Experiment No.3

To implement Selection Sort and Comparative analysis for large values of ‘n’

#include <stdio.h>

void swap(int \*a, int \*b) {

int temp = \*a;

\*a = \*b;

\*b = temp;

}

int partition(int \*array, int low, int high) {

int pivot = array[high];

int i = low - 1;

for (int j = low; j < high; j++) {

if (array[j] <= pivot) {

i++;

swap(&array[i], &array[j]);

}

}

swap(&array[i + 1], &array[high]);

return i + 1;

}

void quickSort(int \*array, int low, int high) {

if (low < high) {

int pivotIndex = partition(array, low, high);

quickSort(array, low, pivotIndex - 1);

quickSort(array, pivotIndex + 1, high);

}

}

int main() {

int array[] = {10, 7, 8, 9, 1, 5};

int n = sizeof(array) / sizeof(array[0]);

quickSort(array, 0, n - 1);

for (int i = 0; i < n; i++) {

printf("%d ", array[i]);

}

return 0;

}

Output:

1 5 7 8 9 10