

# Python CCC101

## Env

pycharm

## Debugging skills:

1. print
2. Breakpoint, step over/step into/step out

Find shortcut: double shift

## Comments

#, """"

## Variable

x=100

# convert type  
int(), float(), str()

## Input

i = input()

## Output

print("hello", end='')

'%.2f' % 123.456

## Data types

### Number

+, -, \*, /, //, \*\*, %, +=  
math.inf

**Boolean:** True, False  
not, or, and

## String

s = "hello"  
"abc"+"def"  
s=s\*3

**Special chars:** \n

## indexing

s[1], s[-1]

## slicing:

s[0:3]  
s[::-1]

## # split

c1,c2='a b'.split()

## # replace

s=str.replace("a", "A")  
s=str.replace("a", '')

## # query

str.count("a")  
'abc'.find('a')

## # case

str.lower()

## # list to str

''.join(l)

## Statement

If, elif, else  
for c in iterable:  
    pass

while True:  
    pass

break, continue

nested loop

## Functions

def add(a,b):  
    return a+b

## Build-in function

list(), set()

l.sort(), ll=sorted(l)

l.reverse(), ll=reversed(l)

len()

## # range

range(start,stop,step)

## # math

max(), min(), sum(), abs()

## Iterable(Collection)

### List:

list1=[1,2,3]  
nested\_list=[1,2,3,[4,5]]

### read:

list1[index]  
nested\_list[3][1]

### query:

list1.index("a")  
list1.count("a")

update: list1[1]="two"

### Add:

l.append(1)  
l.insert(index, "a")

### delete:

l.remove("a")  
l.pop(); l.pop(index)  
l.clear()

join: l+[3,4]

copy: l2 = l[:]

### convert:

list1=list(str)  
",".join(iterable)

**Set: no duplicate, no order, no position**

s=set()  
s={1,2}

Add: s.add('one')

### delete:

s.remove('a')  
s.pop()  
s.clear()

### Dictionary

d={}  
d={'key': 'value'}

read: d['key']

update: d['key']=100

### Add:

d['non\_exist\_key']=100

### delete:

d.pop(key)

query: 'key' in dict1

## Random

import random  
random.randint(a,b)  
(a<=x<=b)

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