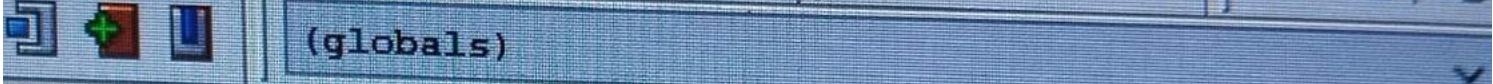


**C, C++ and DSA In Depth****Assignment-4: More on Operators in C Language**

1. Write a program to input a three digit number and display the sum of the digits.
2. Write a program to find ASCII code of the character '+'.
3. Write a program to print size of an int, a float, a char and a double type variable
4. Write a program to make the last digit of a number stored in a variable as zero.  
(Example - if  $x=2345$  then make it  $x=2340$ )
5. Write a program to input a number from the user and also input a digit. Append a digit in the number and print the resulting number. (Example - number=234 and digit=9 then the resulting number is 2349)
6. Assume price of 1 USD is INR 84.23. Write a program to take the amount in INR and convert it into USD.
7. Write a program to take a three digit number from the user and rotate its digits by one position towards the right.
8. What will be the value stored in the variable  $x$  after executing following statement:  
 $x=10>8>4;$
9. What will be the value stored in the variable  $x$  after executing following statement:  
 $x=12>-2;$
10. What will be the value stored in the variable  $x$  after executing following statement:  
 $x=3<0&&5>0;$



assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.c

```
1
2 #include<stdio.h>
3 int main()
4 {
5     int n,sum;
6     printf("Enter any three digit no.");
7     scanf("%d",&n);
8
9     sum=n/100+n/10%10+n%10;
10    printf("Sum of three digit no. %d",sum);
```

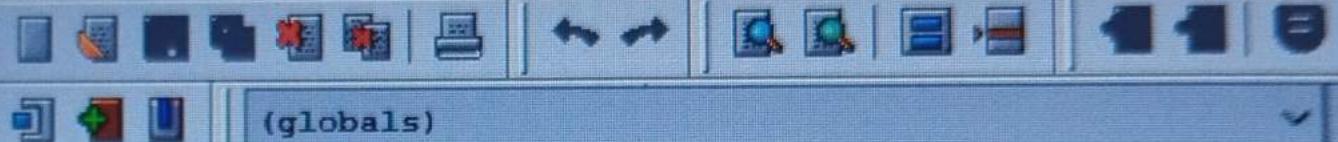
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assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp a

```
1 #include<stdio.h>
2 int main(){
3     char ch='+';
4     printf(" %c ASCII Code is %d",ch,ch);
5 }
```

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(globals)

assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp

```
1 #include<stdio.h>
2 int main(){
3     int x;
4     x=sizeof(char);
5     printf("Size of char in bytes %d\n",x);
6     x=sizeof(int);
7     printf("Size of int in bytes %d\n",x);
8     x=sizeof(float);
9     printf("Size of float in bytes %d\n",x);
10    x=sizeof(double);
11    printf("Size of double in bytes %d",x);
12 }
13 }
```

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assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp ass

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no.");
5     scanf("%d",&n);
6     n=(n-n%10);
7     printf("Given number make the last digit zero %d",n);
8 }
```

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(globals)

assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp assi

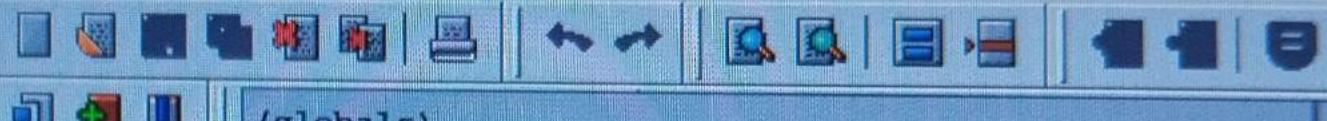
```
1 #include<stdio.h>
2 int main(){
3     int n,digit;
4     printf("Enter any no.");
5     scanf("%d",&n);
6     printf("Enter any one digit ");
7     scanf("%d",&digit);
8     n=n*10+digit;
9     printf("A digit is append for given no. %d",n);
10 }
```



assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp

