**Quicksort Program**

#include <stdio.h>

void quicksort (int [], int, int);

int main()

{

int a[50];

int n, i;

printf("How many elements to be Sorted :: ");

scanf("%d", &n);

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

{

printf("\nEnter [ %d ] element :: ",i+1);

scanf("%d", &a[i]);

}

quicksort(a, 0, n - 1);

printf("\nAfter implementing Quick sort, Sorted Lists are :: \n");

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

{

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

}

printf("\n");

return 0;

}

void quicksort(int a[], int low, int high)

{

int pivot, i, j, temp;

if (low < high)

{

pivot = low;

i = low;

j = high;

while (i < j)

{

while (a[i] <= a[pivot] && i <= high)

{

i++;

}

while (a[j] > a[pivot] && j >= low)

{

j--;

}

if (i < j)

{

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

temp = a[j];

a[j] = a[pivot];

a[pivot] = temp;

quicksort(a, low, j - 1);

quicksort(a, j + 1, high);

}

}