Assignment 4: Conditional Statements

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1. Write a program that reads a number between 1 to 7 from the user and display the day of the week from Monday to Sunday.

Answer:

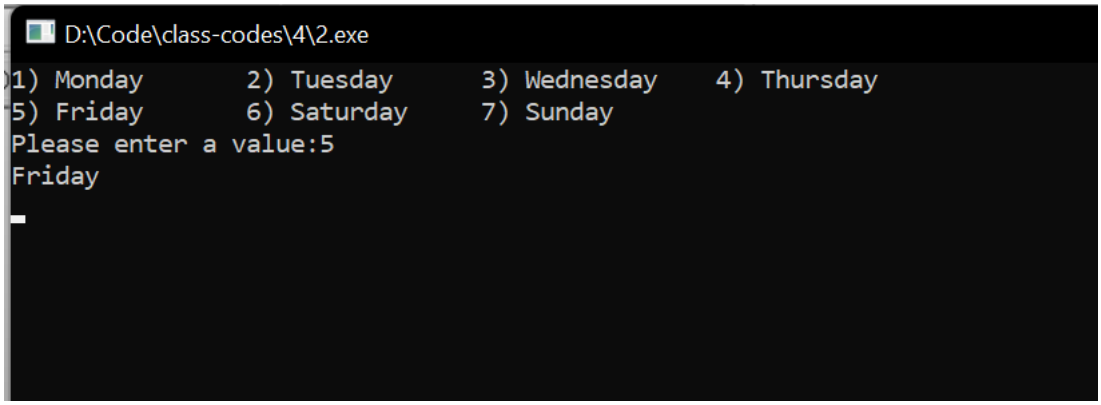
Source code:

```
#include<stdio.h> #include<conio.h>
int main()
{
        int days;
        printf("1) Monday\t");
printf("2) Tuesday\t");
printf("3) Wednesday\t");
printf("4) Thursday\n");
printf("5) Friday\t");   printf("6)
Saturday\t");   printf("7) Sunday\n");
        printf("Please enter a value:");
scanf("%d",&days);

        switch(days)
        {
                case 1:
                        printf("Monday\n");
                        break;
        case 2:
                        printf("Tuesday\n");
                        break;
        case 3:
                        printf("Wednesday\n");
                        break;
        case 4:
                        printf("Thursday\n");
                        break;
        case 5:
                        printf("Friday\n");
                        break;
        case 6:
                        printf("Saturday\n");
                        break;
        case 7:
printf("Sunday\n");
```

```
                    break;
        default:
                    printf("INVALID:Please enter value between 1-7\n");
                    break;
        }
        getch();
}
```

OUTPUT:



2. Make a simple calculator using a simple switch case.

SOURCE CODE:

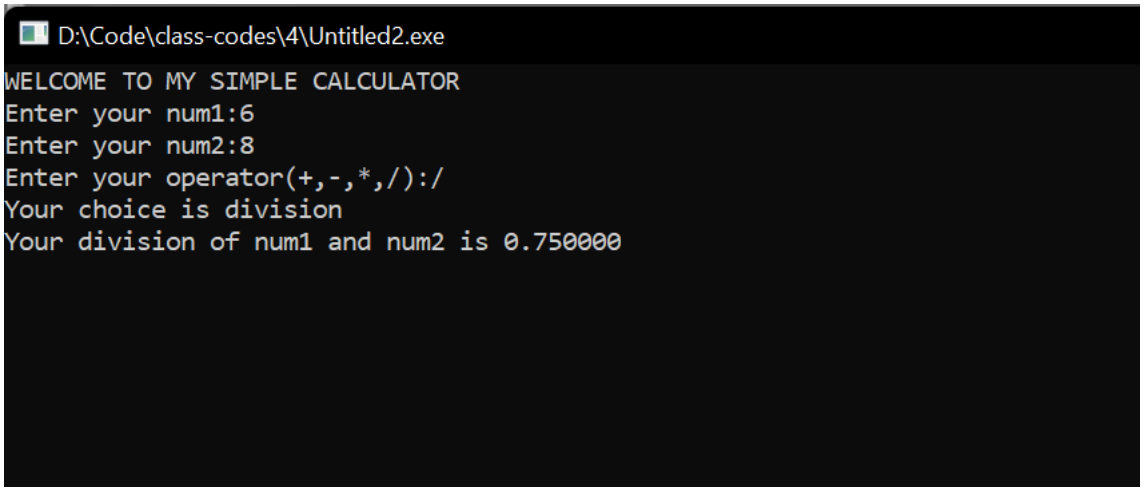
```
#include<stdio.h>
 #include<conio.h>
int main()
{
        float num1,num2,add,sub,mul,div;
        char x;
        printf("WELCOME TO MY SIMPLE CALCULATOR\n");
        printf("Enter your num1:");
scanf("%f",&num1);   printf("Enter your
num2:");
        scanf("%f",&num2);
```

```
        add=num1+num2;      sub=num1-
num2;           mul=num1*num2;
        div=num1/num2;

        printf("Enter your operator(+,-,*,/):");
        scanf("%s",&x);

        switch(x)
        {
                case '+':
                        {
                                printf("\nYour choice is addition\n");
                                printf("Your addition of num1 and num2 is %f",add);
                                break;
                         }
                case '-':
                        {
                                printf("Your choice is substraction\n");
                                printf("Your substraction of num1 and num2 is
%f",sub);
                                break;
                         }
                case '*':
                        {
                                printf("Your choice is multiplication\n");
                                printf("Your multiplication of num1 and num2 is
%f",mul);
                                break;
                         }
                case '/':
                        {
                                printf("Your choice is division\n");
                                printf("Your division of num1 and num2 is %f",div);
                                break;
                         }
                default:
                        {   printf("Your choice is invalid.\n");
                                printf("Please choose a correct operand.");
                                break;
                        }
        }
        getch();
}
```

