CSA02 C Progrmming

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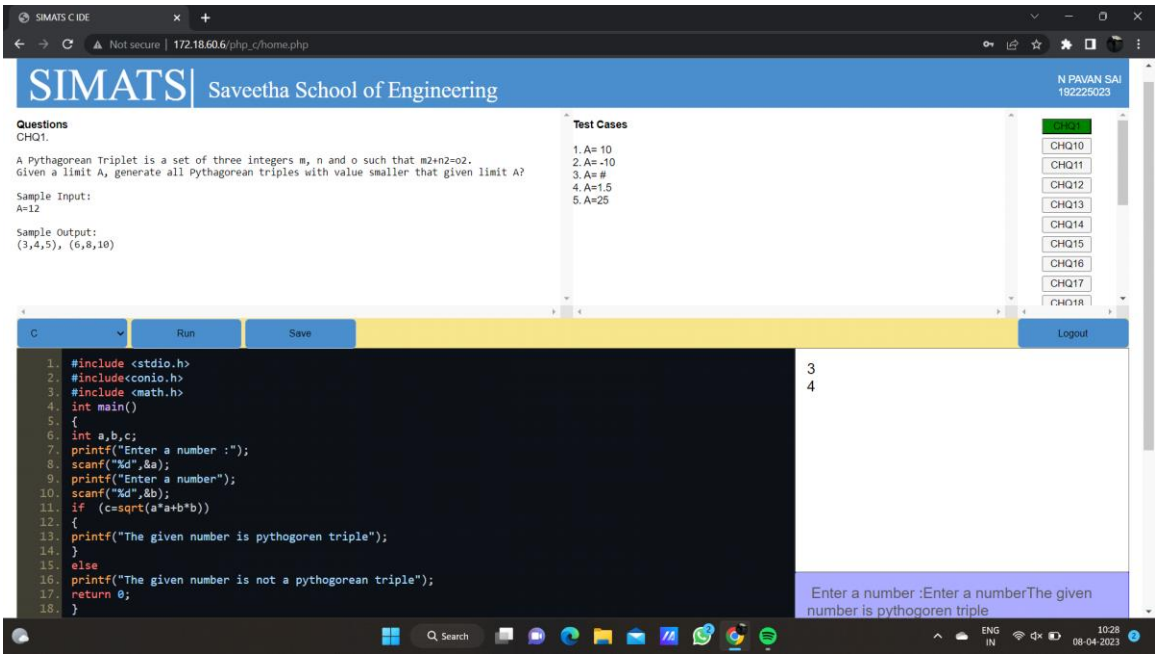

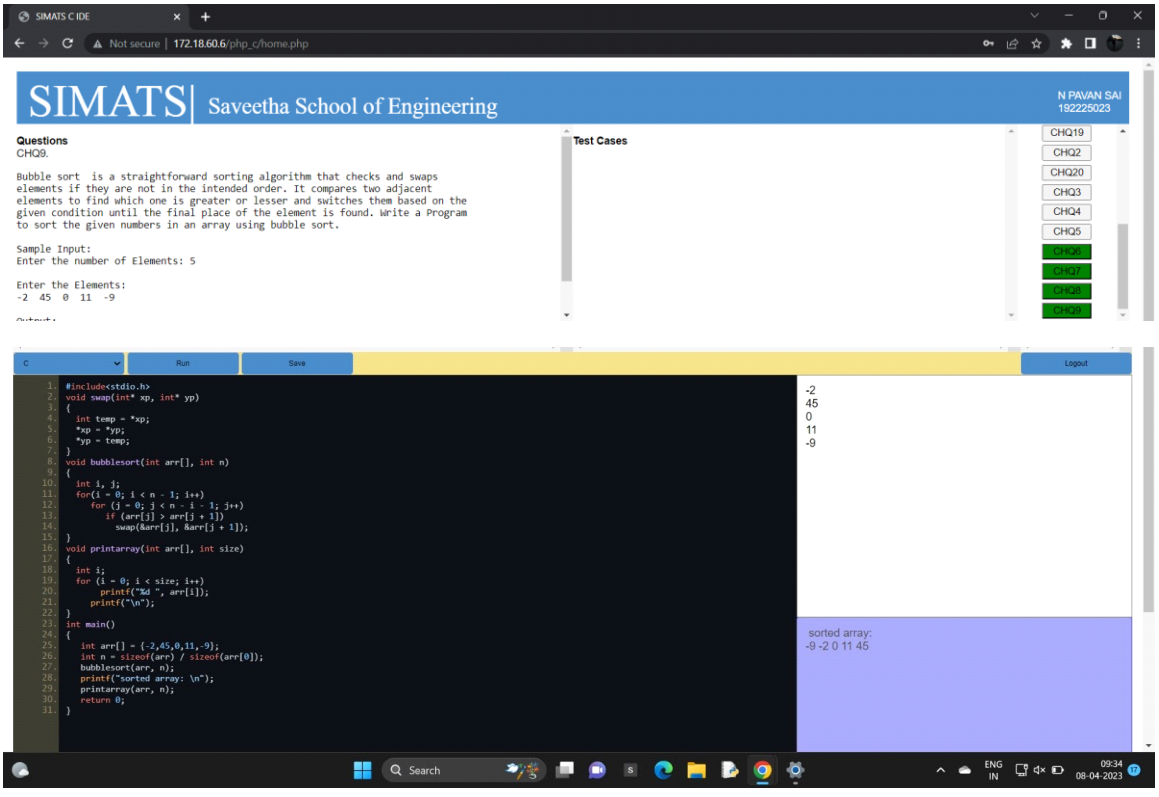

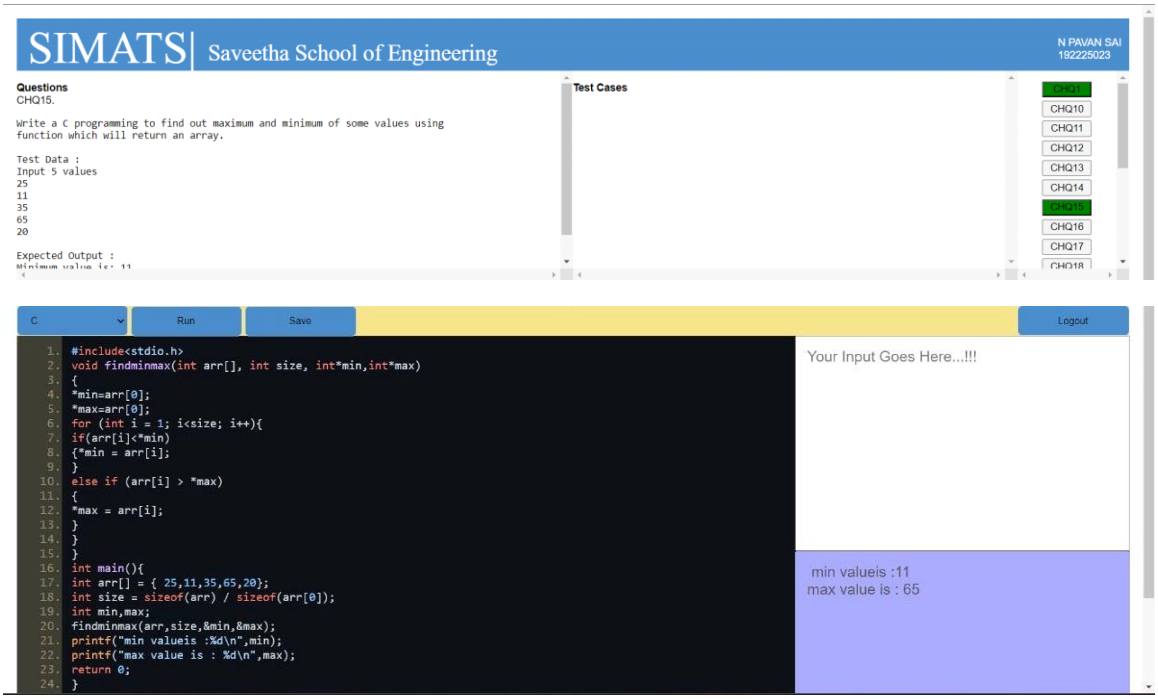
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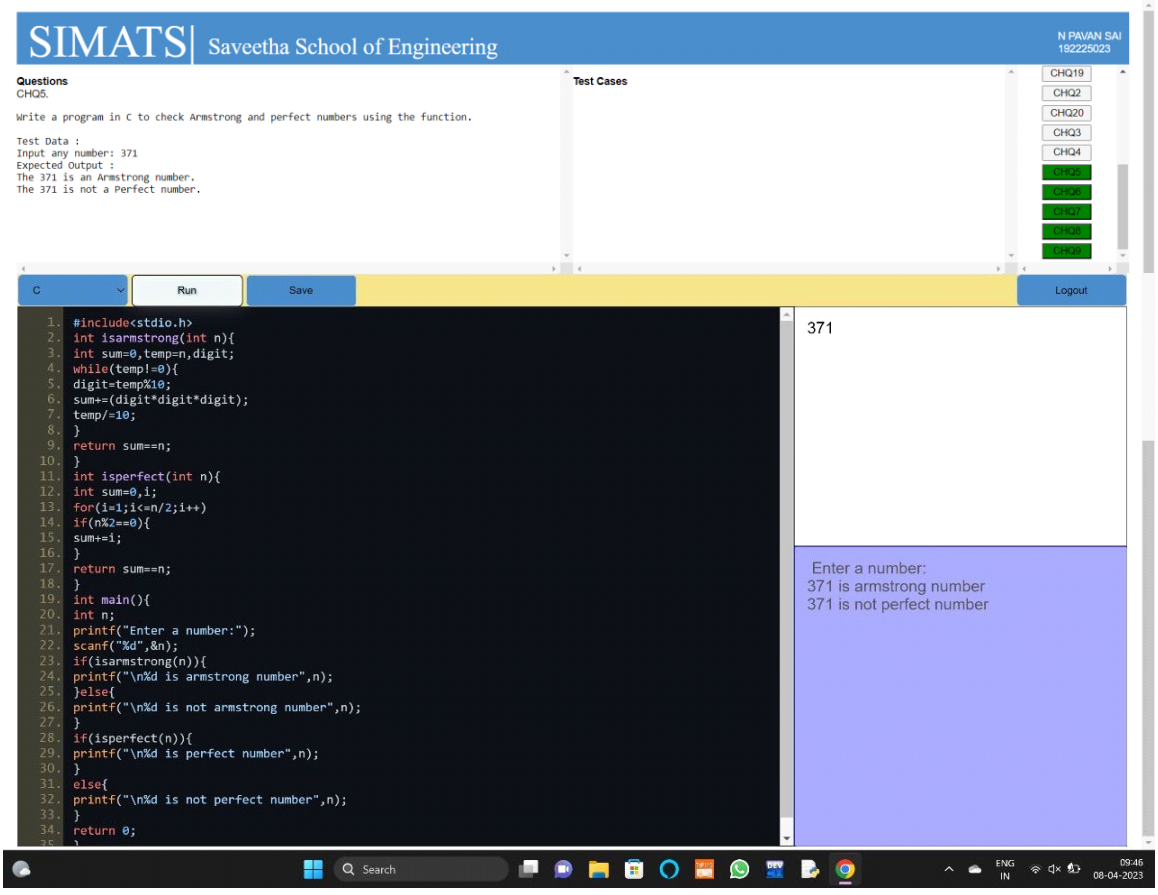
Questions
CHQ15.
Write a C programming to find out maximum and minimum of some values using function which will return an array.
Test Data :
Input 5 values
25
11
35
65
20
Expected Output :
Test Cases
CHQ1
CHQ10
CHQ11
CHQ12
CHQ13
CHQ14
CHQ15
CHQ16
CHQ17
C
Run
Save
Logout
#include<stdio.h>
void findminmax(int arr[], int size, int*min,int*max)
{
*min=arr[0];
*max=arr[0];
for (int i = 1; i<size; i++){
if(arr[i]<*min)
{*min = arr[i];
}
else if (arr[i] > *max)
{
*max = arr[i];
}
}
}
int main(){
int arr[] = { 25,11,35,65,20};
int size = sizeof(arr) / sizeof(arr[0]);
int min,max;
findminmax(arr,size,&min,&max);
printf("min valueis :%d\n",min);
printf("max value is : %d\n",max);
return 0;
}
Your Input Goes Here...!!!
