09thseptember23_pythonintroductiontofunctions

October 16, 2023

[2]:
```
number=-1
if number>0:
    print("positive number")
elif number==0:
    print("zero")
else:
    print("negative number")
print("this is always prints")
```

```
negative number
this is always prints
```

[3]:
```
for i in range(5):
    print(i)
```

```
0
1
2
3
4
```

[6]:
```
days=0
week=['mon','tue','wed','thu','fri','sat','sun']

while days<7:
    print("today is" + week[days])
    days +=1
    #days=days+1
```

```
today ismon
today istue
today iswed
today isthu
today isfri
today issat
today issun
```

[7]:
```
week[0]
```

[7]:
```
'mon'
```

[8]:
```
#split
```

[9]:
```
text="i write code"
text.split()
```

[9]:
```
['i', 'write', 'code']
```

[10]:
```
text='i love python'
text.split()
```

[10]:
```
['i', 'love', 'python']
```

[11]:
```
x=input("enter three word message")
```

```
enter three word message welcom to pwskills
```

[12]:
```
y=1
```

[13]:
```
y,w=2,3
```

[14]:
```
word1,word2,word3=x.split()
```

[15]:
```
word1
```

[15]:
```
'welcom'
```

[16]:
```
word2
```

[16]:
```
'to'
```

[17]:
```
word3
```

[17]:
```
'pwskills'
```

[18]:
```
a=int(input("enter first number"))
b=int(input("enter second number"))
print(a+b)
```

```
enter first number 2
enter second number 3
```

```
5
```

[26]:
```
a,b= input("enter two number").split()
c = int(a)+int(b)

print(c)
```

```
enter two number 2 3
```

```
5
```

[27]:
```
x = input("enter two number seperated by spaces")
sum=int(x.split()[0])+int(x.split()[1])
print(sum)
```

```
enter two number seperated by spaces 3 6
```

```
9
```

[5]:
```
s = input("enter the rollno, name, percentage")
roll,name,percent=s.split()
print(roll)
print(name)
print(percent)
```

```
enter the rollno, name, percentage 40 sha 96
```

```
40
sha
96
```

[6]:
```
s1="A B C D E F"
print(s1.split(' ',4))
```

```
['A', 'B', 'C', 'D', 'E F']
```

[7]:
```
s1="Hi@hi@hi@hi@hi"
s1.split('@',3)
```

[7]:
```
['Hi', 'hi', 'hi', 'hi@hi']
```

[8]:
```
for letter in "pwskills":
    print('letter',letter)
```

```
letter p
letter w
letter s
letter k
letter i
letter l
letter l
letter s
```

[9]:
```
for letter in "pwskills":
    if letter =="l":
        break
    print('letter',letter)
```

```
letter p
letter w
letter s
letter k
letter i
```

[10]:
```
for i in range(5):
    if i==3:
        break
    print(i)
```

```
0
1
2
```

[11]:
```
list(range(5))
```

[11]:
```
[0, 1, 2, 3, 4]
```

[13]:
```
i=1
while i<=10:
    print(i)

    if i>=5:
        break
    i=i+1
```

```
1
2
3
4
5
```

[14]:
```
numbers=[10,20,30,40,120,230]
for i in numbers:
    if i>100:
        break
    print(i)
```

```
10
20
```

```
30
40
```

[15]:
```
s="hello,world"
for char in s:
    print(char)
    if char==',':
        break
```

```
h
e
l
l
o
,
```

[16]:
```
for letter in "pwskills":
    if letter=='i':
        continue
        print(letter)
```

[17]:
```
for i in range(5):
    if i==3:
        continue
        print(i)


#break---end the loop
#continue---skip the loop
```

[18]:
```
#write a program to print odd number from 1 to 10
```

[19]:
```
for i in range(1,11):
    if i%2==0:
        continue
    print(i)
```

```
1
3
5
7
9
```

[23]:
```
for i in range(1,11):
    if i%2!= 0:
        print(i)
    else:
        continue
```

```
```

```
1
3
5
7
9
```

