53. Intersection of Three Sorted Arrays

Given three integer arrays arr1, arr2 and arr3 sorted in strictly increasing order, return a sorted

array of only the integers that appeared in all three arrays.

Code:

```
def arraysIntersection(arr1, arr2, arr3):
    i, j, k = 0, 0, 0
    result = []

    while i < len(arr1) and j < len(arr2) and k < len(arr3):
        if arr1[i] == arr2[j] == arr3[k]:
            result.append(arr1[i])
            i += 1
            j += 1
            k += 1
        else:
            if arr1[i] < arr2[j]:
                i += 1
            elif arr2[j] < arr3[k]:
                j += 1
            else:
                k += 1

    return result
arr1 = [1, 2, 3, 4, 5]
arr2 = [1, 2, 5, 7, 9]
arr3 = [1, 3, 4, 5, 8]
print(arraysIntersection(arr1, arr2, arr3))
```

Output:

```
[1, 5]
```

Time Complexity:

- T(n)= O(n)