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***CLASS : CSE CORE 2***

***ASSIGNMENT – 2***

2 . IMPLEMENT QUICK SORT .

#include <bits/stdc++.h>

using namespace std;

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

{

int t = \*a;

\*a = \*b;

\*b = t;

}

int partition (int arr[], int low, int high)

{

int pivot = arr[high];

int i = (low - 1);

for (int j = low; j <= high - 1; j++)

{

if (arr[j] < pivot)

{

i++;

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

}

}

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

return (i + 1);

}

void quickSort(int arr[], int low, int high)

{

if (low < high)

{

int pi = partition(arr, low, high);

quickSort(arr, low, pi - 1);

quickSort(arr, pi + 1, high);

}

}

void printArray(int arr[], int size)

{

int i;

for (i = 0; i < size; i++)

cout << arr[i] << " ";

cout << endl;

}

int main()

{

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

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

quickSort(arr, 0, n - 1);

cout << "Sorted array: \n";

printArray(arr, n);

return 0;

}

OUTPUT :

