

Definitions

```
def printDefinitions(word):
    if word == "variable":
        print ("""A variable is
the value that we can
change""")
    elif word == "function":
        print ("""A function is
when we define the block of code
that can be reused when we
call""")
    elif word == "parameter":
        print ("""parameter is
the thing that we give to
function in the blanket """)
    elif word == "argument":
        print ("""argument is
the thing that we give to
function in the blanket""")
    elif word == "Function
call":
        print ("""Function call
is when we tell the function
(all the code inside) to
run""")
    elif word == "String":
        print ("""String is the
list of characters such as
letter, number, etc""")
    else:
        print ("unknown word")
    return
while True:
    user_input = input("Enter
word:")
    printDefinitions(user_input)
```

Name

```
first name = input("what is your
first name? ")
lastname = input("what is your
lastname? ")
fullname = firstname + " " +
lastname
print("Your fullname is ")
print (fullname)
letternumber = input("what is
letter number? ")
mynumber = int(letternumber)-1
if (mynumber) > len(fullname):
    print ("invalid letter number,
try again")
else:
    print (fullname[mynumber])
repeat = input("how many times
you want to print the letter? ")
myrepeat = int(repeat)
if (myrepeat) > 99:
    print ("too many letter! ")
else:
    print(fullname[mynumber]*(myr-
epeat))`
```

Additional

string + string	Combine together
string + number	Crash
number + number	Addition (Math)

Guessing Game

```
"""
Group Members: Mind and Gam
Class: 10-05
"""
chance = 5
score = 0
mylist = ['coke','bacon',
'chicken', 'pocky', 'pepsi',
'pizza']
import random
random_item = random.choice(m-
ylist)
while chance > 0:

    print ("-----")
    print ("Guessing Game")
    print ("-----")

    print ("Words:", mylist)

    user_guese = input("Guese
the word: ")
    if user_guese == random-
_item:
        score = score+100
        print ("That's correct!
Score:", score)
        random_item = random.ch-
oice(mylist)
    else:
        chance = chance-1
        if user_guese in mylist:
            print ("Sorry, wrong
choice!")
            print ("Chances
Remaining:", chance)
        else:
            print ("Sorry, that
is not ever in the list")
```



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Guessing Game (cont)

```

        print ("Chances
Remaining:", chance)
print ("Game Over! The word
was", random_item)
print ("Final Score:", score)

```

Maxfunction

```

#write a function that returns
the largest number in a list
#name: maxlist
#argument: numlist
#return the largest value in a
list
def maxlist(numlist):
    maxvalue = numlist[0]
    for item in numlist :
        if item >= maxvalue:
            maxvalue = item
    return maxvalue
numlist = [1,2,35,2654,23-
2,5,2,5]
print(maxlist(numlist))

```

Max value of three

```

#write a function that returns
the largest of two values
#name: max2
#arguments: num1, num2
#return: the largest value
def max2(num1, num2):
    if num1>num2 :
        maxvalue = num1

```

Max value of three (cont)

```

    else :
        maxvalue = num2
        return maxvalue
user_num1 = int(input("Enter the
first number:"))
user_num2 = int(input("Enter the
second number:"))
print ("The largest value
is:",max2(user_num1, user_num2))
#write a function that returns
the largest number of three
value
#name: max3
#arguments: num1, num2, num3
#return: the largest value
def max3 (num1,num2,num3):
    maxvalue = num1
    if num2 > maxvalue:
        maxvalue = num2
    if num3 > maxvalue:
        maxvalue = num3
    return maxvalue
user_num3 = int(input("Enter the
third number:"))
print ("The largest value
is:",max3(user_num1, user_num2,
user_num3))

```

Area of The Circle

```

user_radius = input("Enter the
radius of the circle")
radius = float(user_radius)
pi = 3.1415
TheAreaOfTheCircle = (pi (radi-
us*2))
print (TheAreaOfTheCircle)

```

Rules for naming valuables

- letters
 - numbers
 - underscores
 - start with letters or underscores only.
- Don't start with number

