**Problem name:** C program find the maximum between two numbers

```
Source code: #include<stdio.h>
int main(){
int num1,num2;
printf("enter two number:");
scanf("%d%d",&num1,&num2);
if(num1>num2){
  printf("%d is maximum",num1);
}
if(num1<num2){
  printf("%d is maximum",num2);
}
if(num1==num2){
  printf("both are equal");
}
return 0;
}
        "C:\Users\Admin\Desktop\co X
        enter two number:9
        9 is maximum
        Process returned 0 (0x0)
                                        execution time : 3.369 s
        Press any key to continue.
```

**Problem name:** C program find the maximum number between three numbers

```
max = num3;
    }
  }
  else
  {
    if(num2 > num3)
    {
      max = num2;
    else
    {
      max = num3;
    }
  }
printf("Maximum among all three numbers=%d",max);
return 0;
}
```

```
Enter three numbers:56
54
51
Maximum among all three numbers=56
Process returned 0 (0x0) execution time : 3.464 s
Press any key to continue.
```

**Problem name:** C program to check whether a number is positive, negative or zero

```
Source code: #include<stdio.h>
int main(){
  int num;
  printf("inter the number:");
  scanf("%d",&num);
  if(num>0)
  {
     printf("number is POSITIVE");
  }
  if(num<0){
     printf("number is NEGATIVE");
  }</pre>
```

```
if(num==0){
    printf("number is ZERO");
}
return 0;
}
```

```
"C:\Users\Admin\Desktop\coi \times + \times inter the number:5 number is POSITIVE Process returned 0 (0x0) execution time : 1.623 s Press any key to continue.
```

Problem name: C program to check whether a number is divisible by 5 and 11 or not

```
Source code: #include<stdio.h>
int main(){
  int num;
  printf("inter the number:");
  scanf("%d",&num);
  if((num%5==0)&&(num%11==0)){
     printf("the number is divisible by 5 and 11");
  }
  else{
     printf("the number is not divisible by 5 and 11");
  }
  return 0;
}
```

# Output:

```
inter the number:55
the number is divisible by 5 and 11
Process returned 0 (0x0) execution time : 1.124 s
Press any key to continue.
```

**Problem name:** C program to check whether a number is even or odd

```
<u>Source code:</u> #include < stdio.h > int main(){ int num;
```

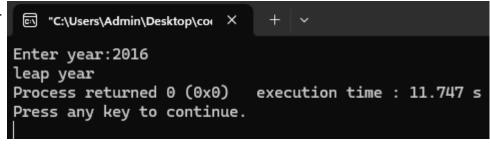
```
printf("enter any number to check even or odd:");
scanf("%d",&num);
if(num%2==0){
    printf("the number is even");
}
else{
    printf("the number is odd");
}
return 0;
}
```

```
enter any number to check even or odd:12
the number is even
Process returned 0 (0x0) execution time: 3.504 s
Press any key to continue.
```

**Problem name:** C program to check leap year

```
Source code: #include<stdio.h>
int main(){
  int year;
  printf("Enter year:");
  scanf("%d",&year);
  if((year%4==0)&&(year%100!=0)||(year%400==0)){
      printf("leap year");
  }
  else{
      printf("common year");
  }
  return 0;
}
```

## Output:



**<u>Problem name:</u>** C program to check whether a character is alphabet or not

```
Source code: #include<stdio.h>
int main(){
char ch;
printf("Enter any character:");
scanf("%c",&ch);
if((ch>='a'\&\&ch<='z')||(ch>='A'\&\&ch<='Z')){}
  printf("the character is ALPHABET");
}
else{
  printf("the character is not ALPHABET");
}
return 0;
}
         ©:\ "C:\Users\Admin\Desktop\co( ×
Output:
        Enter any character:a
        the character is ALPHABET
        Process returned 0 (0x0)
                                          execution time : 1.127 s
        Press any key to continue.
```

Problem name: C program to check vowel or consonant

Source code: #include <stdio.h>

```
int main()
  char ch;
  printf("Enter any character: ");
  scanf("%c", &ch);
  if(ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u' ||
    ch=='A' || ch=='E' || ch=='I' || ch=='O' || ch=='U')
  {
     printf("'%c' is Vowel.", ch);
  else if((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))
  {
     printf("'%c' is Consonant.", ch);
  }
  else
     printf("'%c' is not an alphabet.", ch);
  }
  return 0;
```

```
Enter any character: a
'a' is Vowel.

Process returned 0 (0x0) execution time: 1.402 s
Press any key to continue.
```

**<u>Problem name:</u>** C program to check whether a character is alphabet\_, digit or special character

```
Source code: #include <stdio.h>
int main(){
char ch;
printf("Enter any character:");
scanf("%c",&ch);
if((ch>='a'\&\&ch<='z')||(ch>='A'\&\&ch<='Z')){}
 printf("'%c'is alphabet",ch);
 else if(ch>='0'&&ch<='9'){
  printf("'%c'is digit",ch);
 else{
  printf("'%c'is special character",ch);
return 0;
               C:\Osers\Admin\Desktop\cor
          Enter any character:a
          'a'is alphabet
Output:
          Process returned 0 (0x0)
                                           execution time : 1.838 s
          Press any key to continue.
          Enter any character:1
           '1'is digit
                                            execution time : 2.032 s
          Process returned 0 (0x0)
          Press any key to continue.
```

```
Enter any character:@
'@'is special character
Process returned 0 (0x0) execution time : 2.695
Press any key to continue.
```

