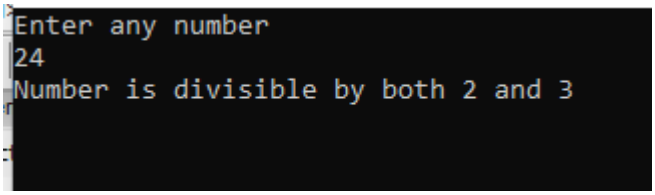
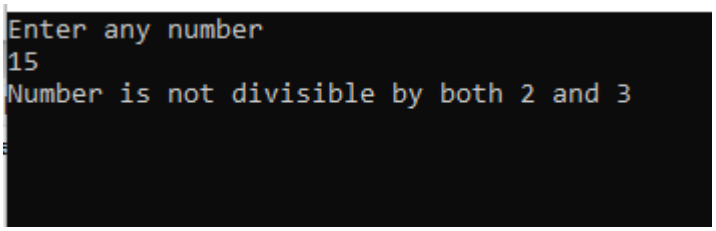
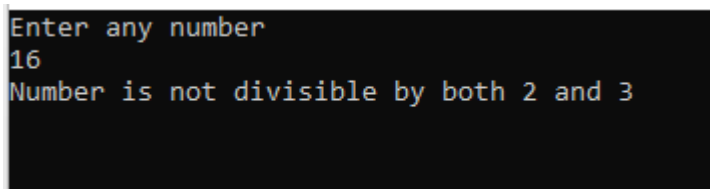
ASSIGNMENT 08

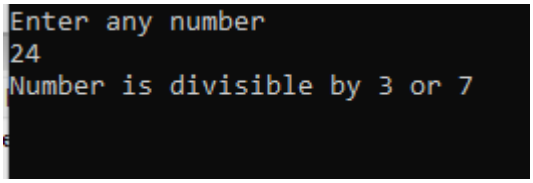
1.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int num;
   printf("Enter any number\n");
   scanf("%d",&num);
   if(num%2==0 && num%3==0)
      printf("Number is divisible by both 2 and 3");
   else
      printf("Number is not divisible by both 2 and 3");
   getch();
}
```

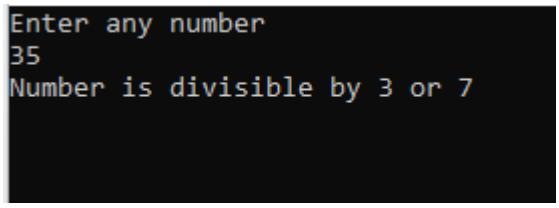


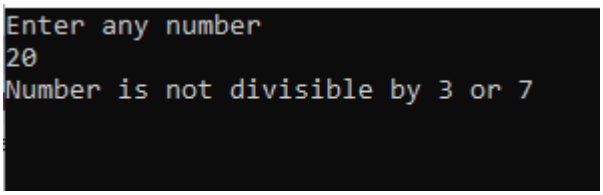




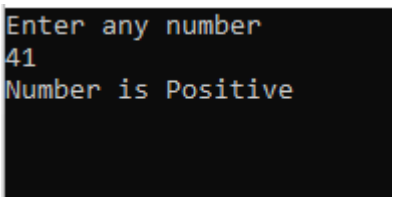
2.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int num;
   printf("Enter any number\n");
   scanf("%d",&num);
   if(num%3==0 ||num%7==0)
      printf("Number is divisible by 3 or 7");
   else
      printf("Number is not divisible by 3 or 7");
   getch();
}
```