OUTPUT:



3. Write a program to check whether the given year is a leap year or not.

SOURCE CODE :

```
#include<stdio.h>
int main()
{
	int year;
	printf("Enter Year:");
	scanf("%d",&year);

	if(year%400==0)
	{
		printf("This year is a leap year.");
	}
	else if(year%100==0)
	{
		printf("This year is not a leap year.");
	}
	else if(year%4==0)
	{
		printf("This year is a leap year.");
	}
```

```
        else
        {
                printf("This year is not a leap year.");
        }


}
```

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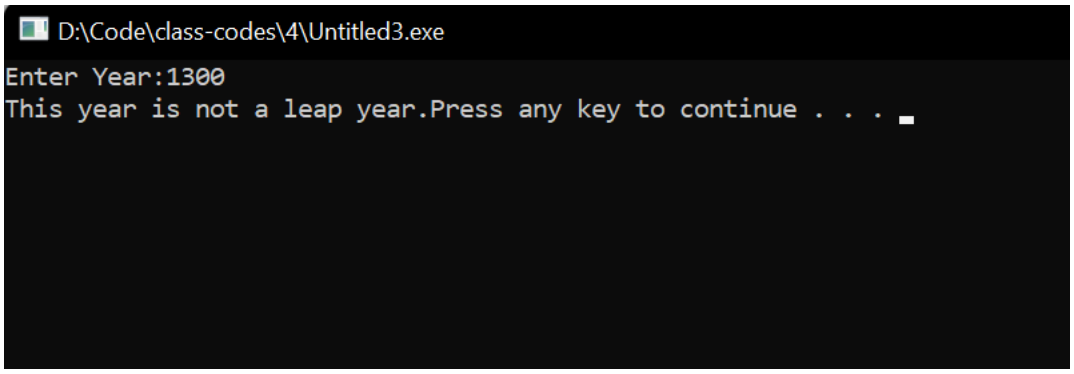
OUTPUT:



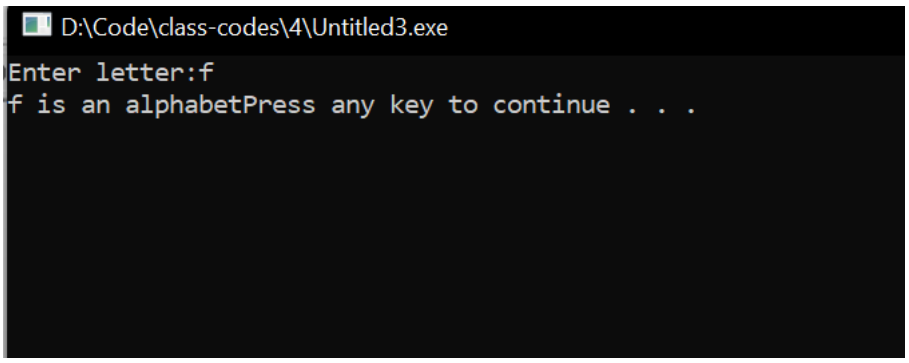
4. Write a program to check whether a character is an alphabet or not.

