

Recursion

Parameters

```
def quicksort(X, i, j):
```

```
    if i < j:
```

```
        p = partition(X, i, j)
```

```
        { quicksort(X, i, p-1)
```

```
          quicksort(X, p+1, j) }
```

X is modified
by the function

```
def partition(X, i, j):
```

```
    pivot = X[j]
```

```
    m = i
```

← local variable

```
    for n in range(i, j):
```

```
        if X[n] <= pivot:
```

```
            X[m], X[n] = X[n], X[m]
```

```
            m += 1
```

local variable
modified

```
    X[m], X[j] = X[j], X[m]
```

```
    return m
```

```
def QuickSort(X):
```

```
    return quicksort(X, 0, len(X)-1)
```