Python programming-CSA0814

DAY 12

(26 aug 24)

**1.FILTERING EVEN NO. AND SQUARING REMAINING ODD NO.**

lst=[1,2,3,4,5]

on=filter(lambda x:x%2!=0,lst)

en=filter(lambda x:x%2==0,lst)

sqon=[x\*\*2 for x in on]

print(list(on))

print(sqon)

**OUTPUT:** [1,9,25]

**2.MERGE TWO DICT AND REMOVE DUPLICATES**

def m(d1,d2):

return {\*\*d1,\*\*d2}

d1={'a':1,'b':2,'c':3}

d2={'b':20,'c':30,'d':40}

merge=m(d1,d2)

print(merge)

**OUTPUT:**

{'a': 1, 'b': 20, 'c': 30, 'd': 40}

**3.FIBONACCI USING GENERATOR**

def gen():

a, b = 0, 1

while True:

yield a

a, b = b, a + b

def fib(n):

fibo = gen()

for i in range(n):

print(next(fibo))

n = 10

fib(n)

**OUTPUT:**

0

1

1

2

3

5

8

13

21

34

**4.SORT A DICTIONARY BASED ON SPECIFIC KEY USING LAMBDA**

data=[{'name':'alice','age':25},{'name':'bob','age':20},

{'name':'charlie','age':30}]

sor=sorted(data,key=lambda x:x['age'])

print(sor)

**OUTPUT:**

[{'name': 'bob', 'age': 20}, {'name': 'alice', 'age': 25}, {'name': 'charlie', 'age': 30}]

**5.CREATE A CUSTOM EXCEPTION THAT SHOWS INVALID AGE ERROR USING RAISES**

def raises(exception,msg):

raise exception(msg)

def check(age):

if age<18 or age>100:

raises(ValueError,f"invalid age:{age},age must be between 18 and 100")

else:

print("valid age")

try:

age=120

check(age)

except ValueError as e:

print(e)

**OUTPUT:**

invalid age:120,age must be between 18 and 100

**6.USING MAP,FILTER,SQUARE ALL ELEMENT AND FILTER OUT ALL EVEN SQ. IN LIST**

lst=[1,2,3,4,5]

sq=map(lambda x:x\*\*2,lst)

sqlst=list(sq)

evensq=filter(lambda x:x%2==0,sqlst)

print("squared:",sqlst)

print("even squares:",list(evensq))

**OUTPUT:**

squared: [1, 4, 9, 16, 25]

even squares: [4, 16]