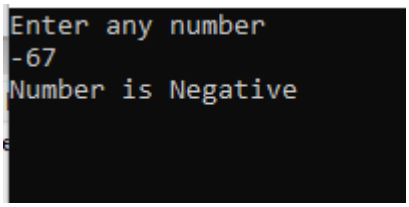


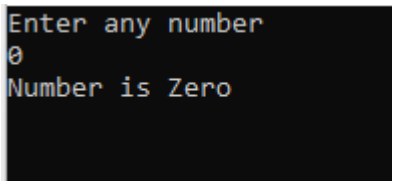




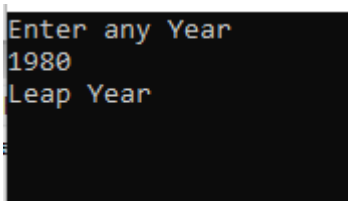
3.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int num;
   printf("Enter any number\n");
   scanf("%d",&num);
   if(num>0)
      printf("Number is Positive");
   else if(num<0)
      printf("Number is Negative");
   else
      printf("Number is Zero");
   getch();
}
```

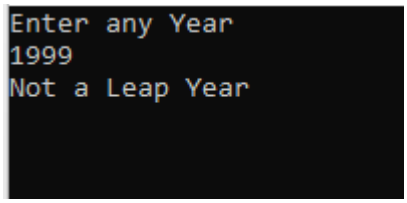






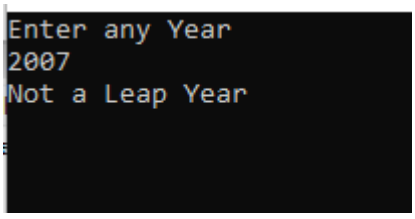
4.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int year;
   printf("Enter any Year\n");
   scanf("%d",&year);
   if(year%4)
      printf("Not a Leap Year");
   else if(year%100)
      printf("Leap Year");
   else if(year%400)
      printf("Not a Leap Year");
   else
      printf("Leap Year");
   getch();
}
```

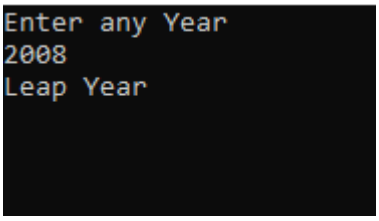




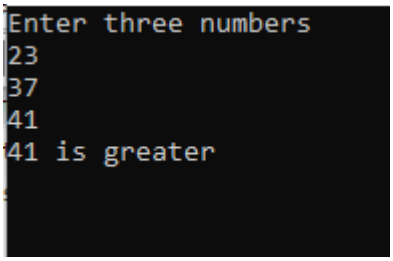
OR

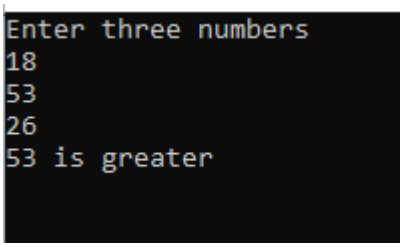
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int year;
   printf("Enter any Year\n");
   scanf("%d",&year);
   if(year%100==0)
   {
      if(year%400)
         printf("Not a Leap Year");
      else
         printf("Leap Year");
   }
   else if(year%4)
      printf("Not a Leap Year");
   else
      printf("Leap Year");
   getch();
}
```

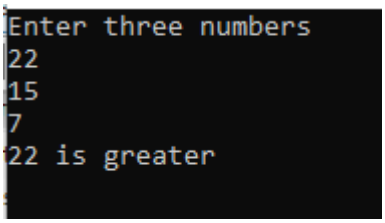




5.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int num1,num2,num3;
   printf("Enter three numbers\n");
   scanf("%d %d %d",&num1,&num2,&num3);
   if(num1>num2)
   {
      if(num1>num3)
         printf("%d is greater",num1);
      else
         printf("%d is greater",num3);
   }
   else if(num2>num1)
   {
      if(num2>num3)
         printf("%d is greater",num2);
      else
         printf("%d is greater",num3);
   }
   else if(num1==num2)
      printf("%d is greater",num1);

   else if(num2==num3)
      printf("%d is greater",num2);

   else if(num1==num3)
      printf("%d is greater",num1);

   else if(num1==num2==num3)
      printf("%d is greater",num1);

   getch();
}
```



