

WK04\shellSort.py

```
1 x = [13,86,35,1,100,45,11,6,67,65,2,7,23,23,23,87,38,67,31,99,1,1,100]
2 y = [13,86,35,1,100,45,11,6,67,65,2,7,23,23,23,87,38,67,31,99,1,1,100]
3
4 def shellSort(arr):
5     gap = len(arr)//2
6     while gap > 0:
7         for i in range(0, len(arr)-gap, 1):
8             if arr[i] > arr[i+gap]:
9                 arr[i], arr[i+gap] = arr[i+gap], arr[i]
10            for j in range(i, gap-1, -gap):
11                if arr[j] < arr[j-gap]:
12                    arr[j], arr[j-gap] = arr[j-gap], arr[j]
13            else:
14                break
15        gap = gap//2
16
17 print("unsorted:\t", x)
18 shellSort(x)
19 print("shellSort:\t", x)
20 print("Python sort:\t",sorted(y))
```