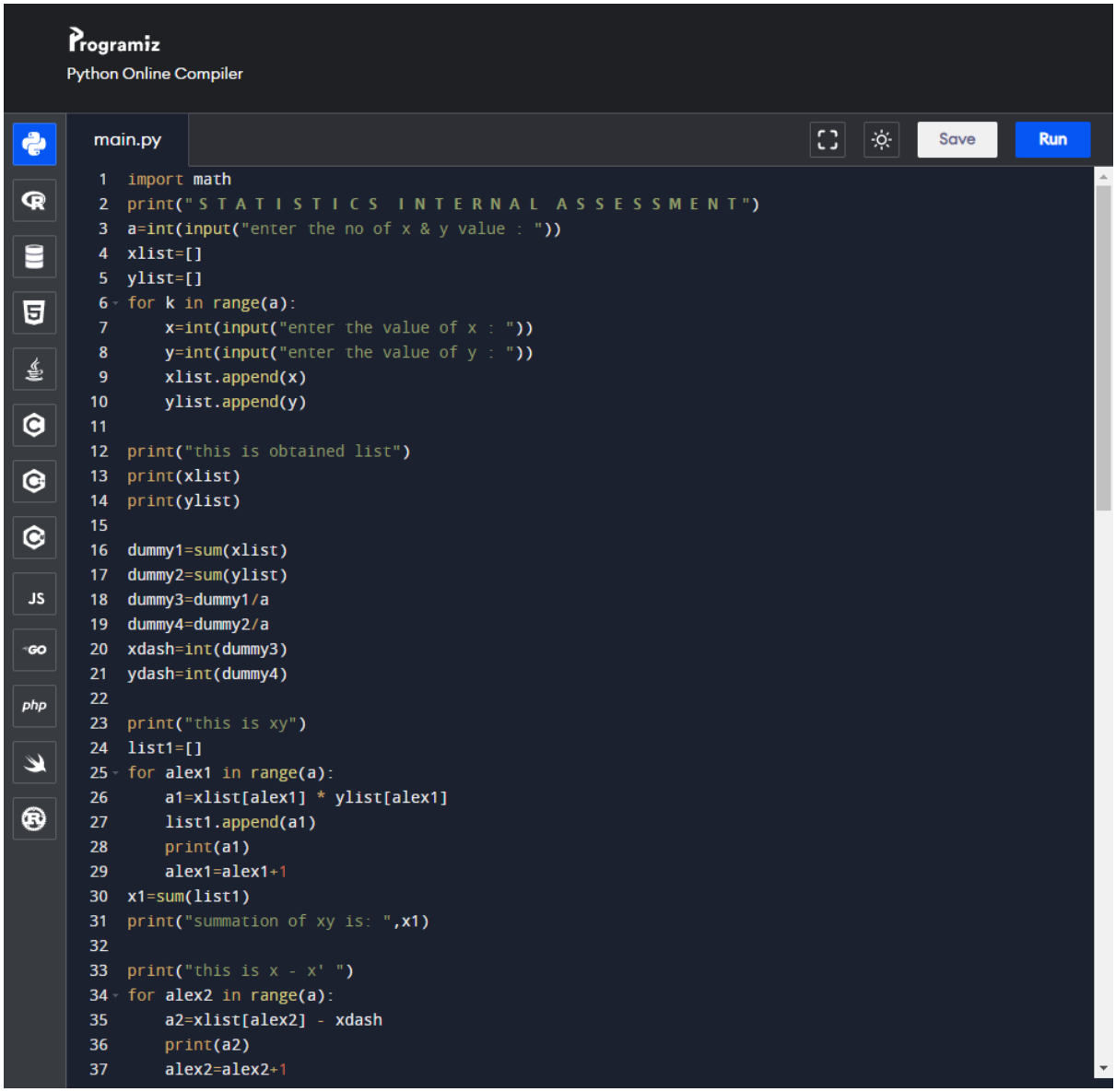
Custom Implementation of Pearson Correlation Coefficient in Python



```
print("this is y - y' ")
for alex3 in range(a):
    a3=ylist[alex3] - ydash
    print(a3)
    alex3=alex3+1

print("this is x2 ")
list3=[]
for alex4 in xlist:
    a12=alex4**2
    list3.append(a12)
    print(a12)
x3=sum(list3)

print("this is y2 ")
list4=[]
for alex5 in ylist:
    a13=alex5**2
    list4.append(a13)
    print(a13)
x4=sum(list4)

print("this is (x-x' * y-y') ")
list2=[]
for alex6 in range(a):
    a6=(xlist[alex6] - xdash) * (ylist[alex6] - ydash)
    list2.append(a6)
    print(a6)
    alex6=alex6+1
x2=sum(list2)

dummy5=1 / a
dummy6=dummy5 * x2
print("coefficient of x,y is :",int(dummy6))

dummy7= xdash**2
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```
dummy8= ydash**2
dummy9= dummy5 * x3 * dummy7
dummy10=dummy5 * x4 * dummy8
print("standard deviation of x is : ",math.sqrt(dummy9))
print("standard deviation of y is : ",math.sqrt(dummy10))

final1=dummy9 * dummy10
final2=dummy6/final1
final3=int(final2)
print("karl peterson correlation coefficient is : ",final3)

if final3 == 0:
    print("U N C O R R E L A T I O N")
elif final3>0:
    print("P O S I T I V E  C O R R E L A T I O N")
else:
    print("N E G A T I V E  C O R R E L A T I O N")

```

Shell

Clear

```
S T A T I S T I C S   I N T E R N A L   A S S E S S M E N T
enter the no of x & y value : 5
enter the value of x : 2
enter the value of y : 3
enter the value of x : 2
enter the value of y : 4
enter the value of x : 2
enter the value of y : 5
enter the value of x : 2
enter the value of y : 6
enter the value of x : 2
enter the value of y : 7
this is obtained list
[2, 2, 2, 2, 2]
[3, 4, 5, 6, 7]
this is xy
6
8
10
12
14
summation of xy is:  50
this is x - x'
0
0
0
0
0
this is y - y'
-2
-1
0
1
2
```

```
this is x2
4
4
4
4
4
this is y2
9
16
25
36
49
this is (x-x' * y-y')
0
0
0
0
0
coefficient of x,y is : 0
standard deviation of x is :  4.0
standard deviation of y is :  25.98076211353316
karl peterson correlation coefficient is :  0
U N C O R R E L A T I O N
>
```