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, mumber, 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")
```

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

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(shopl-
ist):
    print ("list item:", shopli-
st[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 circlr
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 number	decimal 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)
```

Countdown Code

```
user_number = input("enter a number: ")
number = int(user_number)
countdown_string = ""
while number > 0:
    countdown_string = countdown_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(intlist)
print (intlist, random_int)
fplist = [1.01, 1.02, 2.03, 3.04]
```

Random list (cont)

```
random_fp = random.choice(fplist)
print (fplist, random_fp)
strlist = ["hello", "hi", "good", "bye"]
random_str = random.choice(strlist)
print (strlist, random_str)
mylist = [1, 2.01, "hi"]
random_item = random.choice(mylist)
print (mylist, random_item )
myvar1 = 1
myvar2 = 2
myvar3 = 3
varlist = [myvar1, myvar2, myvar3]
random_var = random.choice(varlist)
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[letter_num] + reverse
    letter_num = letter_num + 1
if reverse == user_input:
    print("the string is palindrome")
else:
    print ("the string is not palindrome")
```

area of triangle and volume of prism

```
def areaOfTriangle(b,h):
    area = 0.5 *user_base*user_height
    return area
user_base = float(input('Enter the base of the triangle:'))
user_height = float(input('Enter the high of the triangel:'))
print('The area of triagle is',areaOfTriangle(user_base,user_height))
def areaOfTriangle(b,h):
    area = 0.5 *user_base*user_height
    return area
user_base = float(input('Enter the base of the triangle:'))
user_height = float(input('Enter the height of the triangel:'))
print('The area of triagle is',areaOfTriangle(user_base,user_height))
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))
```