1. Given an array with infinite elements and numeric in nature. Find the smallest element post sorting it with the most efficient technique.

Sample size 10,11,12 elements.

#include<stdio.h>

void quicksort(int arr[],int first,int last);

int main()

{

int i, count, arr[12];

printf("Enter number of elements in an array: ");

scanf("%d",&count);

printf("Enter %d elements: ", count);

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

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

quicksort(arr,0,count-1);

printf("Smallest element: %d",arr[0]);

}

void quicksort(int arr[12],int first,int last)

{

int i, j, pivot, temp;

if(first<last)

{

pivot=first;

i=first;

j=last;

while(i<j)

{

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

i++;

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

j--;

if(i<j)

{

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

temp=arr[pivot];

arr[pivot]=arr[j];

arr[j]=temp;

quicksort(arr,first,j-1);

quicksort(arr,j+1,last);

}

}

2. Reverse a string which consists of atleast two spaces and then change all upper to lower and lower to upper case and print the converted string.

Sample: Made in India

Output: AIDNi NI EDAm

#include<stdio.h>

#include <string.h>

int main()

{

char Str[100], Rev[100], ch;

int i, j, len;

printf("Enter a String : ");

gets(Str);

j = 0;

len = strlen(Str);

for (i = len - 1; i >= 0; i--)

{

Rev[j++] = Str[i];

}

Rev[i] = '\0';

i=0;

while (Rev[i] != '\0')

{

ch = Rev[i];

if (ch >= 'A' && ch <= 'Z')

{

Rev[i] = Rev[i] + 32;

}

else if (ch >= 'a' && ch <= 'z')

{

Rev[i] = Rev[i] - 32;

}

i++;

}

printf("Output String: %s\n", Rev);

}