Tool box

1. Variable:

Interger: the number without decimal point.

Float: if the number has decimal point for instance 1.2 10.0

String: “hello word”

Boolean: True False.

1. List: school bag: can put everything inside.
2. Set: no duplicate stuff inside. hashable
3. Tuples: read only, can not change

2. for loop:

For [element] in [elements]:

XXXXX

For each elements inside the iterable elements do XXXXX one by one.

1. While XXX:

XXXXXX

Do XXXXXX when XXX is true.

While 1:

XXXXX

Everything belong to the for/while loop should type a tab/(4 space) under the for/while loop.

1. If AAA:

XXXX

Elif BBB：

XXXXXX

Else：

XXXXXXX

1. A = Input(“XXXXXXXXXXXxx”)

You can type what you want to the PC

1. Print(XXXX): print out all the info in the XXXX
2. Int(“6”) => 6
3. And or not xor:
4. And:

Joshua is a boy and Jack is a boy => if the sentence before and after and is true then the all sentence is true.

Joshua is a boy and Lisa is a boy => if one of the sentence is wrong then the whole sentence is wrong.

Joshua is a girl and Lisa is a boy => whole sentence is wrong.

Conclusion: all the sentence should be true and then the whole sentence is True.

Example:

Tom is a boy and Lisa is a girl and Tim is a girl => False!!

Tom is a boy and Lisa is a girl and Tim is a boy => True!!

1. Or: if one of the sentence is true, the whole sentence is true. If all of the sentence is wrong the whole sentence is wrong.

For instance: Lisa is a boy or Tim is a boy or Marry is a boy => True

For instance: Tim is girl or apple’s shape is a square or Jack is girl => False.

1. Not:

Tim is not a girl => True

Jack is not a boy => False

Code example: if a is not 7 => not => !

If a != 7 => a is not equal to 7

1. XOR: exclusive or => ! or => ^

If something is true: this thing xor a true => False this thing exclusive a false => True

Tim is a boy xor Lisa is a girl => False.

1. Tim is a boy or Lisa is a girl => True
2. !(Tim is a boy or Lisa is a girl) => Tim is a not boy and Lisa is not a girl => False
3. Tim is a girl xor Lisa is a boy =>True

Code example: 1 ^ 1 = 0 1 ^ 0 = 1 0 ^ 0 = 0

Indentation:

Indentation: four space == one TAB => one indentation

For XXX in XXXXX:

AAAFDDDCDDD

Fjhdasklfjdskla

Fads

Fdsafdsafdsfds

Fdasfdsafds

Dsfdsafdsafdsagds

Dfdasfds

ABCD => run for once.

For Abc in range(1,101):

For cbd in range(1,11):

Efg

Lmn

opq

Index: the index always starts from 0 ~ len(list) - 1

a = [1,2,3,4,5,6,7,8]

Index 0 => 1

Index 1=> 2

Index 7 => 8

a[0] => 1

a = [1,2,3,4,5,6,7,8]  
b = a

A is the address of the list. b = a means b and a share the same address of the list above. Both of them point to the first address of the list.

Del a: just delete the address.

!= not equal

## String:

“XXX”.split():

Return a copy of the string with trailing whitespace removed.

“XXX”.startwith(“xxx”)

“XXX”.endswith(...)

“XXX”.endswith(“XX”)

Return True if S ends with the specified suffix. False otherwise.

“XXX”.strip(chars):

Return a copy of the string with leading ans trailing whitespace removed.

If chars is given and not None, remove characters in chars instead.

## File operation:

1. How to open file?

Fd= open(“XXX.txt”,’w’)

1. How to close file?

Fd.close()

1. How to read file?
2. read(), f.readlines()
3. How to write?
4. write(“XXX”) F.writelines(list)