1. python语言基础

1.python常见数据类型

(1)Print(int(“1”)) Print(int(“-8080”)) Print(int(“0”))

(2)print(float(“3.14”)) -9.01 0.000012

(3)print(str(“’这是一个字符串！’ ”)) (第一层双引号内为)“This is a string” ”’X”’

(4)print(bool(1)) print(bool(0))

2算数运算符

a=int(print(“1”)) b=int(print(“2”)) //定义并输入ab

1. print(a-b)
2. print(a\*b)
3. print(a\*\*b)
4. print(a/b) ——判断数据类型int or float
5. print(a//b)
6. print(a%b)
7. 关系运算符

(1)

a=str(input(“a”))

b=str(input(“b”))

If a in b:

Print(“True”)

Else

Print(“False”)

(2)

a=int(input("a"))

b=int(input("b"))

if a>b:

print("> ")

if a<b:

print("< ")

if a>=b:

print(">= ")

if a<=b:

print("<= ")

if a!=b:

print("!= ")

if a==b:

print("== ")

(3)

a=int(str(input(“a”)))

b=int(str(input(“b”)))

if a>b:

print("> ")

if a<b:

print("< ")

if a>=b:

print(">= ")

if a<=b:

print("<= ")

if a!=b:

print("!= ")

if a==b:

print("== ")

1. 逻辑运算符

(1)

a=int(input("A"))

b=int(input("B"))

c=int(input("C"))

if a<b and a<c:

print("True")

else:

print("False")

(2)

a=int(input("A"))

b=int(input("B"))

c=int(input("C"))

if a>=b or a>=c:

print("False")

else:

print("True")

(3)

a=int(input("A"))

b=int(input("B"))

If a<=b:

Print(“True”)

Else:

Print(“False”)

1. 赋值
2. 由于一个是“=xxx”为实数型而一个为“=”xxx””为字符串型

所以数据类型不同

1. number-=1
2. number\*=2
3. number/=2
4. Number%=2
5. 基本数据结构

(1)

info=["BH60018","苹果",50]

for i in range(len(info)):

print(info[i])

(2)

S=”Hello”

for i in range(len(s)):

print(s[i])

(3)

info=["BH60018","苹果",50]

For i in range(len(info)-2,len(info)-1)

Print (info(i))

(4)

s=str("Hello")

for i in range(3):

print(s[i])



dic={"铅笔":71,"钢笔":59,"橡皮":98,"尺子":92}

print(dic["尺子"])

7

(1)

a=int(input("a"))

b=int(input("b"))

a,b=b,a

(2)

a=int(input("a"))

float(a)

(3)

s=str(input("a"))

float(s)

(4)a=int(input("a"))

abs(a)

(5)a=float(input("a"))

abs(a)

(6)help(int)

(7)print(len(info))

(8)print(len(s))

(9)print(len(dic))

(10)

a=int(input("a"))

b=int(input("b"))

str(a)

str(b)

print(a,"+",b)

(11)

s=str(input("s"))

a=ord(s[2])

print(a)

(12)chr(a)

(13)print(round(3.1415926,2))

(14)

a=int(input("a"))

b=int(input("b"))

print(max(a,b))

(15)

list=[71,59,98,92]

a=0

b=100000000

for i in range(len(list)):

a=int(max(list[i],a))

b=int(min(list[i],b))

print("max=",a)

print("min=",b)

(16)(17)

s="71,59,98,92"

a=0

b=100000

for i in range(len(s)):

if(s[i]!=","):

a=max(a,int(s[i]))

b=min(b,int(s[i]))

print("max=",a)

print("min=",b)

分支结构和循环结构

1.

代码一输出超速在else外，所以无论是否符合与100关系，都会显示超速，不合理。

代码二输出超速在else内，所以仅仅在超过100时显示超速，合理

2.

a=float(input("请输入成绩"))

if a<=100 and a>=90:

print("A")

elif a>=80:

print("B")

elif a>=70:

print("C")

elif a>=60:

print("D")

else:

print("E")

2.

