Assignment4_1.py

#1.Write a program which contains one lambda function which accepts one parameter and return

#power of two.

#Input : 4 Output : 16

#Input : 6 Output : 64

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#print("By using lambda function")

#fp = lambda no1: 2**no1

#no1=input("num:")

#ret=fp(no1)

#print("power of {} is".format(ret))

#print(result(fp))

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result = lambda x: 2 ** x;

no=input("Enter number:");

print(result(no));

Assignment4_2.py

2.Write a program which contains one lambda function which accepts two parameters and return
its multiplication.
Input : 4 3 Output : 12
Input : 6 3 Output : 18

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#print("By using lambda function")

#fp = lambda no1,no2: no1*no2

#no1=input("num1:")

#no2=input("num2:")

#ret=fp(no1,no2)

```
#print("power of {} is".format(ret))
#print(result(fp))

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result = lambda a,b: a*b;
no1=input("Enter first number:");
no2=input("Enter second number:");

print( result(no1,no2));
```

Assignment4_3.py

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#Write a program which contains filter(), map() and reduce() in it.
#Python application which contains one list of numbers.
#List contains the numbers which are accepted from user.
#Filter should filter out all such numbers which greater than or equal to 70 and less than or equal to 90.
#Map function will increase each number by 10.
#Reduce will return product of all that numbers.

#Input List = [4, 34, 36, 76, 68, 24, 89, 23, 86, 90, 45, 70]
#List after filter = [76, 89, 86, 90, 70]
#List after map = [86, 99, 96, 100, 80]
#Output of reduce = 6538752000

inputList= list();

N=input("Enter Number of elements in the array: ");

print("Enter elements in the array");

for i in range(0,N):
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        element=input("Element : ");
        inputList.append(int(element));


#applying filter()

fliterList = list(filter(lambda no :(no>=70 and no<=90),inputList ))
print(fliterList);

#applying map()
mappedList = list(map(lambda no : no+10,fliterList));
print(mappedList);

#applying reduce()

reducedOutput = reduce(lambda no1, no2: no1*no2,mappedList);
print(reducedOutput);
```

Assignment4_4.py

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#Write a program which contains filter(), map() and reduce() in it.
#Python application which contains one list of numbers.
#List contains the numbers which are accepted from user.
#Filter should filter out all such numbers which are even.
#Map function will calculate its square.
#Reduce will return addition of all that numbers.
#Input List = [5, 2, 3, 4, 3, 4, 1, 2, 8, 10]
#List after filter = [2, 4, 4, 2, 8, 10]
#List after map = [4, 16, 16, 4, 64, 100]
#Output of reduce = 204

inputList= list();
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N=input("Enter Number of elements in the array: ");

print("Enter elements in the array");

for i in range(0,N):
        element=input("Element : ");
        inputList.append(int(element));



#applying filter()

fliterList = list(filter(lambda no :(no%2==0),inputList ))
print(fliterList);

#applying map()
mappedList = list(map(lambda no : no**2,fliterList));
print(mappedList);

#applying reduce()

reducedOutput = reduce(lambda no1, no2: no1+no2,mappedList);
print(reducedOutput);
```

Assignment4_5.py

#Write a program which contains filter(), map() and reduce() in it.
#Python application which contains one list of numbers.
#List contains the numbers which are accepted from user.
#Filter should filter out all prime numbers.
#Map function will multiply each number by 2.

#Reduce will return Maximum number from that numbers.

#(You can also use normal functions instead of lambda functions).

#Input List = [2, 70 , 11, 10, 17, 23, 31, 77]

#List after filter = [2, 11, 17, 23, 31]

#List after map = [4, 22, 34, 46, 62]

#Output of reduce = 62

```
inputList= list();

N=input("Enter Number of elements in the array: ");

print("Enter elements in the array");

for i in range(0,N):
        element=input("Element : ");
        inputList.append(int(element));



def ChkPrime(number):
        flag=True;
        for i in range(2,(number)):
                if((number%i)==0):
                        flag=False
                        break;

        return flag;

#applying filter()

fliterList = list(filter(lambda no :(ChkPrime(no)),inputList ))
```

```
print(fliterList);

#applying map()
mappedList = list(map(lambda no : no*2,fliterList));
print(mappedList);

#applying reduce()

reducedOutput = reduce(max,mappedList);
print(reducedOutput);
```