

Function

str()	make the number or symbol
input()	to get information from the user
print()	to show some information that in the code
int()	the integers
len()	length of the string
#	comment

Addition

string+string	Combine together
string+number	CRASH!
Number+number	Addition(Math)

Multiplication and Exponent

string*number	Combine the string
string*string	CRASH!
number*number	Multiply(math)
string**string	CRASH!
number**number	Exponent(math)
string**number	CRASH!

Convert to binary

```

user_number = ' '

while user_number != '0' :
    user_number = input ("Enter a
number to convert to binary")
    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)
    
```

Random

```

import random

intlist = [1,2,3,4,5,]
random_int =
random.choice(intlist)
print (intlist, random_int)

fplist = [1.5,2.5,3.5,4.5,5.5]
random_fp = random.choice(fplist)
print (fplist, random_fp)

strlist = ['1', '2', '3', '4',
'5']
random_str =
random.choice(strlist)
print (strlist, random_str)

mylist = [1, 2, 3, 4, 5, 1.5, 2.5,
3.5, 4.5, 5.5,'1', '2', '3', '4',
'5' ]
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)
    
```

Vocab

Variable	The unknown that can be change
String	a list of character
Float	Decimal number
Integer	Whole number
Syntax	structure of language
Boolean	True/False
Length	the length of the string
Modulo	Finds the remainder

Symbol

==	equal to
!=	not equal to
<	less than
>	more than

Symbol (cont)

<=	less than or equal to
>=	more than or equal to
%	Modulo, find remainder
+	plus
-	subtract
*	multiply
**	exponent

Reverse code

```

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

while int(index) < len(word):
reverse = word[index] + (reverse)
index = int(index) + 1

print ("Reverse:" , reverse)
    
```

Name 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