SOURCE CODE:

```
#include<stdio.h>
int main()
{
        char c;
        printf("Enter letter:");
        scanf("%c",&c);

        if((c>=97 && c<=122) || (c>=65 && c<=90))
```

```
        {
                printf("%c is an alphabet",c);
        }
        else
        {
                printf("%c is not an alphabet",c);
        }

}
```

OUTPUT:



5. Write a program to swap two numbers with and without using a temporary variable.

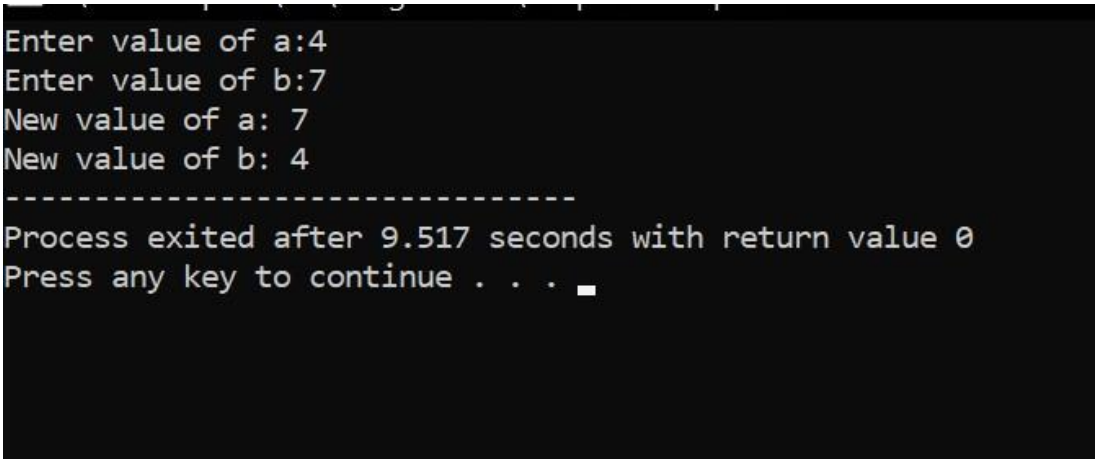
   (i) WITH TEMP

SOURCE CODE:

```
#include<stdio.h>
int main()        //with swap
{
        int a,b,temp;
        printf("Enter value of a:");
        scanf("%d",&a);
        printf("Enter value of b:");
        scanf("%d",&b);
```

```
    temp=a;
    a=b;
    b=temp;

    printf("New value of a: %d\n",a);
    printf("New value of b: %d",b);

}
```

OUTPUT:



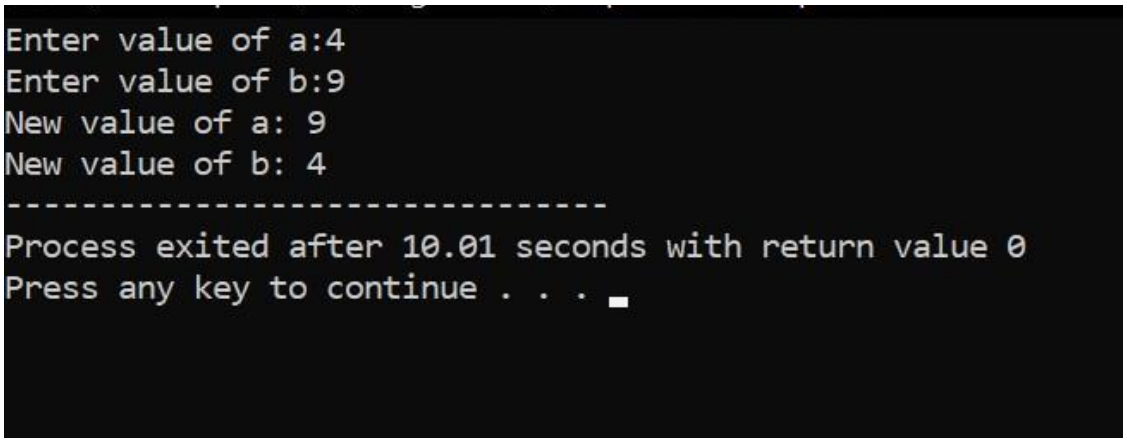
(ii) WITHOUT TEMP

SOURCE CODE:

```
#include<stdio.h>
int main()
 {
    int a,b;
    printf("Enter value of a:");
    scanf("%d",&a);
    printf("Enter value of b:");
    scanf("%d",&b);

    a=a+b;
    b=a-b;
    a=a-b;
```

```
        printf("New value of a: %d\n",a);
        printf("New value of b: %d",b);
}
```