```
1 #include<stdio.h>
2 int main(){
3     float x,d;
4     printf("Enter the in INR ");
5     scanf("%f",&x);
6     d=x/83.23;
7     printf("USD is %0.2f$ ",d);
8 }
```

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(globals)

assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp

```
1 #include<stdio.h>
2 int main(){
3     int x,rot;
4     printf("Enter any no. ");
5     scanf("%d",&x);
6     rot=x%10*100+x/10;
7     printf("Rotate its digit %d",rot);
8 }
```

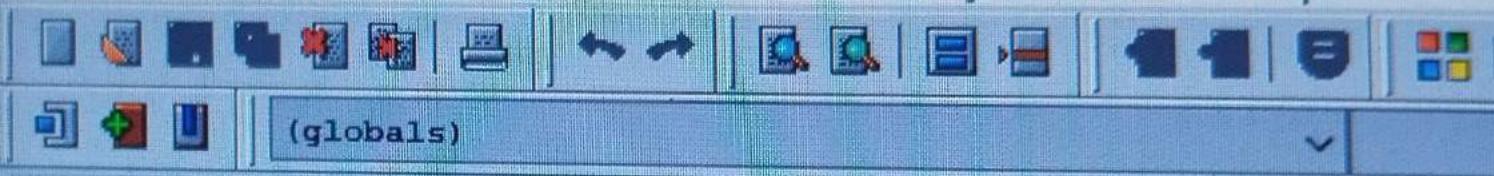
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(globals)

```
assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp assi
```

```
1 #include<stdio.h>
2 int main(){
3     int x;
4     x=10>8>2;
5     printf("After executing statement x is stored: %d",x);
6 }
```

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(globals)

assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp assig

```
1 #include<stdio.h>
2 int main(){
3     int x;
4     x=!2>2;
5     printf("After executing statement x is stored: %d",x);
6 }
```

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(globals)

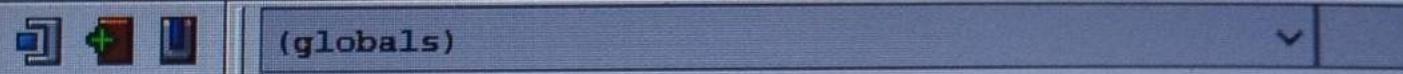
assig4.1.cpp assig4.2.cpp assig4.3.cpp assig4.4.cpp assig4.5.cpp assig4.6.cpp assig4.7.cpp

```
1 #include<stdio.h>
2 int main(){
3     int x;
4     x=3<0&&5>0;
5     printf("After executing statement stored value in x %d:",x);
6 }
```

### **Assignment-5: Decision Control Statements**

1. Write a program to check whether a given number is positive or non positive.
2. Write a program to check whether a given number is divisible by 5 or not
3. Write a program to check whether a given number is an even number or an odd number.
4. Write a program to check whether a given number is an even number or an odd number without using % operator.
5. Write a program to check whether the given number is even or odd using a bitwise operator.
6. Write a program to check whether a given number is a three digit number or not.
7. Write a program to print greater between two numbers. Print one number if both are the same.
8. Write a program to check whether roots of a given quadratic equation are real & distinct, real & equal or imaginary roots
9. Write a program to check whether a given year is a leap year or not.
10. Write a program to find the greatest among three given numbers. Print number once if the greatest number appears two or three times.

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assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp as

```
1 #include<stdio.h>
2 int main(){
3     /*int n;
4     printf("Enter any no.");
5     scanf("%d",&n);
6     if(n>0)
7         printf("Positive number %d",n);
8     else
9         printf("Non positive number %d",n);
10
11    */
12    int x=10;
13    ++x;
14    printf("%d",x);
15 }
```

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assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no. ");
5     scanf("%d",&n);
6     if(n%5==0){
7         printf("%d is divisible by 5 ",n);
8     }
9     else
10    {
11        printf("%d is not divisible by 5 ",n);
12    }
13 }
14
```