min valueis :11
max value is : 65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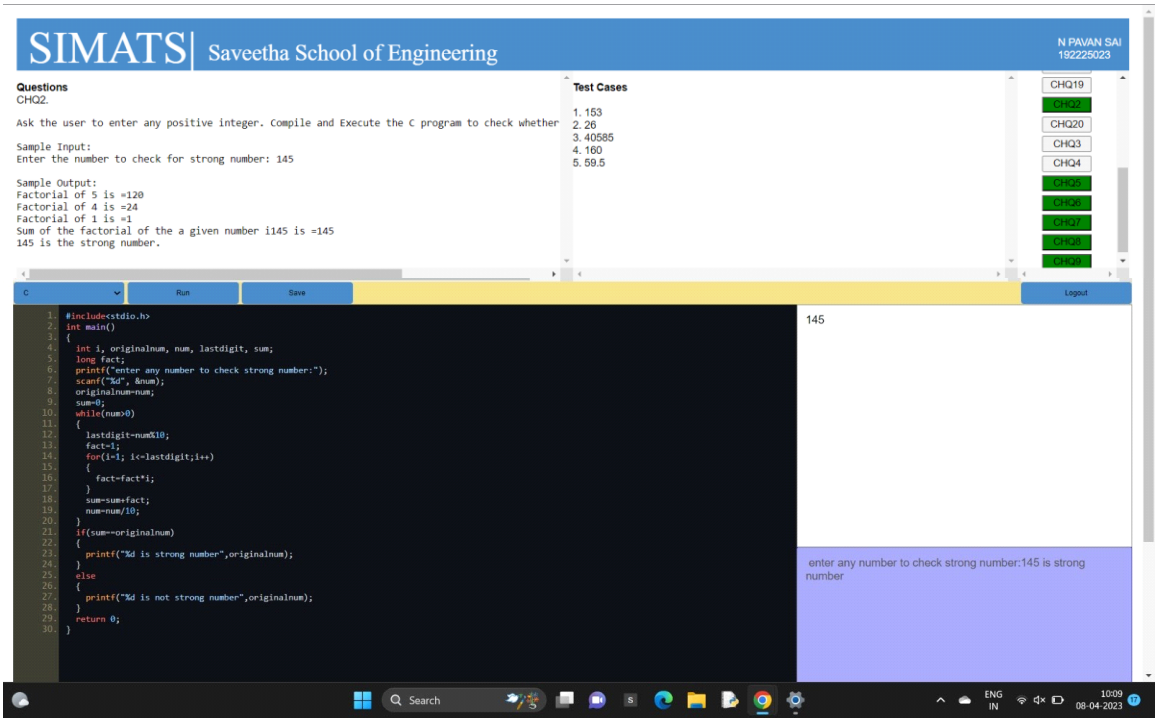
Questions
CHQ5.
Write a program in C to check Armstrong and perfect numbers using the function.
Test Data :
Input any number: 371
Expected Output :
The 371 is an Armstrong number.
The 371 is not a Perfect number.
Test Cases
CHQ19
CHQ2
CHQ20
CHQ3
CHQ4
CHQ5
CHQ6
CHQ7
CHQ8
CHQ9
C
Run
Save
Logout
#include<stdio.h>
int isarmstrong(int n){
int sum=0,temp=n,digit;
while(temp!=0){
digit=temp%10;
sum+=(digit*digit*digit);
temp/=10;
}
return sum==n;
}
int isperfect(int n){
int sum=0,i;
for(i=1;i<=n/2;i++)
if(n%2==0){
sum+=i;
}
return sum==n;
}
int main(){
int n;
printf("Enter a number:");
scanf("%d",&n);
if(isarmstrong(n)){
printf("\n%d is armstrong number",n);
}else{
printf("\n%d is not armstrong number",n);
}
if(isperfect(n)){
printf("\n%d is perfect number",n);
}
else{
printf("\n%d is not perfect number",n);
}
return 0;
}
371
Enter a number:
371 is armstrong number
371 is not perfect number
Search
