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HARISH V
192224043

Questions

CMQ1.

A year has 365 days but leap year consists of 366 days. This one day is added in the month of February. This month which g

Sample Input:

Enter Date : 04/11/1947

Sample Output:

Given year is Non Leap Year

Test Cases

1. 04/11/19.47
2. 11/15/1936
3. 31/45/1996
4. 64/09/1947
5. 00/00/2000

CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int d,m,y;
printf("\nenter the date");
scanf("%d",&d);
printf("\n enter the month");
scanf("%d",&m);
printf("\nenter the year");
scanf("%d",&y);
printf("\n%d/%d/%d",d,m,y);
if(y%4==0)
{
printf("\n it is a leap year");
}
else
{
printf("it is not a leap year");
}
return 0;
}
```

4
11
1947

enter the date
enter the month
enter the year
4/11/1947it is not a leap year

C | Run | Save | Logout

```c
#include <stdio.h>
int main()
{
int a,b,c,d,e,f,g,h,i,sum;
scanf("%d",&a);//12345
b=a/10;//1234
c=a%10;//5
d=b/10;//123
e=b%10;//4
f=d/10;//12
g=d%10;//3
h=f/10;//1
i=f%10;//2
sum=(10000*c)+(1000*e)+(100*g)+(10*i)+(1*h);
printf("\n the reverse number of %d is %d",a,sum);
return 0;
}
```

12345

the reverse number of 12345 is 54321

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Questions
CMQ12.

Write a Program to find the sum and average of numbers in a matrix.

Sample input:
1 2 3
4 5 6
7 8 9

Output:
Sum = 45
Average = 5

Test Cases

CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
float a[100],sum=0,avg;
int i,n;
printf("\nenter ");
scanf("%d",&n);
printf("\nenter the number");
for(i=0;i<n;i++)
{
printf("a[%d]=",i);
scanf("%f",&a[i]);
}
for(i=0;i<n;i++)
{
sum=sum+a[i];
}
avg=sum/n;
printf("\n sum is %f",sum);
printf("\n average is %f",avg);
return 0;
}
```

Your Input Goes Here...!!!

enter name:enter age

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Questions
CMQ15.

Write a program in C to swap elements using call by reference.

```
Test Data :
Input the value of 1st element : 5
Input the value of 2nd element : 6
Input the value of 3rd element : 7

Expected Output :
The value before swapping are :
element 1 = 5
element 2 = 6
element 3 = 7
```

Test Cases

CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C | Run | Save | Logout

```c
#include<stdio.h>
void swap(int x,int y,int z)
int main()
{
int n1,n2,n3,tmp;
printf("\n enter the first element");
scanf("%d",&n1);
printf("\n enter the second element");
scanf("%d",&n2);
printf("%d",&n3);
printf("\n n1=%d n2=%d n3=%d ",n1,n2,n3);
swap(&n1,&n2,&n3);
printf("after swapping n1=%d\n n2=%d\n n3=%d\n",n1,n2,n3;);
return 0;
}
void swap(int*x,int*y,int*z)
{
int tmp;
tmp=y;
*y=*x;
*x=*z;
*z=tmp;
}
```

```
5
6
7
```

```
<pre>ExecutionFolder/192224043.c: In function 'swap':
ExecutionFolder/192224043.c:4:1: error: expected '=', ',', ';',
'asm' or '__attribute__' before '{' token
   4 | {
     | ^
ExecutionFolder/192
```

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Questions

CMQ16.

Write a program in C to find the factorial of a given number using pointers.

Test Data :
Input a number : 5

Expected Output :
The Factorial of 5 is : 120

Test Cases

1. N = 0
2. N = -5
3. N = 1
4. N = M
5. N = %

CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int n,i;
unsigned long long factorial=1;
printf("enter the positve integer");
scanf("%d",&n);
int *ptr_n=&n;
unsigned long long *ptr_factorial=&factorial;
for(i=1;i<=*ptr_n;i++)
{
*ptr_factorial*i;
}
printf("factorial of %d %d",*ptr_n,*ptr_factorial);
return 0;
}
```

5

enter the positve integerfactorial of 5

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Questions
CMQ13.

Write a program in C to add numbers using call by reference.

Test Data :
Input the first number : 5
Input the second number : 6

Expected Output :
The sum of 5 and 6 is 11

Test Cases

1. X = 0 , N = 4
2. X = 5 , N = 0
3. X = -3 , N = 3
4. X = 0 , N = 0
5. X = 123, N = 123

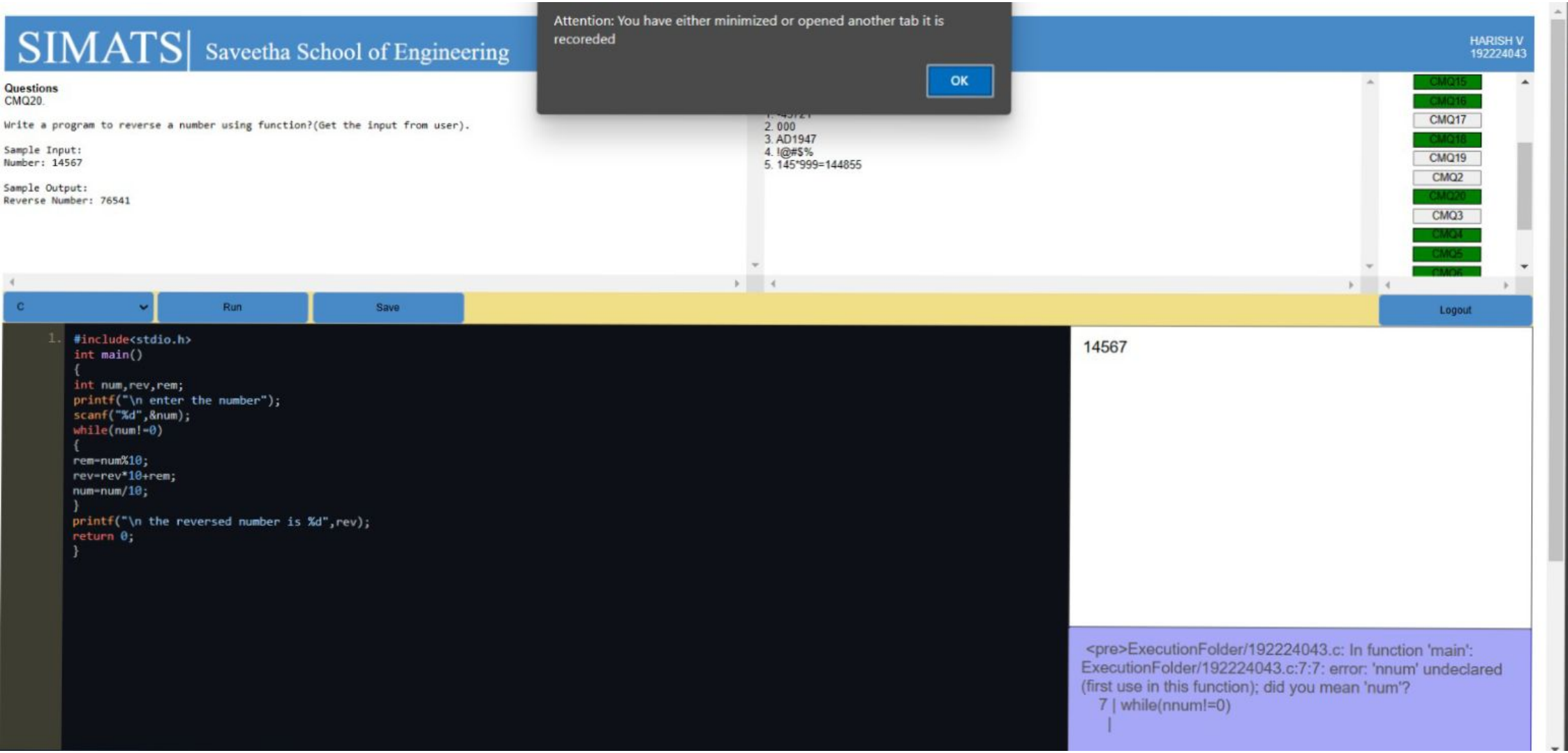
CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int a,b,c;
printf("\nenter the first number");
scanf("%d",&a);
printf("\nenter the second number");
scanf("%d",&b);
c=a+b;
printf("\nsum of two numbers %d",c);
return 0;
}
```

Your Input Goes Here...!!!

sum of the elements in the array 140
average of the elements in the array 20.000000


Attention: You have either minimized or opened another tab it is recoreded
OK
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Questions
CMQ20.
Write a program to reverse a number using function?(Get the input from user).
Sample Input:
Number: 14567
Sample Output:
Reverse Number: 76541
2. 000
3. AD1947
4. !@#$%
5. 145*999=144855
CMQ15
CMQ16
CMQ17
CMQ18
CMQ19
CMQ2
CMQ20
CMQ3
CMQ4
CMQ5
C
Run
Save
Logout
#include<stdio.h>
int main()
{
int num,rev,rem;
printf("\n enter the number");
scanf("%d",&num);
while(num!=0)
{
rem=num%10;
rev=rev*10+rem;
num=num/10;
}
printf("\n the reversed number is %d",rev);
return 0;
}
14567
<pre>ExecutionFolder/192224043.c: In function 'main':
ExecutionFolder/192224043.c:7:7: error: 'nnum' undeclared (first use in this function); did you mean 'num'?
7 | while(nnum!=0)
|

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Questions
CMQ4.

Write a program to print the all Odd numbers and number of even numbers in between M and N?

Sample Input:

M = 6

N = 15

Sample Output:

All Odd Numbers = 7,9,11,13

Test Cases

1. M = 100, N = 100
2. M = 500, N = 100
3. M = -5, N = 4
4. M = 72, N = -72
5. M = 0, N = 0

CMQ15
CMQ16
CMQ17
CMQ18
CMQ19
CMQ2
CMQ20
CMQ3
CMQ4
CMQ5
CMQ6

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int m,n,i;
printf("\n enter the mth number");
scanf("%d",&m);
printf("\n enter the nth number");
scanf("%d",&n);
for(i=m;i<=n;i++)
{
if(i%2==0)
{
printf("\n the even numbers are %d ",i);
}
else
{
printf("\n the odd numbers are %d ",i);
}
}
return 0;
}
```

6
15

enter the mth number
enter the nth number
the even numbers are 16

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Questions
CMQ18.

Write a program in C to check whether a number is a prime number or not using the function.

Test Data :
Input a positive number : 5

Expected Output :
The number 5 is a prime number.

Test Cases

1. N = P
2. N = 0
3. N = -4
4. N = 11
5. N = 7.2

CMQ1
CMQ10
CMQ11
CMQ12
CMQ13
CMQ14
CMQ15
CMQ16
CMQ17
CMQ18

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int n,i;
printf("\nenter the number");
scanf("%d",&n);
for(i=2;i<=n;i++)
{
if(n%i==0)
{
printf("\nit is a prime number");
}

else if(n==1)
{
printf("it is neither a prime nor a composite number");
}
else
{
printf("\nit is not a prime number");
}
}
return 0;
}
```

5

enter the number

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Questions
CMQ6.

