#include <iostream>

#include <cstdlib>

#include<time.h>

#include "sorting.h"

using namespace std;

using namespace csci\_591\_sorting;

const int SIZ\_MAX = 5000;

int main()

{

int MS[SIZ\_MAX]; // array for merge sort

int QS[SIZ\_MAX]; // array for quick sort

int IS[SIZ\_MAX]; // array for inserttion sort

int numbergenerate;

int seed;

char ch;

Sorting M;

Sorting Q;

Sorting I;

cout<<"Enter the number of values to generate and sort , between 1 and 5000:"<<endl;

cin>>numbergenerate;

cout<<"Enter an integer seed value :"<<endl;

cin>>seed;

srand(seed);

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

{

MS[i]=(rand()%5000)+1;

QS[i]=MS[i];

IS[i]=QS[i];

}

M.MergeSort( MS, 0, numbergenerate );

Q.QuickSort( QS, 0, numbergenerate);

I.InsertionSort( IS, numbergenerate);

cout<<"Print the values?"<<endl;

cin>>ch;

if(ch=='Y'|| ch=='y')

{

cout<<"Insertion Sort-"<<endl;

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

{

cout<<IS[i]<<" ";

}

cout<<endl<<cout<<"Merge Sort-"<<endl;

for(int m=1; m<=numbergenerate; m++)

{

cout<<MS[m]<<" ";

}

cout<<endl<<" Quick Sort-"<<endl;

for(int q=1; q<=numbergenerate; q++)

{

cout<<QS[q]<<" ";

}

}

cout<<endl;

cout<<"Count Insertion Sort = "<<I.size()<<endl;

cout<<"Count Merge Sort = "<<M.size()<<endl;

cout<<"Count Quick Sort = "<<Q.size()<<endl;

return 0;

}