(1)

list=[71,59,98,92]

for i in range (len(list)):

print(list[i])

(2)

for i in range(9,-1,-1):

print(i)

(3)

list=[71,59,98,92]

a=0

for i in range (len(list)):

a+=list[i]

print(a)

3

import random

number=random.randint(0,200)

a=1

while a:

b=int(input("请输入猜测的数"))

if b==number:

print("Yes")

a=0

elif b>number:

print("偏大")

elif b<number:

print("偏小")

函数和模块

1.

import math

def a(r):

b=float(math.pi)

b=b\*r\*\*2

return(b)

r=int(input("r"))

print(a(r))

2.

(1)

import math

print(float(math.pi))

(2)

import math

a=float(input("a"))

if a-int(a)>=0.5:

print(math.ceil(a))

else:

print(math.floor(a))

(3)

a=int(input("a"))

b=int(input("b"))

print(a\*\*b)

(4)

import math

a=float(input("a"))

print("sin=",math.sin(a))

print("cos=",math.cos(a))

print("tan=",math.tan(a))

(5)

①import math

a=float(input("a"))

print(math.degrees(a))

②

import math

a=float(input("a"))

print(math.radians(a))

(6)

import math

s=int(input("s"))

print(math.pow(s/(math.pi),1/2))

3.

(1)

import random

print(random.random())

(2)

import random

a=float(input("a"))

b=float(input("b"))

print(random.uniform(a,b))

(3)

import random

a=int(input("a"))

b=int(input("b"))

print(random.randint(a,b))

(4)

①

import random

list=[71,59,98,92]

a=random.randint(0,3)

print(list[a])

②

import random

list=[71,59,98,92]

n=int(input("n"))

b=n

while b>0:

a=random.randint(0,3)

if list[a]!=0:

print(list[a])

list[a]=0

b=b-1

1. 随机选择放入，不直接调用
2. 综合练习
3. print(128%100) 28

print(len("Hello Leo!")) 10

Print(abs(-12)) 12

172

(2)

①

a=int(input("a"))

b=int(input("b"))

print(max(a,b))

②

a=int(input("a"))

b=int(input("b"))

c=int(input("c"))

print(max(a,b,c))

(3)

s=str(input("s"))

if int(s[16])%2==0:

print("您的出生日期为：",s[6:10],"年",s[10:12],"月",s[12:14],"日","性别为女")

else:

print("您的出生日期为：",s[6:10],"年",s[10:12],"月",s[12:14],"日","性别为男")

(4)

①

a=0

for i in range(2,100,2):

a=a+i

print(a)

②

Print((2+100)/2)

5.

①

s=str(input("s"))

a=0

for x in range(len(s)):

for i in range(10):

if s[x]==str(i):

a=a+1

if a==len(s):

print("该字符串全是数字字符")

else:

print("该字符串含非数字字符")

②

判定数字与其他字符ASCII的首位不同即可

(6)

调用turtle函数

将turtle定义为t

将初始颜色定为白

定义红绿蓝黄四色

构造循环

将颜色根据顺序,轮流变为以上四色

画圆形状

向逆时针转91°

1. 前已完成

2.4解析算法

import math as m

y=(int(input("年份")))

c=(int(input("世纪")))

m=(int(input("月份")))

d=(int(input("日期")))

w=y+m.floor(y/4)+floor(c/4)-2\*c+floor(26\*(m+1)/10)+d-1

print(w)

2.5枚举算法

for i in range(1000,1100):

if i%3==2 and i%5==4 and i%7==6:

print(i)

Break

2.6

from PIL import Image

serarr=['@','#','$','&','?','\*','o','/','{','[','(','|','!','^','~','-','\_',':',';',',','.','`','']

count=len(serarr)

def t(image\_file):

asd="

for h in range(0,image\_file.size[1]):

for w in range(0,image\_file.size[0]):

r,g,b=image\_file.getpixel((w,h))

gray=int(r\*0.299+g\*0.587+b\*0.114)

asd=asd+serarr[int((gray/(255/(count-1)))]

asd=asd+'\r\n'

return asd

image\_file=Image.open("boy.jpg")

image\_file=image\_resize((int(image\_file.size[0]\*0.9),int(image\_file.size[1]\*0.5)))

tmp=open('boy.text','a')

tmp.write(t(image\_file))

tmp.close()

2.7读写操作

1.

f=open(' gushi','r')

f.read(5)

2.

f=open(' gushi','r')

f.readline()

3.

f=open(' gushi','r')

for line in f.readlines():

print(line.strip())

4.

1. write(“123\n”)

F.write(“456\n”)