[1]:
```
n=10

if n>10:
    pass
print('hello')
```

```
hello
```

[2]:
```
for i in range(5):
    pass
```

[3]:
```
for letter in "pwskills":
    if letter =="l":
        pass
    print('letter',letter)
```

```
letter p
letter w
letter s
letter k
letter i
letter l
letter l
letter s
```

[4]:
```
#functions
```

[5]:
```
a=10
b=20
print(a+b)
```

```
30
```

[6]:
```
a=80
b=34
print(a+b)
```

```
114
```

[7]:
```
a=45
b=2
print(a+b)
```

```
47
```

[8]:
```
def add_nums(a,b):
    return a+b
```

[9]:
```
create a fun
def functionname(arguments):
    #functionbody
    return
call a function
functionname()
```

[12]:
```
x=10
```

[13]:
```
def greet():
    print("hello world")
```

[14]:
```
greet()
```

```
hello world
```

[15]:
```
def addnum():
    a=100
    b=233
    c=a+b
    print(c)
```

[16]:
```
addnum()
```

```
333
```

[19]:
```
def addtwonumbers():
    a=input("enter first number")
    b=input("enter second number")
    c=int(a)+int(b)
    print(c)
```

[20]:
```
addtwonumbers()
```

```
enter first number 45
enter second number 52
97
```

[22]:
```
def multwonumbers(x,y):
    a=x
    b=y
    c=a*b
    print(c)
```

[23]:
```
multwonumbers(2,4)
```

```
8
```

[24]:
```
def introduction(name):
    print("hi",name)
```

[25]:
```
introduction('shamnida')
```

```
hi shamnida
```

[26]:
```
def introduction(name,lastname):
    print("hi",name+lastname)
```

[27]:
```
introduction("pw","skills")
```

```
hi pwskills
```

[28]:
```
#find absolute value
```

[29]:
```
def absolute(n):
    if n>0:
        print(n)
    else:
        print(-n)
```

[30]:
```
absolute(-85)
```

```
85
```

[34]:
```
def fullname(a,b):
    c=a+b
    return c
    #print(c)
```

[35]:
```
fullname('pw','skills')
```

[35]:
```
'pwskills'
```

[37]:
```
def fullname(a,b):
    c=a+b
   # return c
```

```
    print(c)
```

[38]:
```
x=fullname('pw','skills')
```

```
pwskills
```

[40]:
```
def fullname(a,b):
    c=a+b
    return c
    #print(c)
```

[41]:
```
x=fullname('pw','skills')
```

[42]:
```
x
```

[42]:
```
'pwskills'
```

[43]:
```
type(x)
```

[43]:
```
str
```

[45]:
```
def fullname(a,b):
    c=a+b
    return #here nothing return so x value is none type
    #print(c)
```

[46]:
```
x=fullname('pw','skills')
```

[47]:
```
x
```

[48]:
```
type(x)
```

[48]:
```
NoneType
```

[49]:
```
#simple calculator
```

[50]:
```
def calculator(a,b):
    c=a+b
    d=a*b
    e=a-b
    return c,d,e
```

[51]:
```
x=calculator(3,2)
```

[52]:
```
x
```

[52]:
```
(5, 6, 1)
```

[53]:
```
def calculator():
    a=int(input("enter first number"))
    b=int(input("enter second number"))
    add=a+b
    sub=a-b
    div=a/b
    mul=a*b
    return add,sub,div,mul
```

[54]:
```
calculator()
```

```
enter first number 5
enter second number 2
```

[54]:
```
(7, 3, 2.5, 10)
```

[55]:
```
def cal(a,b):
    oper=input("enter a operator")
    if(oper=="add"):
        return a+b
    elif(oper=="sub"):
        return a-b
    elif(oper=="mul"):
        return a*b
    else:
        return a/b
```