**<u>Problem name:</u>** C program to check whether a character is uppercase of lowercase

```
Source code: #include < stdio.h >
int main(){
char ch;
printf("Enter any character:");
scanf("%c",&ch);
if(ch>='A'&&ch<='Z')
  printf("is uppercase alphabet",ch);
}
else if(ch >='a'&& ch <='z')
  printf("is lowercase alphabet",ch);
}
else
  printf("is not an alphabet",ch);
}
return 0;
}
```

#### **Output:**

```
Enter any character:A
is uppercase alphabet
Process returned 0 (0x0) execution time : 1.729 s
Press any key to continue.
```

**Problem name:** C program to enter week number and print day of week

```
<u>Source code:</u> int main(){ int week; printf("inter week number(1-7):"); scanf("%d",&week);
```

```
if(week==1){}
  printf("Monday");
}
else if(week==2){
  printf("Tuesday");
else if(week==3){
  printf("Wednesday");
}
else if(week==4){
  printf("Thursday");
}
else if(week==5){
  printf("Friday");
else if(week==6){
  printf("Saturday");
else if(week==7){
  printf("Sunday");
}
else
  printf("invalid input! Please inter week number between 1-7");
}
return 0;
}
Output:
          © C:\Users\Admin\Desktop\cod X
```

**Problem name:** C program to find days in month

inter week number(1-7):1

Process returned 0 (0x0) Press any key to continue. execution time : 2.502 s

```
Source code: #include<stdio.h>
int main(){
  int month;
  printf("inter the month number(1-12):");
  scanf("%d",&month);
  if(month==1){
     printf("It contains 31 days.");
  }
  else if (month==2){
```

Monday

```
printf("It contains 28 or 29 days.");
}
else if (month==3){
  printf("It contains 31 days.");
}
else if (month==4){
  printf("It contains 30 days.");
}
else if(month==5){
  printf("It contains 31 days.");
}
else if(month==6){
  printf("It contains 30 days.");
}
else if(month==7){
  printf("It contains 31 days.");
}
else if(month==8)
  printf("It contains 31 days.");
else if(month==9){
  printf("It contains 30 days.");
}
else if(month==10){
  printf("It contains 31 days.");
}
else if(month==11){
  printf("It contains 30 days.");
}
else if(month==12){
  printf("It contains 31 days.");
}
else{
  printf("invalid info! please inter the month (1-12)");
}
return 0;
          C:\Users\Admin\Desktop\cod
Output:
         inter the month number(1-12):8
         It contains 31 days.
         Process returned 0 (0x0)
                                              execution time : 3.509 s
         Press any key to continue.
```

# **Problem name:** C program to find all roots of quadratic equation

```
Source code: #include<stdio.h>
#include<math.h>
int main(){
float a,b,c;
float root1,root2,imaginary;
float discriminant;
printf("Enter values of a, b, c of quadratic equation (aX^2 + bX + c):");
  scanf("%f%f%f", &a, &b, &c);
  discriminant= (b*b)-(4*a*c);
  if(discriminant>0)
  {
       root1=(-b+sqrt(discriminant))/(2*a);
  root2=(-b-sqrt(discriminant))/(2*a);
     printf("Two distinct and real roots exists: %2f and %2f",root1,root2);
  }
  else if(discriminant=0)
  {
     root1=root2=-b/(2*a);
     printf("two equal and real root exist: %2f and %2f",root1,root2);
  else if(discriminant < 0)
  {
     root1 = root2 = -b / (2 * a);
     imaginary = sqrt(-discriminant) / (2 * a);
     printf("Two distinct complex roots exists: %2f + i%2f and %2f - i%2f",
          root1, imaginary, root2, imaginary);
return 0;
}
```

## **Output:**

```
Enter values of a, b, c of quadratic equation (aX^2 + bX + c): 8
-2
-4
Two distinct and real roots exists: 0.843070 and -0.593070
Process returned 0 (0x0) execution time : 7.682 s
Press any key to continue.
```

# **Problem name:** C program to calculate profit or loss

```
Source code: #include<stdio.h>
int main(){
int cp,sp,amt;
printf("inter the cost price:");
scanf("%d",&cp);
printf("inter the selling price:");
scanf("%d",&sp);
if(sp>cp){
  amt=sp-cp;
  printf("profit=%d",amt);
}
else if(sp<cp){
     amt=cp-sp;
  printf("loss=%d",amt);
}
else{
  printf("no profit no loss");
}
return 0;
}
```

## **Output:**

```
inter the cost price:1400
inter the selling price:1600
profit=200
Process returned 0 (0x0) execution time: 5.613 s
Press any key to continue.
```