- No space
- No dashes

Valid name

mystr_1

_mystr1

invalid name

1mystr

my-str

my str

Function

str() convert to string

int() convert to integer

float() convert to decimal number



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Function (cont)

print() to show the information on the screen

len() the length on the string

comment, nothing happen

Shop list

```
shoplist = ['son', 'goo', 'maaa', 'laaaa']
print(shoplist[2])
"""
item_number = 0
while item_number < len(shoplist):
    print ("list item:", shoplist[item_number])
    item_number = item_number + 1
"""
out = 0
for item in shoplist:
    out = out + 1
    #print ('list item:', item)
print (out)
```

mix the item

```
my_str = "hello123"
numbers = [1,2,3,4,5,6]
print (numbers)
shoppinglist = ['shoes', 'bags', 'pants', 'shirts']
print (shoppinglist)
mixed = [1, 'hello', 2.5, True, False]
```

mix the item (cont)

```
print (mixed)
```

area of circle

```
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))
```

function

```
def nameOfFunction(parameters,argument 0 or more): don't forget :
(indetation) print("1")
■■■■ call function ■■■■■■
■■■■
nameOfFunction(2,4) need a value for each parameter
mynum = nameOfFunction(3,4)
print(mynum)
```

Operator

< less than

> greater than

== equal

!= not equal

<= less than or equal

>= greater than or equal

% modulo , find the remainder

+ plus

Operator (cont)

- minus

* multiply

/ divide with decimal number

// divide no decimal number

** power

Vocabulary

variable value that can change

string a list of numbers, letters, symbols

integer the number that can do math

input the person type the information

syntax grammar

print to show the information on the screen

upper capital letter

lower small letter

float decimal number

number

boolean True or False

Spelling a string out in reverse code

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



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Countdown Code

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

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
"""
for letter in word:
    reverse = letter + reverse
print ('reverse: ',reverse)
```

Random list

```
import random
intlist = [1, 2, 3, 4]
random_int = random.choice(i-
ntlist)
print (intlist, random_int)
fpulist = [1.01, 1.02, 2.03,
3.04]
```

Random list (cont)

```
random_fp = random.choice(f-
plist)
print (fpulist, random_fp)
strlist = ["hello", "hi", "goo-
d", "bye"]
random_str = random.choice(s-
trlist)
print (strlist, random_str)
mylist = [1, 2.01, "hi"]
random_item = random.choice(m-
ylist)
print (mylist, random_item )
myvar1 = 1
myvar2 = 2
myvar3 = 3
varlist = [myvar1, myvar2,
myvar3]
random_var = random.choice(v-
arlist)
print (varlist, random_var)
```

Palindrome

```
reverse = ""
letter_num = 0
user_input = input("type in a
word:")
user_input = str(user_input)
while letter_num < len(user_-
input):
    reverse = user_input[lett-
er_num] + reverse
    letter_num = letter_num + 1
if reverse == user_input:
    print("the string is palind-
rome")
else:
    print ("the string is not
palindrome")
```

area of triangle and volume of prism

```
def areaOfTriangle(b,h):
    area = 0.5 user_baseuser-
_height
    return area
user_base = float(input('Enter
the base of the triangle:'))
user_height = float(inp-
ut('Enter the high of the
triangel:'))
print('The area of triagle
is',areaOfTriangle(user_base,u-
ser_height))
def areaOfTriangle(b,h):
    area = 0.5 user_baseuser-
_height
    return area
user_base = float(input('Enter
the base of the triangle:'))
user_height = float(inp-
ut('Enter the height of the
triangel:'))
print('The area of triagle
is',areaOfTriangle(user_base,u-
ser_height))
def volumeOfPrism(b,h,l):
    volume = areaOfTriangle(-
b,h)*l
    return volume
user_length = float(inp-
ut('Enter the length of the
prism:'))
print('The volume of the prism
is:',volumeOfPrism(user_base,u-
ser_height,user_length))
```



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