ENG
IN
09:46
08-04-2023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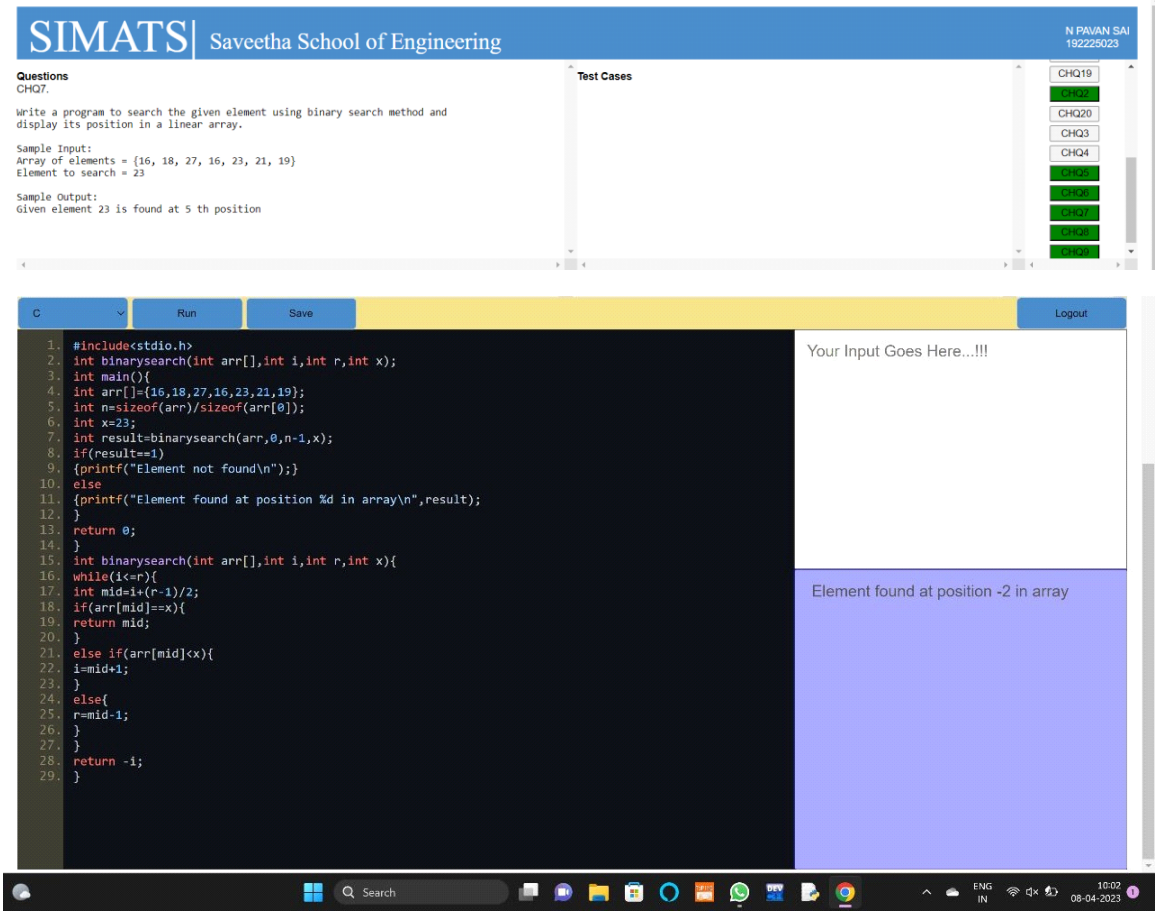
Questions
CHQ2.
Ask the user to enter any positive integer. Compile and Execute the C program to check whether
Sample Input:
Enter the number to check for strong number: 145
Sample Output:
Factorial of 5 is =120
Factorial of 4 is =24
Factorial of 1 is =1
Sum of the factorial of the a given number i145 is =145
145 is the strong number.
Test Cases
1. 153
2. 26
3. 40585
4. 160
5. 59.5
CHQ19
CHQ2
CHQ20
CHQ3
CHQ4
CHQ5
CHQ6
CHQ7
CHQ8
CHQ9
C
Run
Save
Logout
#include<stdio.h>
int main()
{
int i, originalnum, num, lastdigit, sum;
long fact;
printf("enter any number to check strong number:");
scanf("%d", &num);
originalnum=num;
sum=0;
while(num>0)
{
lastdigit=num%10;
fact=1;
for(i=1; i<=lastdigit;i++)
{
fact=fact*i;
}
sum=sum+fact;
num=num/10;
}
if(sum==originalnum)
{
printf("%d is strong number",originalnum);
}
else
{
printf("%d is not strong number",originalnum);
}
return 0;
}
145
