Problem 5: Merge k sort arrays.import

heapq

```
def merge_k_sorted_arrays(arrays):
    result = []
    heap = []
    for i, arr in enumerate(arrays):
        if len(arr) > 0:
            heapq.heappush(heap, (arr[0], i, 0))

    while heap:
        val, arr_idx, idx = heapq.heappop(heap)
        result.append(val)
        if idx + 1 < len(arrays[arr_idx]):
            heapq.heappush(heap, (arrays[arr_idx][idx + 1], arr_idx, idx + 1))

    return result

arrays = [[1, 4, 7], [2, 5, 8], [3, 6, 9]]
merged_array = merge_k_sorted_arrays(arrays)
print(merged_array)
```