Source Code:

# Lab 3 - QuickSort - CMPSC 463

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def quicksort(A, p, r):

if p < r:

q = partition(A, p, r)

quicksort(A, p, q - 1)

quicksort(A, q + 1, r)

def partition(A, p, r):

x = A[r]

i = p - 1

for j in range(p, r):

if A[j] <= x:

i += 1

A[i], A[j] = A[j], A[i]

A[i + 1], A[r] = A[r], A[i + 1]

return i + 1

lst = [2, 5, 6, 1, 4, 6, 2, 4, 7, 8, 3, 27, 9, 12]

print("Unsorted List: ", lst)

quicksort(lst, 0, len(lst) - 1)

print("Sorted List: ", lst)

Output Code:

Unsorted List: [2, 5, 6, 1, 4, 6, 2, 4, 7, 8, 3, 27, 9, 12]

Sorted List: [1, 2, 2, 3, 4, 4, 5, 6, 6, 7, 8, 9, 12, 27]