evencount - evencount+1
else:
    oddcount = oddcount + 1
```

Reverse

```
word = input("Please enter a word to
reverse: ")
letter_num = 0
reverse = ""
while letter_num <len(word):
    reverse = word[letter_num] + reverse
    letter_num = letter_num + 1
    print("Reverse: ",reverse)
```

guess game

```
import random
mylist = ['lion','cheetah','panther','cougar','l-
eopard']
random_item = random.choice(mylist)
print(random_item)
print(mylist[0])
user_guess = input("Guess a word: ")
if user_guess == random_item:
    print("Correct")
else:
    if user_guess in mylist:
        print("Yes, it is in the list")
    else:
        print("No, it is not in the list")
```

guess game

```
import random
mylist = ['lion','cheetah','panther','cougar','l-
eopard']
random_item = random.choice(mylist)
print(random_item)
print(mylist[0])
user_guess = input("Guess a word: ")
if user_guess == random_item:
    print("Correct")
```



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guess game (cont)

```
else:
if user_guess in mylist:
print("Yes, it is in the list")
else:
print("No, it is not in the list")
```

def of word

```
def printDefinition(word):
# write a definition in your own words for the
following words:
# use multi-line strings to print the definition
#variable
if word == "variable":
print("""A variable is thing that can be
changed""")
elif word == "function":
#function
print(""" A function is a thing that reuse
block or quote. """)
elif word == "parameter":
#parameter
print("""A parameter is thing inside bracket
of function """)
elif word == "agument":
#argument
print(""" A argument is the same thing as
parameter. It is thinfg inside bracket f
function """)
elif word == "function call":
#function call
print("""Function is the thing make fuction
run.""")
elif word == "string":
#string
print(""" A string is a list of character""")
else:
print("unknown word")
while True:
word = input ("Enter the word")
printDefinition(word)
```

def of word (cont)

Result

Enter the wordvariable

A variable is thing that can be changed

Enter the wordfunction

A function is a thing that reuse block or quote.

Enter the wordagument

A argument is the same thing as parameter.

It is thinfg inside bracket f function

Enter the wordfunction call

Function is the thing make fuction run.

Enter the wordstring

A string is a list of character

Enter the wordpear

unknown word



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