(globals)

assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no. ");
5     scanf("%d",&n);
6     if(n%2==0)
7         printf("%d is even no.",n);
8     else
9         printf("%d is odd no.",n);
10 }
```



assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no.");
5     scanf("%d",&n);
6     if(n/2*2==n)
7         printf("%d is even no.",n);
8     else
9         printf("%d is odd no.",n);
10
11 }
```

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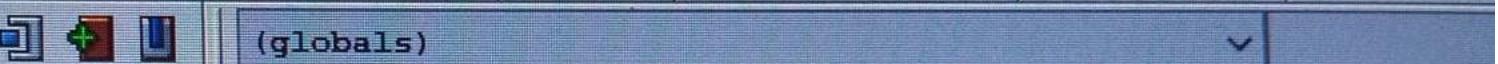
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(globals)

assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp assig5.7.cpp

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no. ");
5     scanf("%d" ,&n);
6     if(n&1==1)
7         printf("%d is odd no. ",n);
8     else
9         printf("%d is even no. ",n);
10 }
```

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assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp assig5.7.cpp

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no.");
5     scanf("%d",&n);
6     if(n>=100&&n<=999)
7         printf("%d is three digit no.",n);
8     else
9         printf("%d is not three digit no.",n);
10
11 }
```

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(globals)

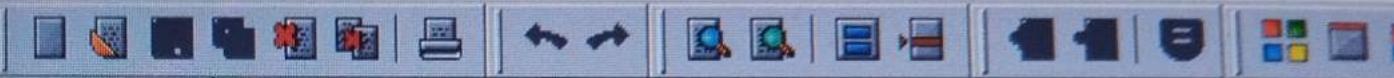
assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp assig5

```
1 #include<stdio.h>
2 int main(){
3     int a,b;
4     printf("Enter the first no.");
5     scanf("%d",&a);
6     printf("Enter the second no.");
7     scanf("%d",&b);
8     printf("\n");
9     if(a>b)
10        printf("%d is largest.",a);
11    else
12        printf("%d is largest.",b);
13 }
```



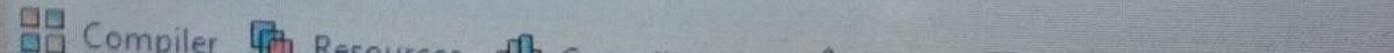
assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp assig5.7.cpp

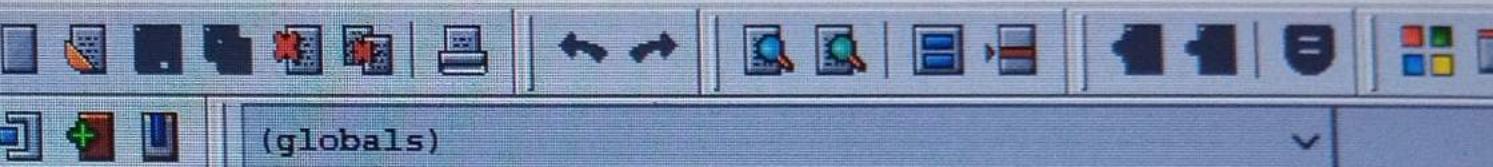
```
1 #include<stdio.h>
2 #include<math.h>
3 int main(){
4     int a,b,c;
5     printf("Enter the value of a ");
6     scanf("%d",&a);
7     printf("Enter the value of b ");
8     scanf("%d",&b);
9     printf("Enter the value of c ");
10    scanf("%d",&c);
11    printf("\n");
12    float r1,r2,d;
13    if(a==0){
14        printf("Quadratic equation is not possible");
15    }
16    else{
17        d=b*b-4*a*c;
18        if(d>0){
19            r1=(-b+sqrt(d))/2*a;
20            r2=(-b-sqrt(d))/2*a;
21            printf("Roots are r1=%0.2f and r2=%0.2f",r1,r2);
22        }
23        else if(d==0){
24            r1=-b/2*a;
25            r2=-b/2*a;
26            printf("Roots are r1=%0.2f and r2=%0.2f",r1,r2);
27        }
28        else
29            printf("Roots are imaginary");
30    }
31 }
```



