ANAGHA ACHARYA

1BM19CS224

Sort the given set of N integer elements using Selection Sort technique and compute its time taken. Run the program for different values of N and record the time taken to sort and plot.

#include<stdio.h>

#include<stdlib.h>

#include<time.h>

void swap(int a[],int min,int i){

int temp=a[min];

a[min]=a[i];

a[i]=temp;

}

void selsort(int a[],int i, int n){

int j,min;

min=i;

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

if(a[min]>a[j])

min=j;

}

swap(a,min,i);

if(i+1<n)

return selsort(a,i+1,n);

}

void main(){

int a[1000],i,n;

clock\_t start,end;

double time;

printf("Enter the number of elements\n");

scanf("%d",&n);

printf("The elements are:\n");

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

a[i]=(int)rand()%10000;

printf("%d ",a[i]);

}

start=clock();

selsort(a,0,n);

end=clock();

time=((double)(end-start))/CLOCKS\_PER\_SEC;

printf("\nSorted elements:\n");

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

printf("%d ",a[i]);

}

printf("\nTime taken=%1f\n",time);

}

OUTPUT:



