

Problem 5: Given two sorted arrays arr1 and arr2 of size m and n respectively, return the **median** of the two sorted arrays.

```
def findMedianSortedArrays(arr1, arr2):
    merged = []

    i, j = 0, 0

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

    while i < len(arr1):
        merged.append(arr1[i])
        i += 1

    while j < len(arr2):
        merged.append(arr2[j])
        j += 1

    length = len(merged)

    if length % 2 == 0:
        mid1 = length // 2
        mid2 = mid1 - 1
        median = (merged[mid1] + merged[mid2]) / 2
    else:
```

```
mid = (length - 1) // 2  
median = merged[mid]
```

```
return median
```

```
arr1 = [1, 4, 7, 10, 12]
```

```
arr2 = [2, 3, 6, 15]
```

```
median = findMedianSortedArrays(arr1, arr2)
```

```
print(median)
```



The image shows a screenshot of a code editor and a terminal window. The code editor at the top has a dark background with light blue and white text. It shows two lines of code: line 21 with `mid2 = mid1 - 1` and line 22 with `median = (merged[mid1] + merged[mid2]) / 2`. Below the code editor is a terminal window with a black background and green text. The terminal shows the number '6' on the first line, followed by the message '...Program finished with exit code 0' and 'Press ENTER to exit console.' on the next line. The terminal window has a title bar that says 'input'.

```
21 mid2 = mid1 - 1  
22 median = (merged[mid1] + merged[mid2]) / 2
```

input

6

...Program finished with exit code 0
Press ENTER to exit console.