assig5.1.cpp assig5.2.cpp assig5.3.cpp assig5.4.cpp assig5.5.cpp assig5.6.cpp assig5.7.cpp

```
1 #include<stdio.h>
2 int main(){
3     int year;
4     printf("Enter the Year ");
5     scanf("%d",&year);
6     if(year%100==0)
7         if(year%400==0)
8             printf("%d is leap Year.",year);
9         else
10            printf("%d is not leap Year.",year);
11
12     else if(year%4==0)
13         printf("%d is leap year.",year);
14     else
15         printf("%d is not leap year.",year);
16 }
```





```
1 #include<stdio.h>
2 int main(){
3     int a,b,c;
4     printf("Enter the value of a:");
5     scanf("%d",&a);
6     printf("Enter the value of b:");
7     scanf("%d",&b);
8     printf("Enter the value of c:");
9     scanf("%d",&c);
10    if(a>b&&a>c)
11        printf("%d is greatest ",a);
12    else if(b>c)
13        printf("%d is greatest ",b);
14    else
15        printf("%d is greatest ",c);
16
17
18 }
```

## Assignment-6: More on Decision Control Statements

1. Write a program to check whether a given number is a three digit number or not.
2. Write a program which takes the cost price and selling price of a product from the user. Now calculate and print profit or loss percentage.
3. Write a program to take marks of 5 subjects from the user. Assume marks are given out of 100 and passing marks is 33. Now display whether the candidate passed the examination or failed.
4. Write a program to check whether a given alphabet is in uppercase or lowercase.
5. Write a program to check whether a given number is divisible by 3 and divisible by 2.
6. Write a program to check whether a given number is divisible by 7 or divisible by 3.
7. Write a program to check whether a given number is positive, negative or zero.
8. Write a program to check whether a given character is an alphabet (uppercase), an alphabet (lower case), a digit or a special character.
9. Write a program which takes the length of the sides of a triangle as an input. Display whether the triangle is valid or not.
10. Write a program which takes the month number as an input and display number of days in that month.

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(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no.");
5     scanf("%d",&n);
6     if(n>=100&&n<=999)
7         printf("%d is a three digit no.",n);
8     else
9         printf("%d is not a three digit no.",n);
10 }
```

I

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 10 Length: 202 Insert Done parsing in 0.0

(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8..

```
1 #include<stdio.h>
2 int main(){
3     float cp,sp;
4     float profit,loss;
5     printf("Enter cost price.");
6     scanf("%f",&cp);
7     printf("Enter selling price.");
8     scanf("%f",&sp);
9     if(sp-cp>=0){
10         profit=(sp-cp)/cp*100;
11         printf("Profit is %.2f",profit);
12     }
13     else {
14         loss=(cp-sp)/cp*100;
15         printf("Loss is %.2f",loss);
16     }
17 }
18
19 }
20
```

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 20 Length: 334 Insert Done parsing.in

The screenshot shows a software interface with a toolbar at the top containing numerous icons. Below the toolbar is a tab bar labeled '(globals)'. The main area is a code editor displaying the following C++ code:

```
1 #include<stdio.h>
2 int main(){
3     float s1,s2,s3,s4,s5;
4     float per;
5     printf("Enter the 5 subject No.");
6     scanf("%f %f %f %f %f",&s1,&s2,&s3,&s4,&s5);
7     per=(s1+s2+s3+s4+s5)/5;
8     if(per>=33)
9         printf("Candidate passed the examination %.2f%%",per);
10    else
11        printf("candidate failed the examination %.2f%%",per);
12
13
14
15 }
16
```

At the bottom of the interface, there are several tabs: Compiler, Resources, Compile Log, Debug, Find Results. Below these tabs, status information is displayed: Line: 1, Col: 1, Sel: 0, Lines: 16, Length: 331, Insert, and Done parsing in 0.016.

File Edit Search View Project Tools

(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp

```
1 #include<stdio.h>
2 int main(){
3     char x;
4     printf("Enter Alphabet: ");
5     scanf("%c",&x);
6     if(x>='a' && x<='z')
7         printf("Alphabet is Lowercase %c ",x);
8     else if (x>='A' && x<='Z')
9         printf("Alphabet is Uppercase %c ",x);
10    else
11        printf("%c is Not alphabet.",x);
12 }
```

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 12 Length: 274 Insert Done parsing in 0.0

File Edit Search View Project Execute Tools AStyle Window Help

(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp assig

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter the any no.");
5     scanf("%d",&n);
6     if(n%3==0 && n%2==0)
7         printf("%d is divisible by 3 and 2 ",n);
8     else
9         printf("%d is Not divisible by 3 and 2 ",n);
10
11 }
```