[56]:
```
cal(6,7)
```

```
enter a operator mul
```

[56]:
```
42
```

[57]:
```
# find area of circle 3.14*r*r
```

[58]:
```
def area(r):
    return 3.14*r*r
```

[59]:
```
area(5)
```

[59]:
```
78.5
```

[60]:
```
#find area of rectangle
#find area oftriangle
```

[61]:
```
def area_rect(l,b):
    return l*b
```

[62]:
```
area_rect(2,5)
```

[62]:
```
10
```

[63]:
```
def area_tria(b,h):
    return 0.5*b*h
```

[64]:
```
area_tria(6,7)
```

[64]:
```
21.0
```

[1]:
```
#print the first 5 positive intiger in ascending order with one number in each line
```

[2]:
```
def numbers():
    for i in range(6):
        print(i)
```

[4]:
```
numbers()
```

```
0
1
2
3
4
5
```

[5]:
```
'''#print the following pattern
*
**
***
****
*****'''
```

[5]:
```
'#print the following pattern\n*\n**\n***\n****\n*****'
```

[ ]:

[10]:
```
#accept an integer as input and print its square as output
```

[11]:
```
def sq():
    a=int(input("enter the number"))
    return a*a
```

[12]:
```
sq()
```

```
enter the number 6
```

[12]: 36

[13]:
```
#accept two integers as input and print their sum as output
```

[14]:
```
num1=int(input("enter the first number: "))
num2=int(input("enter the second number: "))
num3=num1+num2
print(f"the sum of {num1}and{num2} is {num3}:".format(num1,num2,num3))
```

```
enter the first number:  3
enter the second number:  5
```

```
the sum of 3and5 is 8:
```

[15]:
```
#accept two words as input and print thetwowords after adding a space between␣
 ↪them
```

[16]:
```
def fullname(first,second):
    print(first,"",second)
```

[17]:
```
fullname("aizad","rahim")
```

```
aizad  rahim
```

[19]:
```
#create a python program that includes a user defined function called␣
 ↪print_even_number()
#the function should prompt the user to set a range limit before printing all␣
 ↪even numbers upto that limit
```

[20]:
```
def print_even_number():
    limit1=int(input('enter the first limit of even numbers'))
    limit2=int(input('enter the second limit of even numbers'))
    for i in range(limit1,limit2+1):
        if i%2==0:
            print(i)
```

[21]:
```
print_even_number()
```

```
enter the first limit of even numbers 2
enter the second limit of even numbers 50
```

```
2
4
6
8
10
12
14
16
```

18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50

[31]:
```
def print_even_numbers():
    a , b = input("enter 2 numbers between which you want the even number").
 ↪split()

    for i in range( int(a), int(b)):
        if i%2==0:
            print(i)


print_even_numbers()
```

```
enter 2 numbers between which you want the even number 2 8
```

```
2
4
6
```

[32]:
```
#accept three positive integers as input and check if they form the sides of a␣
 ↪right triangle.print yes if they form the sides of a right triangle.print␣
 ↪yes if they form one,and no is they do not.the input will have three␣
 ↪lines,with one integer on each line.the output should be asingle line␣
 ↪containing one of these two strings: yes or no
```

[35]:
```
a=int(input("enter a side 1 of right triangle"))
b=int(input("enter a side 2 of right triangle"))
c=int(input("enter a side 3 of right triangle"))

hyp= a
side1=b
side2=c
```

```
if b>hyp:
    hyp,side1=b,hyp

if c> hyp:
    hyp,side1,side2=c,hyp,side1

elif c>side1:
    b,c = side2,side1

if hyp*hyp==side1*side1+side2*side2:
    print("yes")
else:
    print("no")
```

```
enter a side 1 of right triangle 3
enter a side 2 of right triangle 4
enter a side 3 of right triangle 5
```

```
yes
```

[41]:
```
def check_right_triangle(a,b,c):
    if a**2==b**2+c**2 or b**2==c**2+a**2 or c**2==a**2+b**2:
        print('it is a right angle triangle')
    else:
            print('it is not a right angled triangle')
a=int(input('enter the first side of a triangle: '))
b=int(input('enter the second side of a triangle: '))
c=int(input('enter the third side of triangle: '))
check_right_triangle(a,b,c)
```

```
enter the first side of a triangle:  3
enter the second side of a triangle:  9
enter the third side of triangle:  2
```

```
it is not a right angled triangle
```

[ ]:
```

```