Write a program to print the longest word in the below text "Programming does wonders in the world".

Test Cases

CMQ19
CMQ2
CMQ20
CMQ3
CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CMQ9

C | Run | Save | Logout

```c
#include<stdio.h>
#include<string.h>
int main()
{
char text[]="programming does wonder in the world";
char*word=strtok(text," ");
char longest_word[100]=" ";
while(word!=NULL)
{
if(strlen(word)>strlen(longest_word))
{
strcpy(longest_word,word);
}
word=strtok(NULL," ");
}
printf("\n the longest word is %s",longest_word);
return 0;
}
```

Your Input Goes Here...!!!

<pre>ExecutionFolder/192224043.c: In function 'main':
ExecutionFolder/192224043.c:6:11: warning: implicit declaration of function 'strrok'; did you mean 'strtok'? [-Wimplicit-function-declaration]

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Questions
CMQ8.

Write a C program to display the details of student(Name , Age) by passing structures to a function.

Sample Input :
Enter No.Students: 1
Enter student 1 Name, Age :AAA, 25

Sample Output:
Student 1 details:
Name: AAA
Age : 25

Test Cases

No.Student :4 (Any details of student)
No.Student: 5
No.Student: 1(62, 28)
No.Student: A
No.Student: 1(xxx, 28.2)

CMQ19
CMQ2
CMQ20
CMQ3
CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CMQ9

C | Run | Save | Logout

```c
#include<stdio.h>
struct student
{
char name[50];
int age;
};
void display(struct student s)
{
printf("\n name%s,s.name");
printf("\nage %d ,s.age");
}
int main()
{
struct student s1;
printf("enter name:");
printf("%s",s1.name);
printf("enter age");
scanf("%d",s1.age);
return 0;
}
```

virat
18

<pre>ExecutionFolder/192224043.c: In function 'main':
ExecutionFolder/192224043.c:16:20: warning: missing terminating " character
16 | printf("%s",s1.name");
| ^
Execution

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Questions

CMQ9.

Write a program to find the sum and average of the elements in an array

Sample Input;

Array of elements = {16, 18, 27, 16, 23, 21, 19}

Sample Output:

Sum = 140

Average = 20

Test Cases

CMQ19
CMQ2
CMQ20
CMQ3
CMQ4
CMQ5
CMQ6
CMQ7
CMQ8
CMQ9

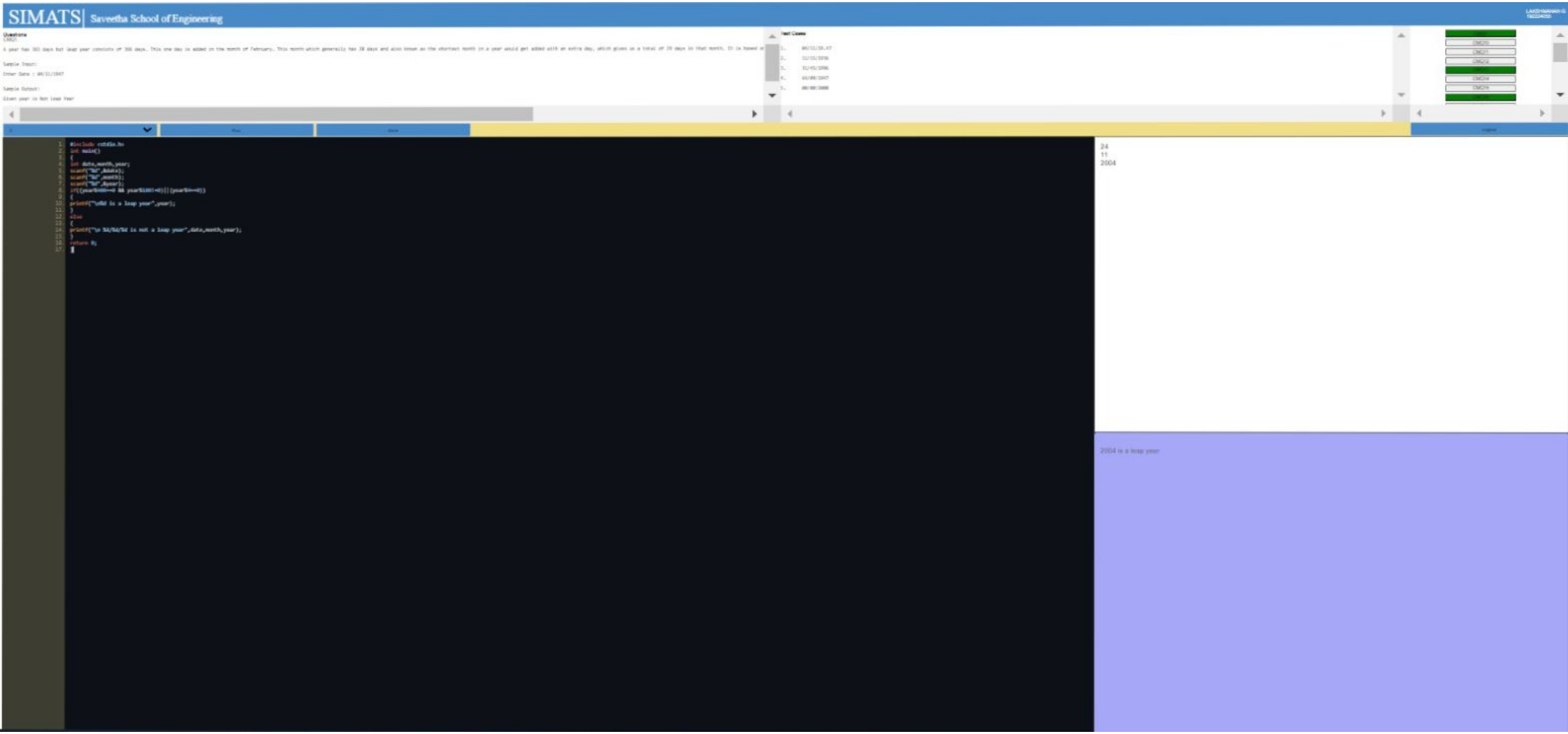
C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int arr[7]={16,18,27,16,23,21,19};
int sum=0,i;
float avg;
for(i=0;i<=7;i++)
{
sum+=arr[i];
avg=sum/7;
}
printf("\n sum of the elements in the array %d",sum);
printf("\n average of the elements in the array %f",avg);
return 0;
}

```

Your Input Goes Here...!!!

sum of the elements in the array 140
average of the elements in the array 20.000000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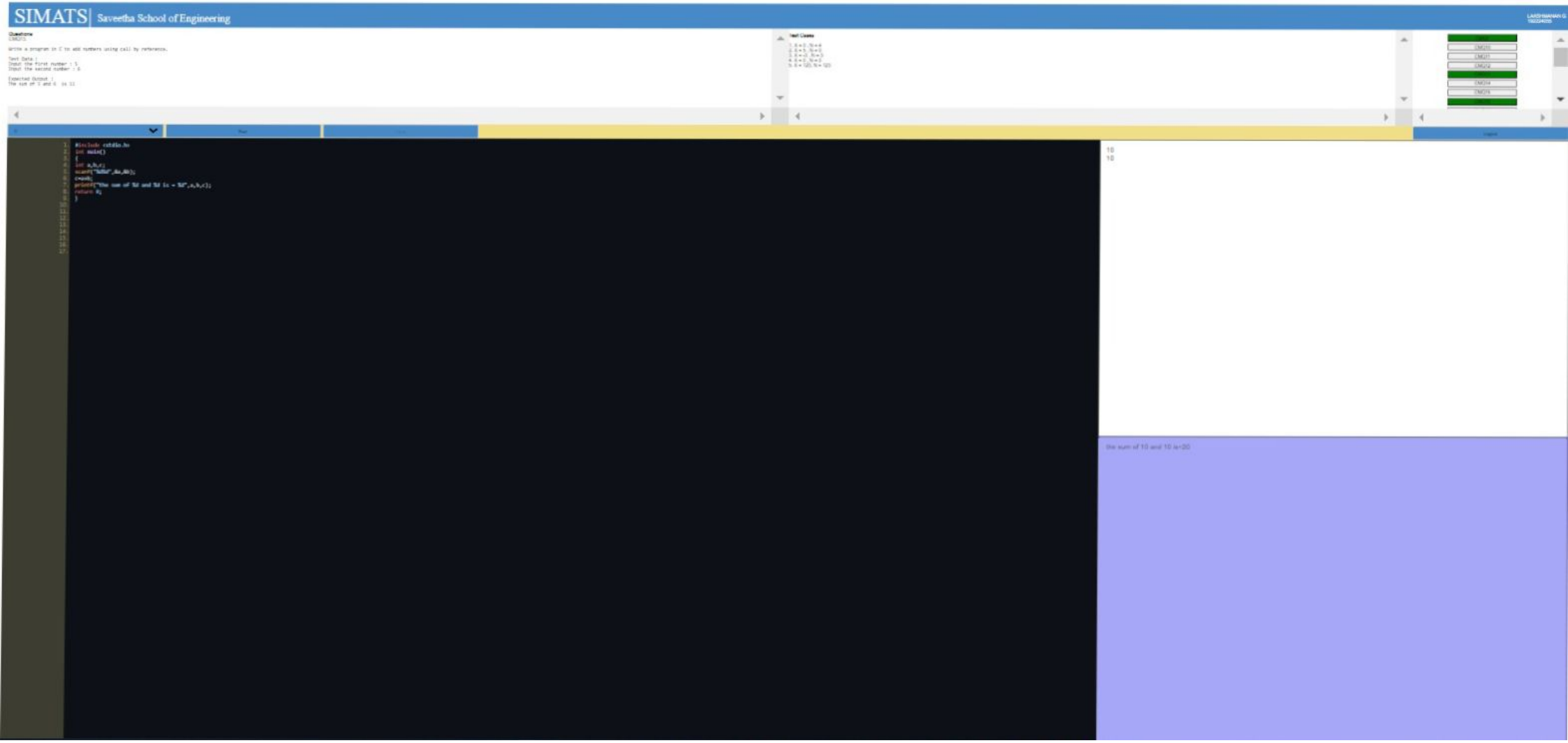
Questions
A year has 365 days but leap year consists of 366 days. This one day is added in the month of February. This month which generally has 28 days and also known as the shortest month in a year would get added with an extra day, which gives us a total of 29 days in that month. It is known a
Sample Input:
Enter Date : 09/11/1947
Sample Output:
Given year is Non Leap Year
Test Cases