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 11 Length: 218 Insert Done parsing in 0.016s

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(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp ass

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no.");
5     scanf("%d",&n);
6     printf("\n");
7     if(n%7==0 || n%3==0)
8         printf("%d is divisible by 7 or divisible by 3",n);
9     else
10        printf("%d is not divisible by 7 or not divisible by 3",n);
11 }
```

C:\Users\Sohan\Documents\C,C++

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 11 Length: 256 Insert Done parsing in 0.0

C:\Users\Sohan\Documents\C,C++,DSA Assignment\ C programming assignment\assignment6\assig6.7.cpp - Dev-C++

File Edit Search View Project Execute Tools AStyle Window Help

(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp assig6.9.cpp

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     printf("Enter any no.");
5     scanf("%d", &n);
6     if(n>0)
7         printf("%d is a positive no.", n);
8     else if(n<0)
9         printf("%d is a negative no.", n);
10    else
11        printf("%d is a zero", n);
12 }
```

C:\Users\Sohan\Documents\C,C++,DSA Assignment\ C programming assignment\assignment6\assig6.7.cpp

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 12 Length: 227 Insert Done parsing in 0.016 second

File Edit Search View Project Execute Tools AStyle Window Help

(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp assig6.9.cpp assig6.10.cpp

C:\Users\Sohan\Documents\C,C++\DSA Assignment\Assignment\Assignment6\assig6.8.cpp - Dev-C++ 5.11

TDM-G

```
1 #include<stdio.h>
2 int main(){
3     char ch;
4     printf("Enter any character: ");
5     scanf("%c",&ch);
6     printf("\n");
7     if(ch>=65 && ch<=90)
8         printf("%c is an alphabet (uppercase)",ch);
9     else if(ch>=97 && ch<=122)
10        printf("%c is alphabet(lowercase)",ch);
11    else if(ch>=32 && ch<=47 || ch>=58 && ch<=64 || ch>=91 && ch<=96 || ch>=123 && ch<=126)
12        printf("%c is special character",ch);
13    else if(ch>=48 && ch<=57)
14        printf("%c is digit",ch);
15    else
16        printf("%c is other character",ch);
17 }
18
```

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 18 Length: 505 Insert Done parsing in 0.016 seconds

File Edit Search View Project Execute Tools AStyle Window Help

(globals)

assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp assig6.9.cpp ass

```
1 #include<stdio.h>
2 int main(){
3     int a,b,c;
4     printf("Enter the length of triangle side a: ");
5     scanf("%d",&a);
6     printf("Enter the length of triangle side b: ");
7     scanf("%d",&b);
8     printf("Enter the length of triangle side c: ");
9     scanf("%d",&c);
10    if(a+b>c && b+c>a && c+a>b)
11        printf("Triangle is Valid");
12    else
13        printf("Triangle is not valid");
14 }
```

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Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 14 Length: 359 Insert Done parsing in 0.016 seconds

(globals)

```
assig6.1.cpp assig6.2.cpp assig6.3.cpp assig6.4.cpp assig6.5.cpp assig6.6.cpp assig6.7.cpp assig6.8.cpp assig6.9.cpp
```

```
1 #include<stdio.h>
2 int main(){
3     int m;
4     printf("Enter the month no.");
5     scanf("%d",&m);
6     printf("\n");
7     if(m==1 || m==3 || m==5 || m==7 || m==8 || m==10 || m==12)
8         printf(" In month total days is 31");
9     else if(m==4 || m==6 || m==9 || m==11)
10        printf("In month total days is 30");
11    else if (m==2)
12        printf("In month total days is 28 or 29");
13    else
14        printf("Invalid month number");
15 }
```

Compiler Resources Compile Log Debug Find Results

Line: 1 Col: 1 Sel: 0 Lines: 15 Length: 402 Insert Done parsing in 0.016 second