**NAME: PRINCIA MELITA DSOUZA**

**EMP ID : 2483929**

**8 Quick Sort**

class QuickSort

{

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

{

int pivot = arr[high];

int i = (low-1); // index of smaller element

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

{

if (arr[j] <= pivot)

{

i++;

// swap arr[i] and arr[j]

int temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

// swap arr[i+1] and arr[high] (or pivot)

int temp = arr[i+1];

arr[i+1] = arr[high];

arr[high] = temp;

return i+1;

}

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

{

if (low < high)

{

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

sort(arr, low, pi-1);

sort(arr, pi+1, high);

}

}

static void printArray(int arr[])

{

int n = arr.length;

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

System.out.print(arr[i]+" ");

System.out.println();

}

// Driver program

public static void main(String args[])

{

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

int n = arr.length;

QuickSort ob = new QuickSort();

ob.sort(arr, 0, n-1);

System.out.println("sorted array");

printArray(arr);

}

}

OUTPUT

sorted array

1 5 7 8 9 10