1. Given an array with infinite elements and numeric in nature find the smallest element post shorting it with the most efficient technique. sample size 10,11,12.
2. Reverse a string which consists of at least two spaces and then change all upper to lower and lower to upper case and print the converted string.

Sample = Made in India OUTPUT = aidn ni edam

1. You already have an integer n and a function LCM(x,n) Which means the least common multiple of x and n con x <= n. Find the value of the series ∑lcm(x,n).

Note

1. Compile the program on the given link create a jpeg /png screen shot and upload it on your github ID
2. Also copy the code in the word file and upload it on your github ID.

Que1 Code =

#include<iostream>

#include<cstdlib>

using namespace std;

void swap(int \*a, int \*b)

{

int temp;

temp = \*a;

\*a = \*b;

\*b = temp;

}

int Partition(int a[], int low, int high)

{

int pivot, index, i;

index = low;

pivot = high;

for(i=low; i < high; i++)

{

if(a[i] < a[pivot])

{

swap(&a[i], &a[index]);

index++;

}

}

swap(&a[pivot], &a[index]);

return index;

}

int RandomPivotPartition(int a[], int low, int high)

{

int pvt, n, temp;

n = rand();

pvt = low + n%(high-low+1);

swap(&a[high], &a[pvt]);

return Partition(a, low, high);

}

int QuickSort(int a[], int low, int high)

{

int pindex;

if(low < high)

{

pindex = RandomPivotPartition(a, low, high);

QuickSort(a, low, pindex-1);

QuickSort(a, pindex+1, high);

}

return 0;

}

int main()

{

int n, i;

cout<<" ";

cin>>n;

int arr[n];

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

{

cout<<" "<<i+1<<": ";

cin>>arr[i];

}

QuickSort(arr, 0, n-1);

cout<<"\nSorted Data ";

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

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

return 0;

}

Que2 Code =

#include<iostream>

#include <bits/stdc++.h>

using namespace std;

void convertOpposite(string &str)

{

int ln = str.length();

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

{

if (str[i]>='a' && str[i]<='z')

str[i] = str[i] - 32;

else if(str[i]>='A' && str[i]<='Z')

str[i] = str[i] + 32;

}

}

void reverseStr(string& stm)

{

int n = stm.length();

for (int i = 0; i < n / 2; i++)

swap(stm[i], stm[n - i - 1]);

}

int main()

{

string str = "madeINIndia";

convertOpposite(str);

cout << str;

string stm = "madeINIndia";

reverseStr(stm);

cout << stm;

return 0;

}