



Does this program have a bug? How to fix it?

```
def bucketsort(arr, k ):  
    counts = [0] * k  
    for x in arr:  
        counts[x] += 1  
    sorted_arr = []  
    for i, count in enumerate(arr):  
        sorted_arr.extend([i] * count )  
    return sorted_arr
```



Yes, this program has a bug. The bug is that the variable "counts" is not being used in the second for loop. To fix this bug, the variable "counts" should be used in the second for loop instead of "arr". The corrected code should look like this:

```
def bucketsort(arr, k ):  
    counts = [0] * k  
    for x in arr:  
        counts[x] += 1  
    sorted_arr = []  
    for i, count in enumerate(counts):  
        sorted_arr.extend([i] * count)  
    return sorted_arr
```