#include <stdio.h>
int main()
{
int date,month,year;
scanf("%d",&date);
scanf("%d",&month);
scanf("%d",&year);
if((year%400==0 && year%100!=0)||(year%4==0))
{
printf("%d is a leap year",year);
}
else
{
printf("\n %d/%d/%d is not a leap year",date,month,year);
}
return 0;
}
24
11
2004
2004 is a leap year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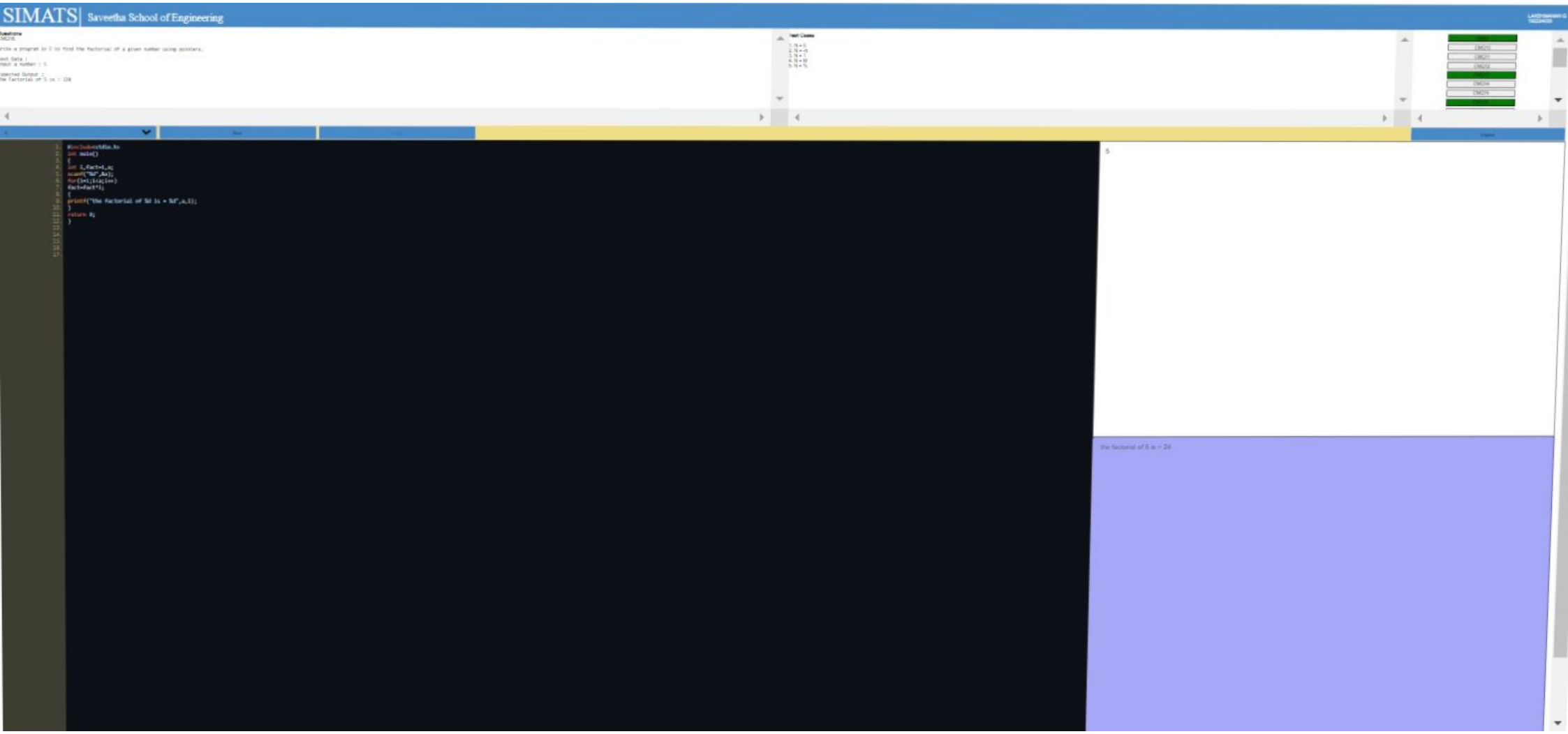
#include<stdio.h>
int main()
{
int a,b,c;
scanf("%d%d",&a,&b);
c=a+b;
printf("the sum of %d and %d is = %d",a,b,c);
return 0;
}
10
10
the sum of 10 and 10 is=20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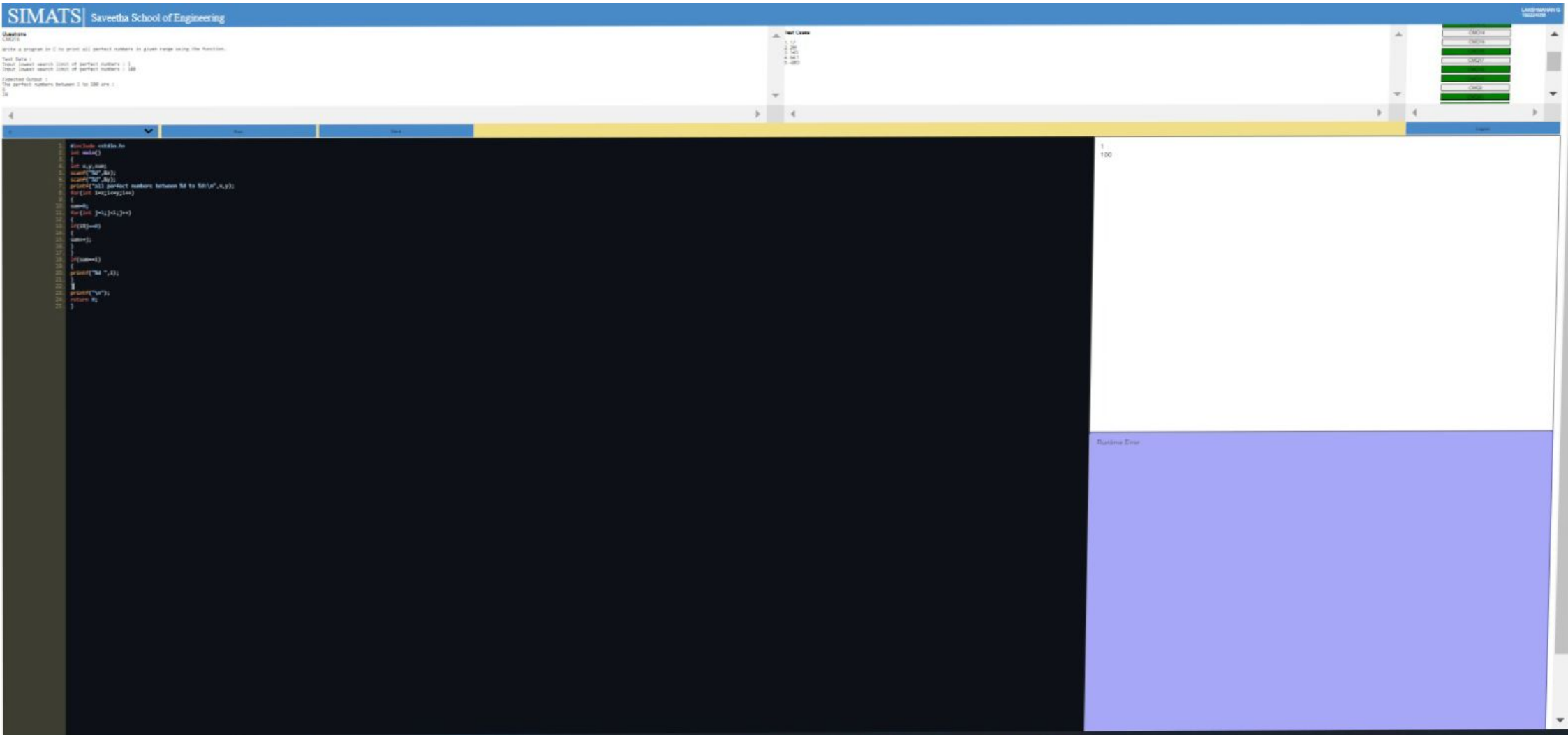
Write a program in C to find the factorial of a given number using pointers.
Sent Data :
Input a number : 5
Expected Output :
The factorial of 5 is : 120
Test Cases
1 N = 5
2 N = -5
3 N = 1
4 N = 10
5 N = 5
#include<stdio.h>
int main()
{
int i,fact=1,n;
scanf("%d",&n);
for(i=1;i<=n;i++)
fact=fact*i;
{
printf("the factorial of %d is = %d",n,i);
}
return 0;