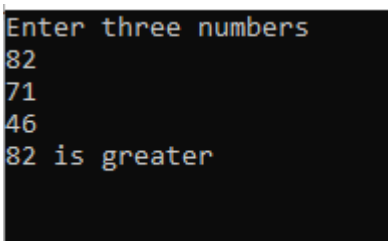


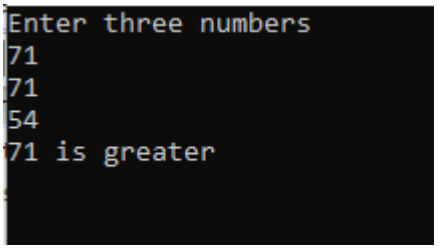


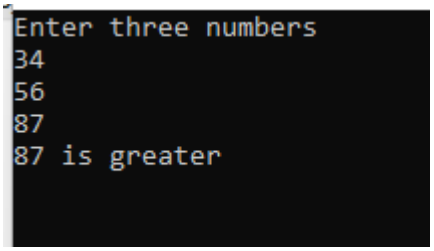
OR

```
#include<stdio.h>
#include<conio.h>
int main()
{
   int num1,num2,num3;
   printf("Enter three numbers\n");
   scanf("%d %d %d",&num1,&num2,&num3);

   if(num1>num2 && num1>num3)
      printf("%d is greater",num1);

   else if(num2>num1 && num2>num3)
      printf("%d is greater",num2);

   else if(num3>num1 && num3>num2)
      printf("%d is greater",num3);
```

```
 else if(num1==num2)
       printf("%d is greater",num1);

    else if(num2==num3)
       printf("%d is greater",num2);

    else if(num1==num3)
       printf("%d is greater",num3);

    else if(num1==num2==num3)
       printf("%d is greater",num1);

    getch();
}
```

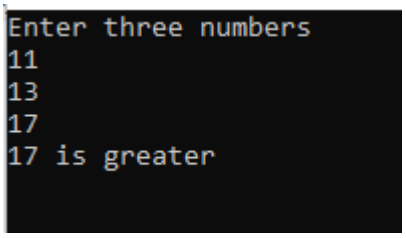


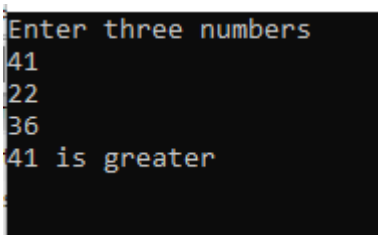


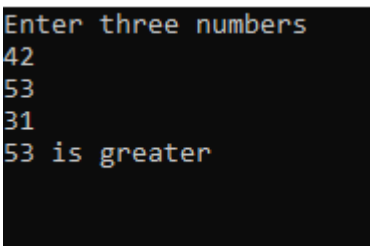


OR

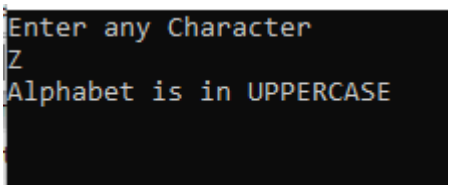
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int num1,num2,num3;
   printf("Enter three numbers\n");
   scanf("%d %d %d",&num1,&num2,&num3);
   (num1>num2?(num1>num3?printf("%d is
greater",num1):printf("%d is
greater",num3)):(num2>num3?printf("%d is
greater",num2):printf("%d is greater",num3)));
   getch();
}
```

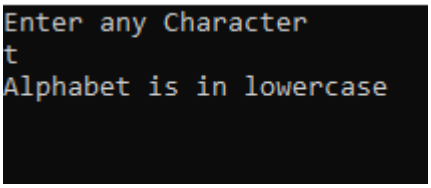


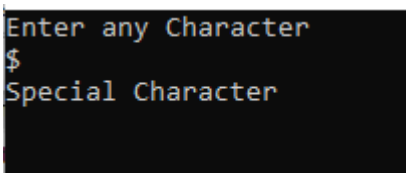




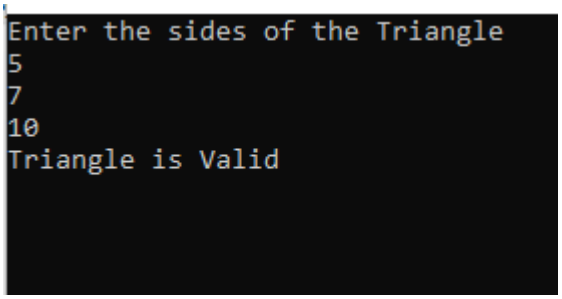
6.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   char ch;
   printf("Enter any Character\n");
   scanf("%c",&ch);
   if(ch>='A' && ch<='Z')
      printf("Alphabet is in UPPERCASE");
   else if(ch>='a' && ch<='z')
      printf("Alphabet is in lowercase");
   else
      printf("Special Character");
   getch();
}
```

