**Assignment No:-**

**Assignment Name**:- **Implementation of program to sort an array in ascending order using Quick sort.**

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**Roll No:- 04**

#include<iostream.h>

#include<conio.h>

#include<stdlib.h>

#include<timer.h>

void QUICK\_SORT(int \*arr,int low,int high)

{

int pivot,temp,i,j;

if(low<high)

{

pivot=arr[low];

i=low+1;

j=high;

while(i<j)

{

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

i++;

while(arr[j]>pivot && j>low)

j--;

if(i<j)

{

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

arr[low]=arr[j];

arr[j]=pivot;

QUICK\_SORT(arr,low,j-1);

QUICK\_SORT(arr,j+1,high);

}

}

void main()

{

clrscr();

Timer T;

int n,arr[1000];

cout<<"\n Enter the size of array : ";

cin>>n;

for(int i=1;i<=n;i++)

{

arr[i]=random(1000);

}

T.start();

QUICK\_SORT(arr,1,n);

T.stop();

cout<<"\n After Quick Sorting Elements : ";

for(i=1;i<=n;i++)

{

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

}

cout<<"\n Exact time of Execution : "<<T.time();

getch();

}