}
5
the factorial of 5 is = 24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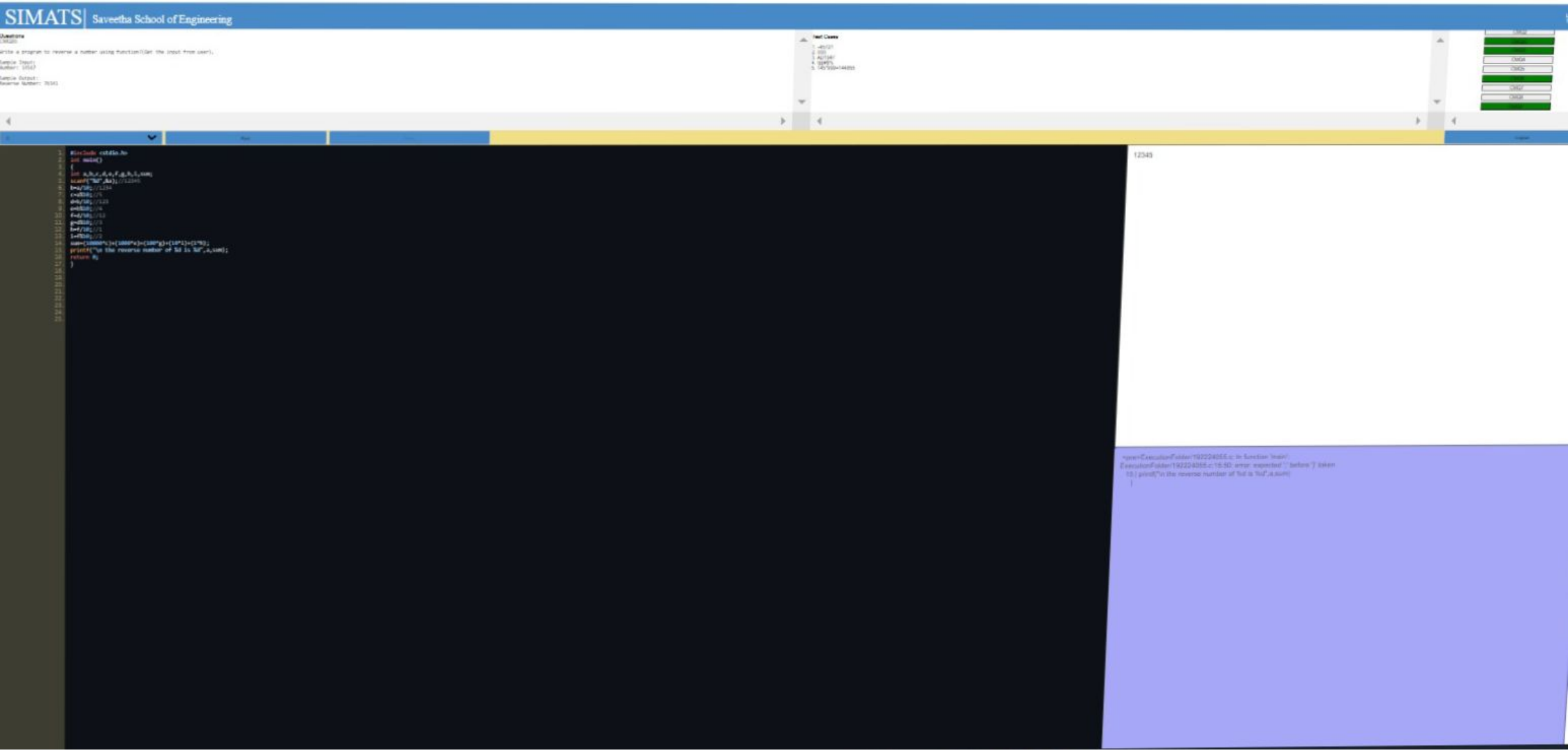
Questions
Write a program in C to print all perfect numbers in given range using the function.
Test Data :
Input lowest search limit of perfect numbers : 1
Input lowest search limit of perfect numbers : 100
Expected Output :
The perfect numbers between 1 to 100 are :
6
28
Test Cases
1 12
2 28
3 145
4 841
5 480
#include <stdio.h>
int main()
{
int x,y,sum;
scanf("%d",&x);
scanf("%d",&y);
printf("All perfect numbers between %d to %d:\n",x,y);
for(int i=x;i<=y;i++)
{
sum=0;
for(int j=1;j<i;j++)
{
if(i%j==0)
{
sum=j;
}
}
if(sum==i)
{
printf("%d ",i);
}
}
printf("\n");
return 0;
}
1
100
Runtime Error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Questions
Write a program to reverse a number using function?(Get the input from user).
Sample Input:
Number: 10567
Sample Output:
Reverse Number: 76501
Test Cases
#include <stdio.h>
int main()
{
int a,b,c,d,e,f,g,h,i,sum;