OUTPUT:

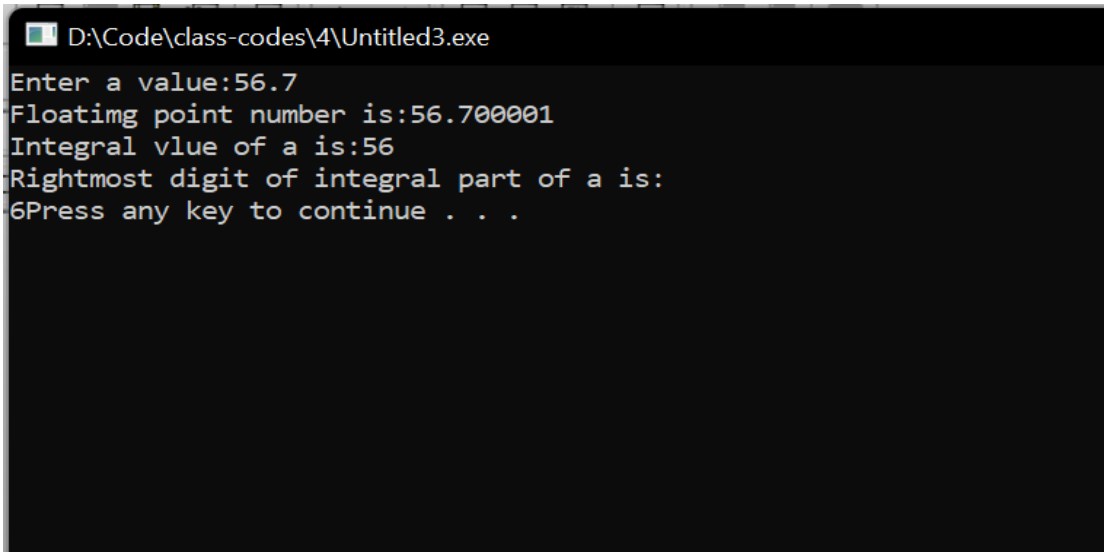


6. Write a program to read a floating-point number display the rightmost digit of an integral part of the number.

SOURCE CODE:

```
#include<stdio.h>
int main()
{
        float a;
        int x,b;
        printf("Enter a value:");       //floating point number
        scanf("%f",&a);
        x=(int)a;
        b=x%10;
        printf("Floatimg point number is:%f\n",a);
        printf("Integral vlue of a is:%d\n",x);
        printf("Rightmost digit of integral part of a is:%d",b);
}
```

OUTPUT:



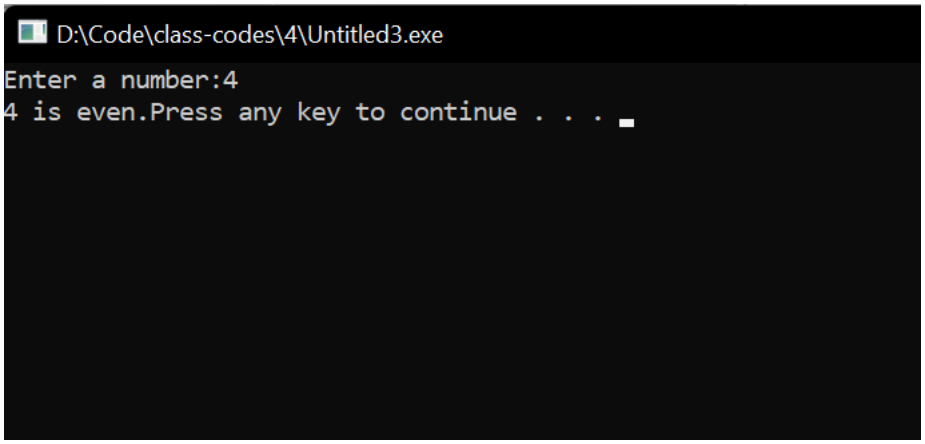
7. Write a program to check whether the number is odd or even.