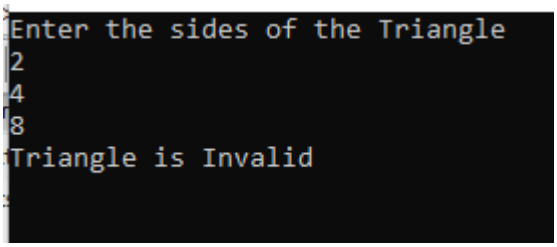






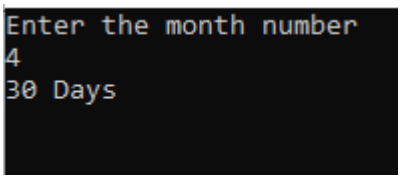
7.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int side1,side2,side3;
   printf("Enter the sides of the Triangle\n");
   scanf("%d %d %d",&side1,&side2,&side3);
   if(side1+side2>side3 && side2+side3>side1 &&
side1+side3>side2)
      printf("Triangle is Valid");
   else
      printf("Triangle is Invalid");
   getch();
}
```

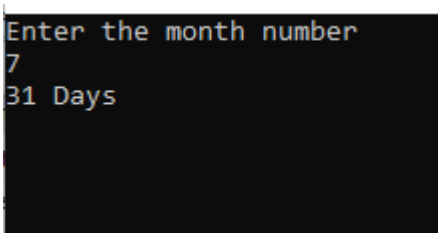


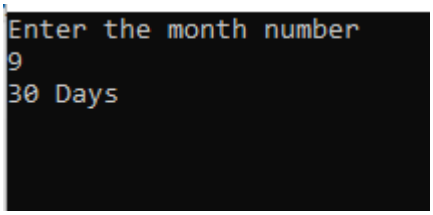


8.
```
#include<stdio.h>
#include<conio.h>
int main()
{
   int month_num,year;
   printf("Enter the month number\n");
   scanf("%d",&month_num);
   if(month_num>=1 && month_num<=12)
   {
      if(month_num==2)
      {
         printf("Enter the Year\n");
         scanf("%d",&year);
         if(year%4)
         {
            printf("Not a Leap Year");
            printf("\n28 Days");
         }
         else if(year%100)
         {
            printf("It's a Leap Year");
            printf("\n29 Days");
         }
         else if(year%400)
         {
            printf("Not a Leap Year");
            printf("\n28 Days");
         }
         else
         {
            printf("It's a Leap Year");
            printf("\n29 Days");
         }
      }
```

```
        else if(month_num==1 || month_num==3 || month_num==5
|| month_num==7)
            printf("31 Days");

        else if(month_num==4 || month_num==6)
            printf("30 Days");

        else if(month_num==8 || month_num==10
||month_num==12)
            printf("31 Days");

        else if(month_num==9 || month_num==11)
            printf("30 Days");
    }
    else
    printf("Invalid Month Number");
    getch();
}
```







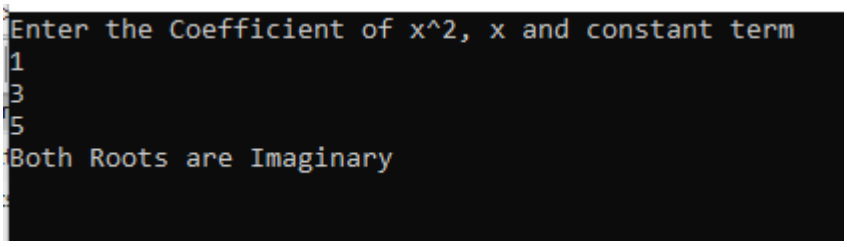
```
Enter the month number
12
31 Days
```

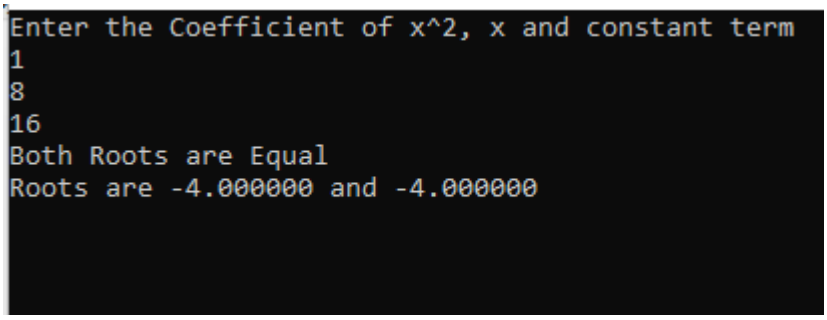
```
Enter the month number
2
Enter the Year
2004
It's a Leap Year
29 Days
```

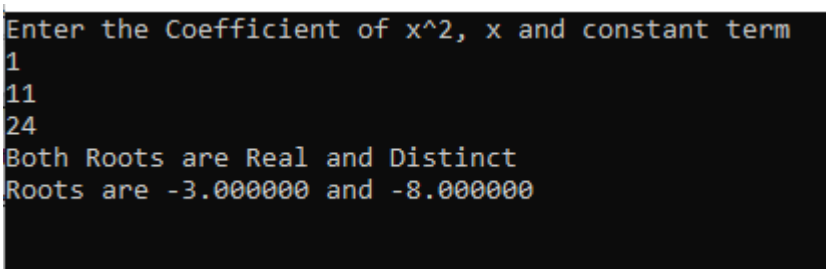
```
Enter the month number
2
Enter the Year
2005
Not a Leap Year
28 Days
```