enter any number to check strong number:145 is strong number
Search
ENG
IN
10:09
08-04-2023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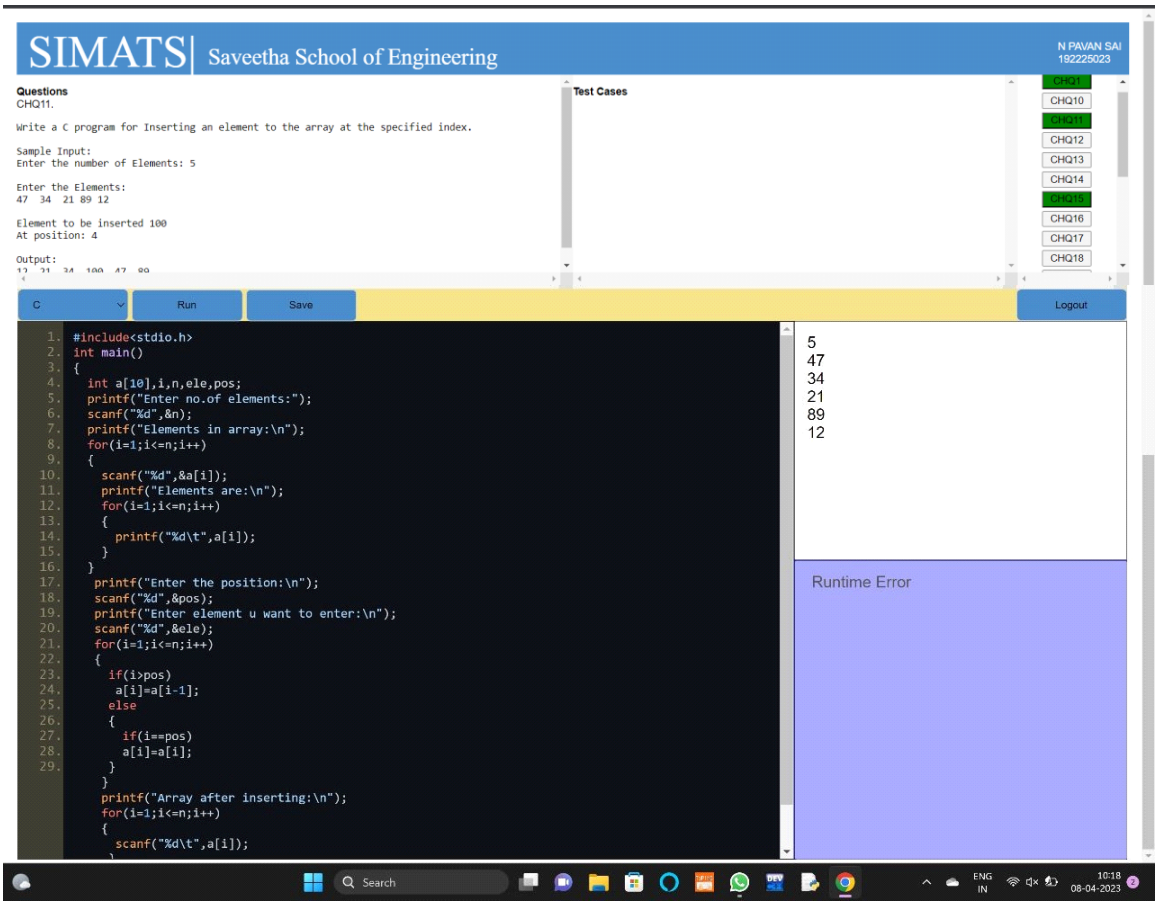
Questions
CHQ7.
Write a program to search the given element using binary search method and
display its position in a linear array.
Sample Input:
Array of elements = {16, 18, 27, 16, 23, 21, 19}
Element to search = 23
Sample Output:
Given element 23 is found at 5 th position
Test Cases
CHQ19
CHQ2
CHQ20
CHQ3
CHQ4
CHQ5
CHQ6
CHQ7
CHQ8
CHQ9
C
Run
Save
Logout
#include<stdio.h>
int binarysearch(int arr[],int i,int r,int x);
int main(){
int arr[]={16,18,27,16,23,21,19};
int n=sizeof(arr)/sizeof(arr[0]);
int x=23;
int result=binarysearch(arr,0,n-1,x);
if(result==1)
{printf("Element not found\n");}
else
{printf("Element found at position %d in array\n",result);
}
return 0;
}
int binarysearch(int arr[],int i,int r,int x){
while(i<=r){
int mid=i+(r-1)/2;
if(arr[mid]==x){
return mid;
}
else if(arr[mid]<x){
i=mid+1;
}
else{
r=mid-1;
}
}
return -i;
}
Your Input Goes Here...!!!