SOURCE CODE:

```
#include<stdio.h>
int main()
{
	int a;
	printf("Enter a number:");
	scanf("%d",&a);

	switch(a%2)
	{
		case 0:	//If a%2==0
		printf("%d is even.",a);
		break;

		case 1:	//else if n%2==1
		printf("%d is odd.",a);
		break;
	}
```

}

OUTPUT:



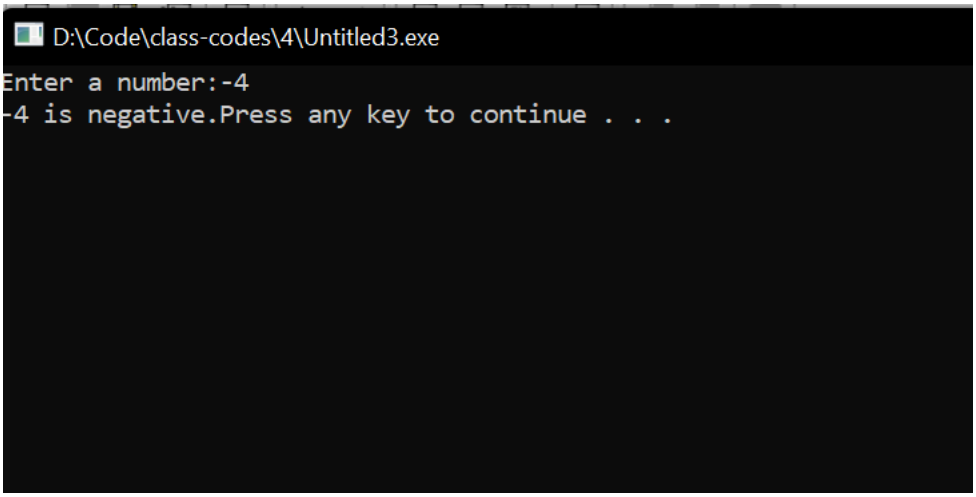
8. Write a program to check whether the number is positive or negative or zero.

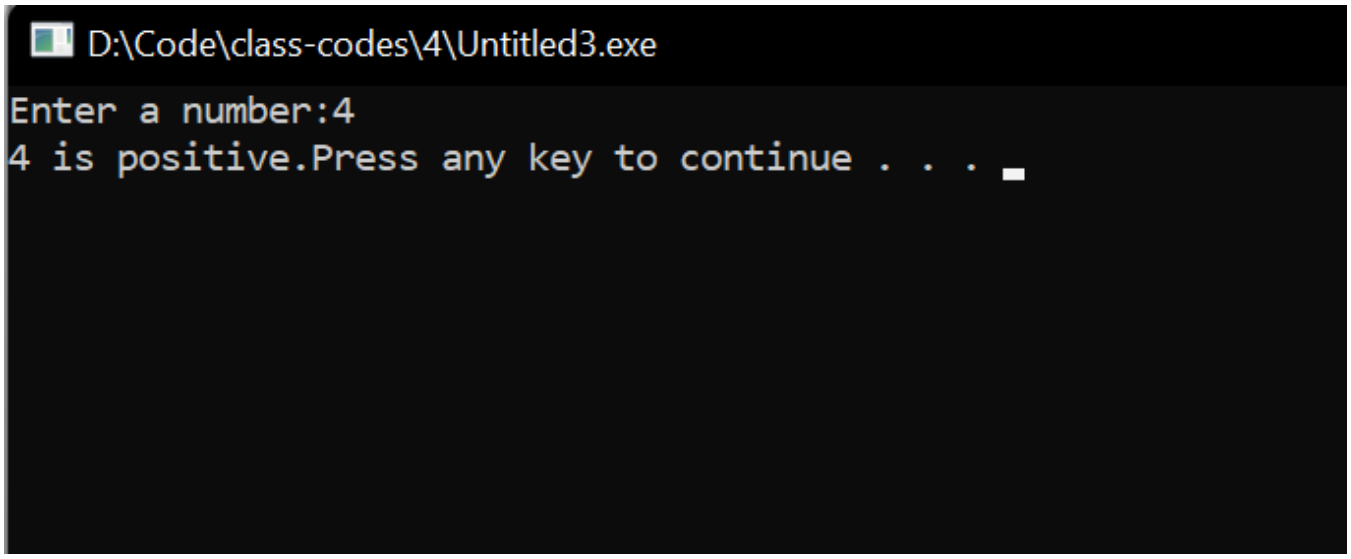
SOURCE CODE:

```
#include<stdio.h>
   int main()
   {
      int a;
      printf("Enter a number:");
      scanf("%d",&a);

      switch(a>0)
      {
                case 1:     //Number is positive
                printf("%d is positive.",a);
                break;

                case 0:     //Number is negative or zero
                          switch(a<0)
                          {
```

```
                                    case 1:
                                            printf("%d is negative.",a);
                                            break;
                                    case 0:
                                            printf("%d is zero.",a);
                                            break;
                                }
                        break;
                }
}
```