```
Enter the month number
13
Invalid Month Number
```

9.
```
#include<stdio.h>
#include<conio.h>
#include<math.h>
int main()
{
   int a,b,c;
   int D;
   float x,y;
   printf("Enter the Coefficient of x^2, x and constant term\n");
   scanf("%d %d %d",&a,&b,&c);
   D=b*b-4*a*c;
   if(D<0)
      printf("Both Roots are Imaginary");

   else if(D==0)
   {
      printf("Both Roots are Equal");
      x=-b/(2.0*a);
      printf("\nRoots are %f and %f",x,x);
   }
   else
   {
      printf("Both Roots are Real and Distinct");
      x=(-b+sqrt(D))/(2.0*a);
      y=(-b-sqrt(D))/(2.0*a);
      printf("\nRoots are %f and %f",x,y);
   }
   getch();
}
```







10.
```
#include<stdio.h>
#include<conio.h>
int main()
{
  int mark1,mark2,mark3,mark4,mark5;
  int total;
  float percent;
  printf("Enter the marks of Five Subjects\n");
  printf("Physics : ");
  scanf("%d",&mark1);
  printf("Chemistry : ");
  scanf("%d",&mark2);
  printf("Biology : ");
  scanf("%d",&mark3);
  printf("Maths : ");
  scanf("%d",&mark4);
  printf("Computer : ");
  scanf("%d",&mark5);
  total=mark1+mark2+mark3+mark4+mark5;
  percent=total/5.0;
  printf("\nTotal Marks Obtained : %d",total);
```

```
if(percent>=90)
{
   printf("\nPercentage : %f",percent);
   printf("\nGrade : A");
   printf("\nResult : PASS");
}
else if(percent>=80)
{
   printf("\nPercentage : %f",percent);
   printf("\nGrade : B");
   printf("\nResult : PASS");
}
else if(percent>=70)
{
   printf("\nPercentage : %f",percent);
   printf("\nGrade : C");
   printf("\nResult : PASS");
}
else if(percent>=60)
{
   printf("\nPercentage : %f",percent);
   printf("\nGrade : D");
   printf("\nResult : PASS");
}
else if(percent>=40)
{
   printf("\nPercentage : %f",percent);
   printf("\nGrade : E");
   printf("\nResult : PASS");
}
else
{
   printf("\nPercentage : %f",percent);
   printf("\nGrade : F");
   printf("\nResult : FAIL");
```

```
    }
    getch();
}
```

```
Enter the marks of Five Subjects
Physics : 82
Chemistry : 93
Biology : 86
Maths : 95
Computer : 97

Total Marks Obtained : 453
Percentage : 90.599998
Grade : A
Result : PASS
```

```
Enter the marks of Five Subjects
Physics : 75
Chemistry : 82
Biology : 78
Maths : 85
Computer : 90

Total Marks Obtained : 410
Percentage : 82.000000
Grade : B
Result : PASS
```

```
Enter the marks of Five Subjects
Physics : 61
Chemistry : 74
Biology : 66
Maths : 88
Computer : 93

Total Marks Obtained : 382
Percentage : 76.400002
Grade : C
Result : PASS
```

```
Enter the marks of Five Subjects
Physics : 54
Chemistry : 62
Biology : 57
Maths : 75
Computer : 80

Total Marks Obtained : 328
Percentage : 65.599998
Grade : D
Result : PASS
```

```
Enter the marks of Five Subjects
Physics : 41
Chemistry : 56
Biology : 47
Maths : 60
Computer : 75

Total Marks Obtained : 279
Percentage : 55.799999
Grade : E
Result : PASS
```

```
Enter the marks of Five Subjects
Physics : 27
Chemistry : 33
Biology : 25
Maths : 42
Computer : 50

Total Marks Obtained : 177
Percentage : 35.400002
Grade : F
Result : FAIL
```