Element found at position -2 in array
Search
ENG
IN
10:02
08-04-2023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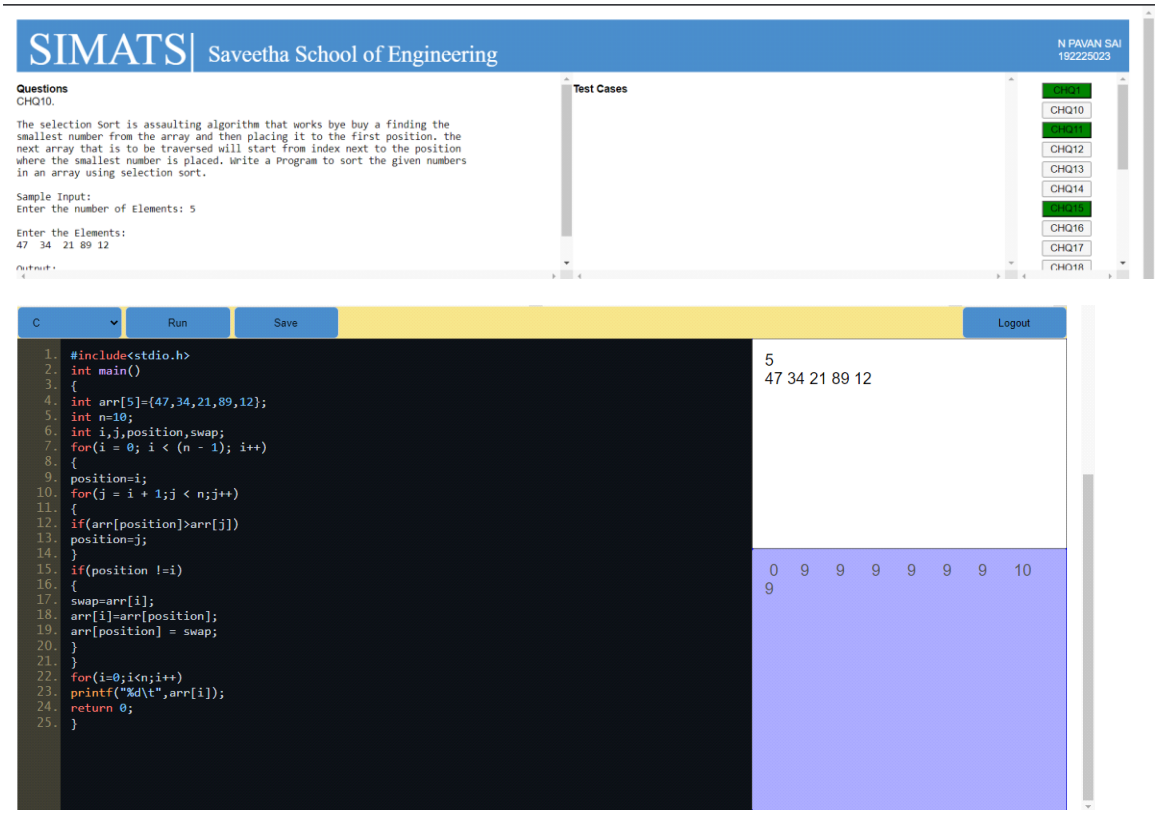
Questions
CHQ11.
Write a C program for Inserting an element to the array at the specified index.
Sample Input:
Enter the number of Elements: 5
Enter the Elements:
47 34 21 89 12
Element to be inserted 100
At position: 4
Output:
Test Cases
CHQ1
CHQ10
CHQ11
CHQ12
CHQ13
CHQ14
CHQ15
CHQ16
CHQ17
CHQ18
C
Run
Save
Logout
#include<stdio.h>
int main()
{
int a[10],i,n,ele,pos;
printf("Enter no.of elements:");
scanf("%d",&n);
printf("Elements in array:\n");
for(i=1;i<=n;i++)
{
scanf("%d",&a[i]);
printf("Elements are:\n");
for(i=1;i<=n;i++)
{
printf("%d\t",a[i]);
}
}
printf("Enter the position:\n");
scanf("%d",&pos);
printf("Enter element u want to enter:\n");
scanf("%d",&ele);
for(i=1;i<=n;i++)
{
if(i>pos)
a[i]=a[i-1];
else
{
if(i==pos)
a[i]=a[1];
}
}
printf("Array after inserting:\n");
for(i=1;i<=n;i++)
{
scanf("%d\t",a[i]);
5
47
34
21
89
12
Runtime Error
Search
ENG
IN
10:18
08-04-2023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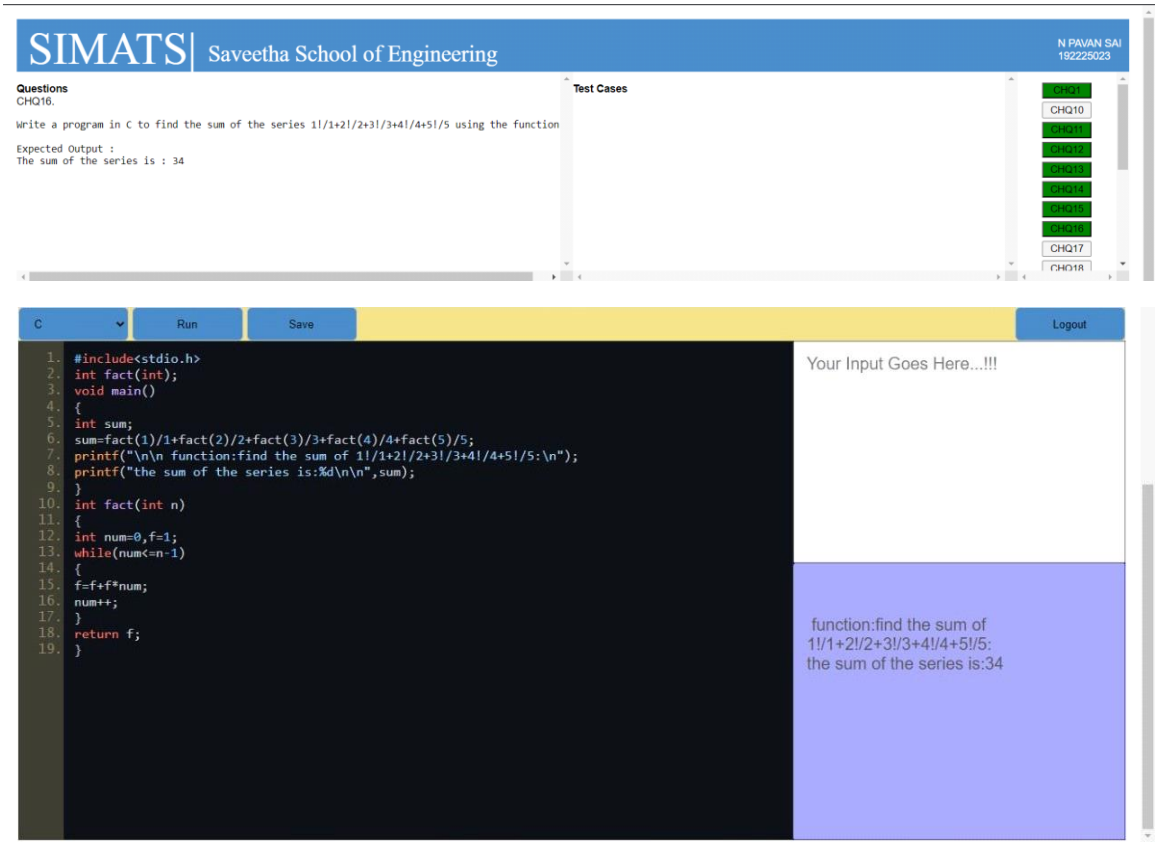
Questions
CHQ10.
The selection Sort is assaulting algorithm that works bye buy a finding the smallest number from the array and then placing it to the first position. the next array that is to be traversed will start from index next to the position where the smallest number is placed. Write a Program to sort the given numbers in an array using selection sort.
