Write a program in Java to find the fourth smallest element in an unsorted list

```
package p4;

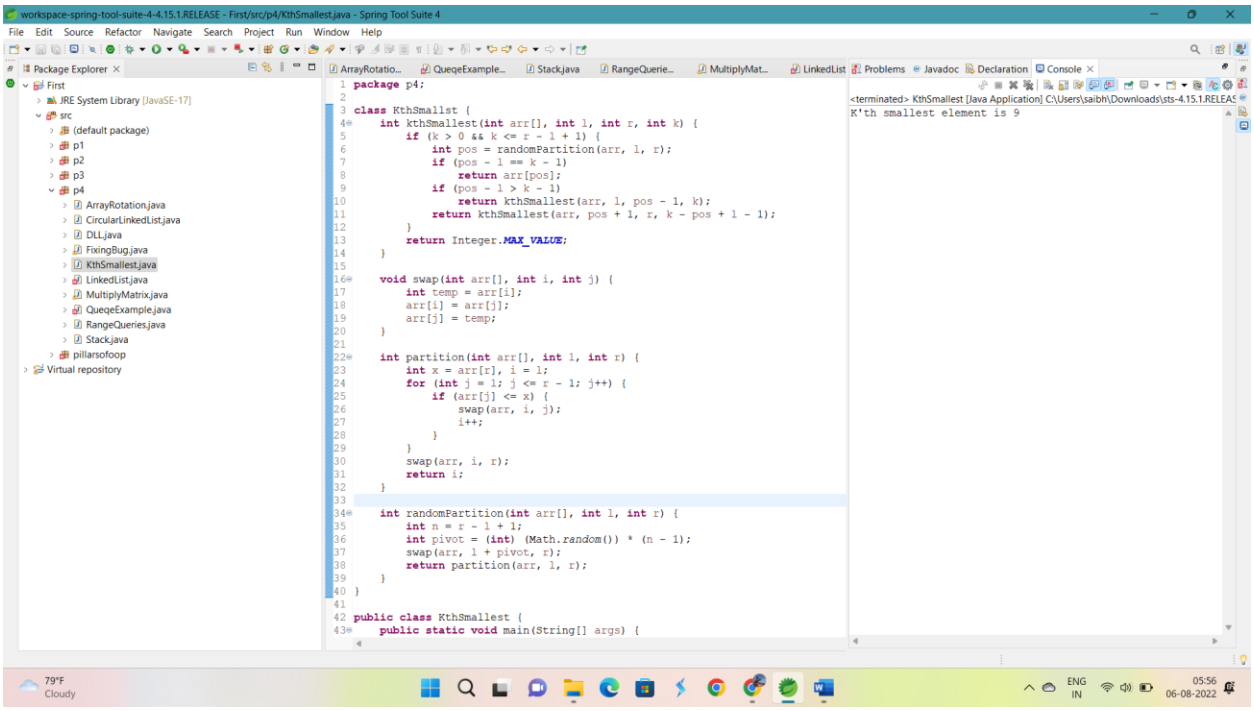
class KthSmallst {
	int kthSmallest(int arr[], int l, int r, int k) {
		if (k > 0 && k <= r - l + 1) {
			int pos = randomPartition(arr, l, r);
			if (pos - l == k - 1)
				return arr[pos];
			if (pos - l > k - 1)
				return kthSmallest(arr, l, pos - 1, k);
			return kthSmallest(arr, pos + 1, r, k - pos + l - 1);
		}
		return Integer.MAX_VALUE;
	}

	void swap(int arr[], int i, int j) {
		int temp = arr[i];
		arr[i] = arr[j];
		arr[j] = temp;
	}

	int partition(int arr[], int l, int r) {
		int x = arr[r], i = l;
		for (int j = l; j <= r - 1; j++) {
			if (arr[j] <= x) {
				swap(arr, i, j);
				i++;
			}
		}
		swap(arr, i, r);
		return i;
	}

	int randomPartition(int arr[], int l, int r) {
		int n = r - l + 1;
		int pivot = (int) (Math.random()) * (n - 1);
		swap(arr, l + pivot, r);
		return partition(arr, l, r);
	}
}

public class KthSmallest {
	public static void main(String[] args) {
		KthSmallst ob = new KthSmallst();
		int arr[] = { 12, 3, 5, 9, 4, 19, 26 };
		int n = arr.length, k = 4;
		System.out.println("K'th smallest element is " +
ob.kthSmallest(arr, 0, n - 1, k));
	}
}
```

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class KthSmallst {
    int kthSmallest(int arr[], int l, int r, int k) {
        if (k > 0 && k <= r - l + 1) {
            int pos = randomPartition(arr, l, r);
            if (pos - l == k - 1)
                return arr[pos];
            if (pos - l > k - 1)
                return kthSmallest(arr, l, pos - 1, k);
            return kthSmallest(arr, pos + 1, r, k - pos + l - 1);
        }
        return Integer.MAX_VALUE;
    }

    void swap(int arr[], int i, int j) {
        int temp = arr[i];
        arr[i] = arr[j];
        arr[j] = temp;
    }

    int partition(int arr[], int l, int r) {
        int x = arr[r], i = l;
        for (int j = l; j <= r - 1; j++) {
            if (arr[j] <= x) {
                swap(arr, i, j);
                i++;
            }
        }
        swap(arr, i, r);
        return i;
    }

    int randomPartition(int arr[], int l, int r) {
        int n = r - l + 1;
        int pivot = (int) (Math.random()) * (n - 1);
        swap(arr, l + pivot, r);
        return partition(arr, l, r);
    }
}

public class KthSmallest {
    public static void main(String[] args) {
```