***Radix Sort:***

#include<iostream>

#include<vector>

using namespace std;

int NumberOfDigit(int num)

{

int cnt = 0;

while(num!=0)

{

cnt++;

num/=10;

}

return cnt;

}

int main()

{

int n,arr[100], arr2[100], mx , factor;

while(true)

{

cout<<"Enter the limitation of Array"<<endl;

cin>>n;

vector<int>vectorArr[10];

mx = -1000;

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

{

cin>>arr[i];

arr2[i] = arr[i];

if(mx<arr[i]) mx = arr[i];

}

factor = 10;

int cnt = NumberOfDigit(mx);

for(int k=0;k<cnt;k++)

{

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

{

int digit = arr2[i]%10;

vectorArr[digit].push\_back(arr[i]);

}

int l = 0;

for(int i=0;i<10;i++)

{

for(int j=0;j<vectorArr[i].size();j++)

{

arr[l] = vectorArr[i][j];

arr2[l] = arr[l]/factor;

l++;

}

vectorArr[i].clear();

}

factor\*=10;

}

cout<<"After Redix Sort"<<endl;

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

{

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

}

cout<<endl;

}

}