scanf("%d",&a);//12345
b=a/10;//1234
c=a%10;//5
d=b/10;//123
e=b%10;//4
f=d/10;//12
g=d%10;//3
h=f/10;//1
i=f%10;//2
sum=(10000*i)+(1000*h)+(100*g)+(10*f)+(1*b);
printf("\n the reverse number of %d is %d",a,sum);
return 0;
}
12345
<pre>/tmp/ExecutionFolder/19222455E.c: In function 'main':
/ExecutionFolder/19222455E.c:10:50: error: expected ')' before '}' token
10 | printf("\n the reverse number of %d is %d",a,sum);
|</pre>

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HARISH V
192224043

Questions

CMQ5.

Write a program to find the number of student users in the college, get the total users, staff users details from the clie

Sample Input:

Total Users: 856

Staff Users: 126

Sample Output:

Student Users: 688

Test Cases

1. Total User: 0
2. Total User: -143
3. Total User: 1026, Staff User: 1026
4. Total User: 450, Staff User: 540
5. Total User: 600, Staff User: 450

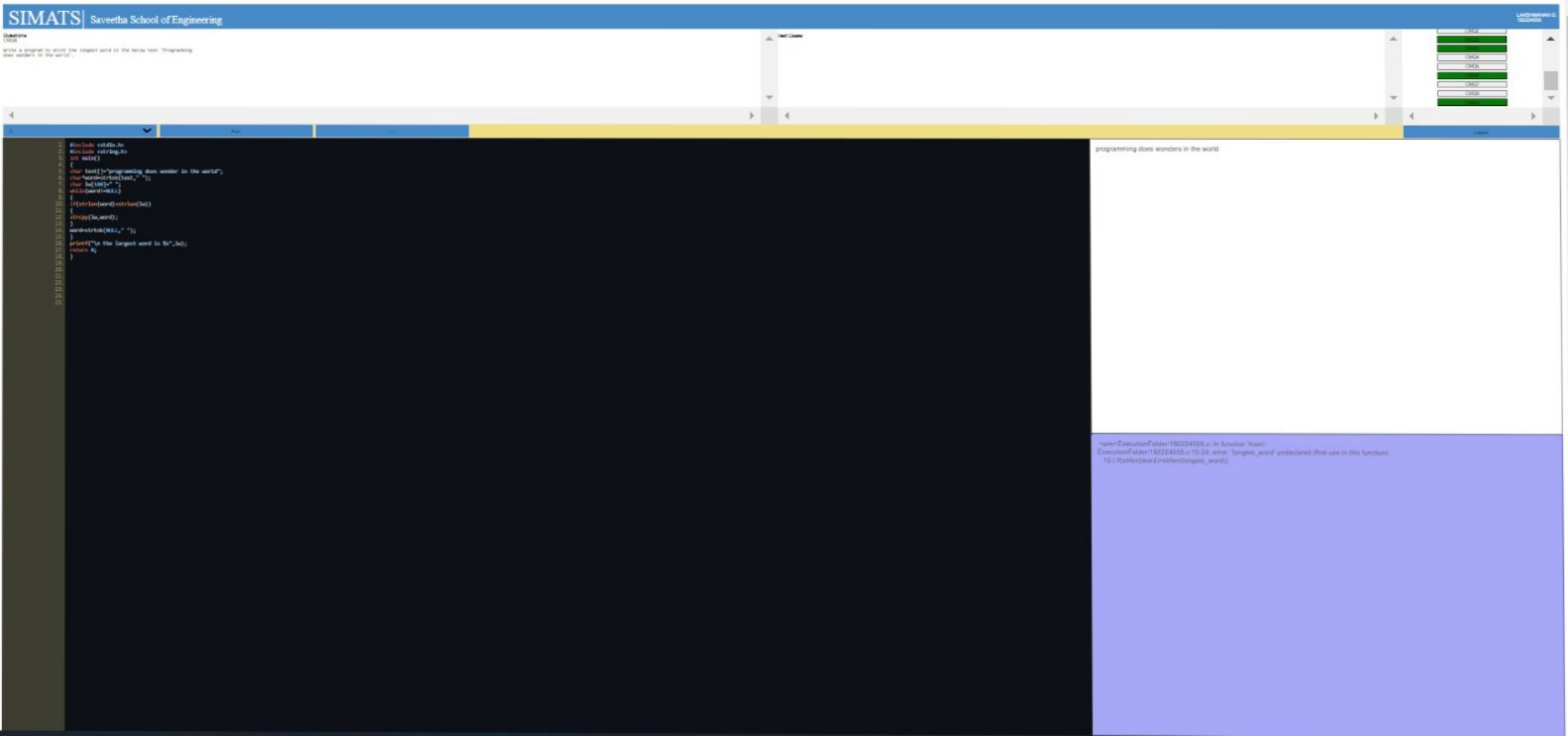
CMQ15 CMQ16 CMQ17 CMQ18 CMQ19 CMQ2 CMQ20 CMQ3 CMQ4 CMQ5 CMQ6

C | Run | Save | Logout