Sample Input:
Enter the number of Elements: 5
Enter the Elements:
47 34 21 89 12
Test Cases
CHQ1
CHQ10
CHQ11
CHQ12
CHQ13
CHQ14
CHQ15
CHQ16
CHQ17
CHQ18
C
Run
Save
Logout
#include<stdio.h>
int main()
{
int arr[5]={47,34,21,89,12};
int n=10;
int i,j,position,swap;
for(i = 0; i < (n - 1); i++)
{
position=i;
for(j = i + 1;j < n;j++)
{
if(arr[position]>arr[j])
position=j;
}
if(position !=i)
{
swap=arr[i];
arr[i]=arr[position];
arr[position] = swap;
}
}
for(i=0;i<n;i++)
printf("%d\t",arr[i]);
return 0;
}
5
47 34 21 89 12
0 9 9 9 9 9 9 10
9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Questions
CHQ16.
Write a program in C to find the sum of the series 1!/1+2!/2+3!/3+4!/4+5!/5 using the function
Expected Output :
The sum of the series is : 34
Test Cases
CHQ1
CHQ10
CHQ11
CHQ12
CHQ13
CHQ14
CHQ15
CHQ16
CHQ17
CHQ18
C
Run
Save
Logout
#include<stdio.h>
int fact(int);
void main()
{
int sum;
sum=fact(1)/1+fact(2)/2+fact(3)/3+fact(4)/4+fact(5)/5;
printf("\n\n function:find the sum of 1!/1+2!/2+3!/3+4!/4+5!/5:\n");
printf("the sum of the series is:%d\n\n",sum);
}
int fact(int n)
{
int num=0,f=1;
while(num<=n-1)
{
f=f+f*num;
num++;
}
return f;
}
Your Input Goes Here...!!!
function:find the sum of
1!/1+2!/2+3!/3+4!/4+5!/5:
the sum of the series is:34