```
class MergeSort
{
	int[] array;
	int[] tempMergeArr;
	int length;
	public static void main(String args[])
	{
		int[] inputArr = {48, 36, 13, 52, 19, 94, 21};
		MergeSort ms = new MergeSort();
		ms.sort(inputArr);

		for(int i:inputArr)
		{
			System.out.print(i+" ");
		}

	}

	public void sort(int inputArr[])
	{
		this.array=inputArr;
		this.length=inputArr.length;
		this.tempMergeArr = new int[length];
		divideArray(0, length-1);
```

```
}

public void divideArray(int lowerIndex, int higherIndex)
{
	if(lowerIndex < higherIndex)
	{
		int middle=lowerIndex+(higherIndex-lowerIndex)/2;

		//it will sort left hand side
		divideArray(lowerIndex, middle);

		//it will sort right hand side
		divideArray(middle+1, higherIndex);

		mergeArray(lowerIndex, middle, higherIndex);
	}
}

public void mergeArray(int lowerIndex, int middle, int higherIndex)
{
	for(int i=lowerIndex; i<=higherIndex; i++)
	{
		tempMergeArr[i]=array[i];
	}
```

```
int i=lowerIndex;
int j=middle+1;
int k=lowerIndex;
while(i<=middle && j<=higherIndex)
{
        if(tempMergeArr[i] <= tempMergeArr[j])
        {
                array[k]=tempMergeArr[i];
                i++;
        }
        else
        {
                array[k]=tempMergeArr[j];
                j++;
        }
        k++;
}
while(i<=middle)
{
        array[k]=tempMergeArr[i];
        k++;
        i++;
}
```

```
        }
    }
```