```c
#include<stdio.h>
int main()
{
int student_users,total_users,staff_users;
printf("\n enter the number of student users");
scanf("%d",&student_users);
printf("\nenter the rtotal number of users");
scanf("%d",&total_users);
staff_users=total_users-student_users;
int non_teaching_staff_users=staff_users/3;
printf("\n number of student users %d",student_users);
printf("\n number of staff_users %d",staff_users);
printf("\n number of non_teaching staff uers %d",non_teaching_staff_users);
return 0;
}
```

```
856
126
```

```
enter the mth number
enter the nth number
the even numbers are 6
the odd numbers are 7
the even numbers are 8
```


SIMATS | Saveetha School of Engineering
Questions
CHAR
write a program to print the longest word in the below text 'Programming does wonders in the world'.
Test Cases
#include stdio.h
#include string.h
int main()
{
char text[]="programming does wonder in the world";
char*word=strtok(text," ");
char lw[100]=" ";
while(word!=NULL)
{
if(strlen(word)>strlen(lw))
{
strcpy(lw,word);
}
word=strtok(NULL," ");
}
printf("\n the largest word is %s",lw);
return 0;
}
programming does wonders in the world
<src>:ExecutionFolder/1922240555.c: In function 'main':
ExecutionFolder/1922240555.c:10:24: error: 'longest_word' undeclared (first use in this function)
10 | if(strlen(word)>strlen(longest_word))

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Questions

Permutation refers number of ways in which set members can be arranged or ordered in some fashion. Compile and execute the C program to print unique permutations of a given number.

Sample Input:

Given Number: 143

Sample Output:

Permutations are:

Test Cases

1. 0
2. 111
3. 585
4. -143
5. -598

```c
#include <stdio.h>
#include <string.h>
void swap(char* x,char* y)
{
char temp;
temp=*x;
*x=*y;
*y=temp;
}
void permutate(char* a,int l,int r)
{
int i;
if(l==r)
printf("%s\n",a);
else
{
for(i=l;i<=r;i++)
{
swap((a+l),(a+i));
permutate(a,l+1,r);
swap((a+l),(a+i));
}
}
}
int main()
{
char str[]="143";
int n=strlen(str);
permutate(str,0,n-1);
return 0;
}
```

Your Input Goes Here...!!

```
143
134
413
431
341
314
```