OUTPUT:



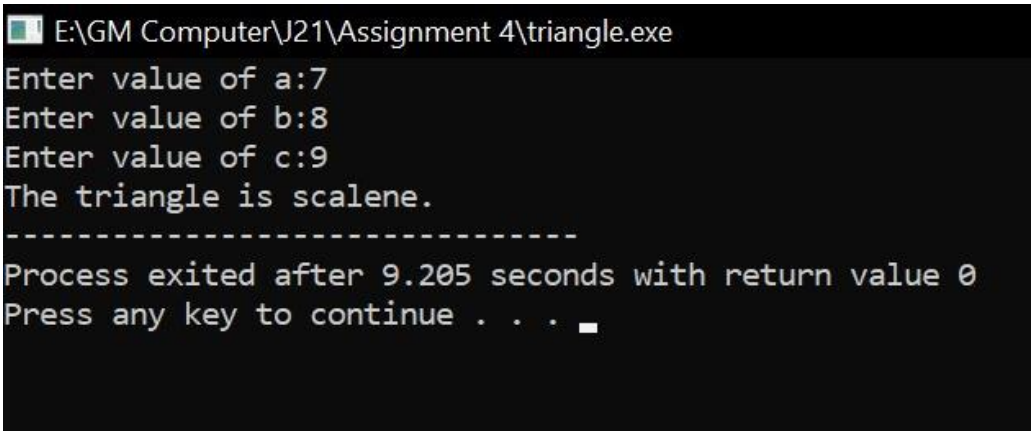


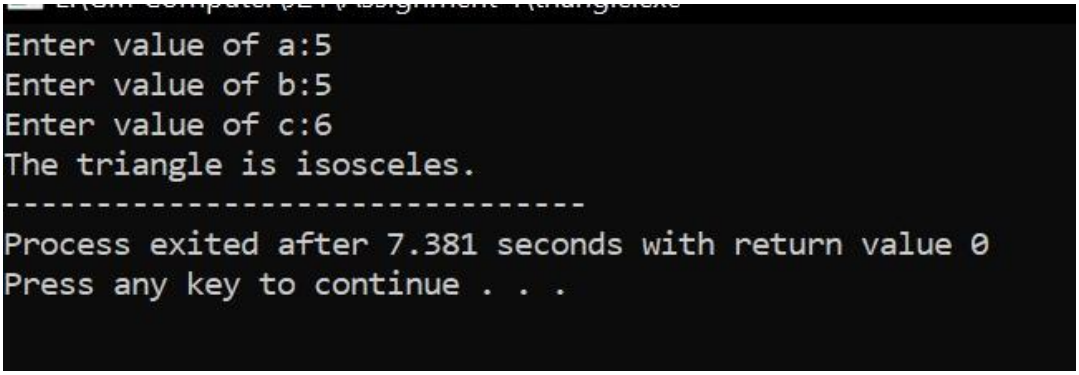
9. Write a program to check whether the triangle is equilateral, isosceles or scalene triangle.

SOURCE CODE:

```
#include<stdio.h>
int main()
{
	float a,b,c;
	printf("Enter value of a:");
	scanf("%f",&a);
	printf("Enter value of b:");
	scanf("%f",&b);
	printf("Enter value of c:");
	scanf("%f",&c);

	if(a==b==c)
	{
		printf("The triangle is equillateral.");
	}
	else if((a==b) || (a==c) || (b==c))
	{
		printf("The triangle is isosceles.");
	}
	else
	{
		printf("The triangle is scalene.");
	}
}
```

OUTPUT:



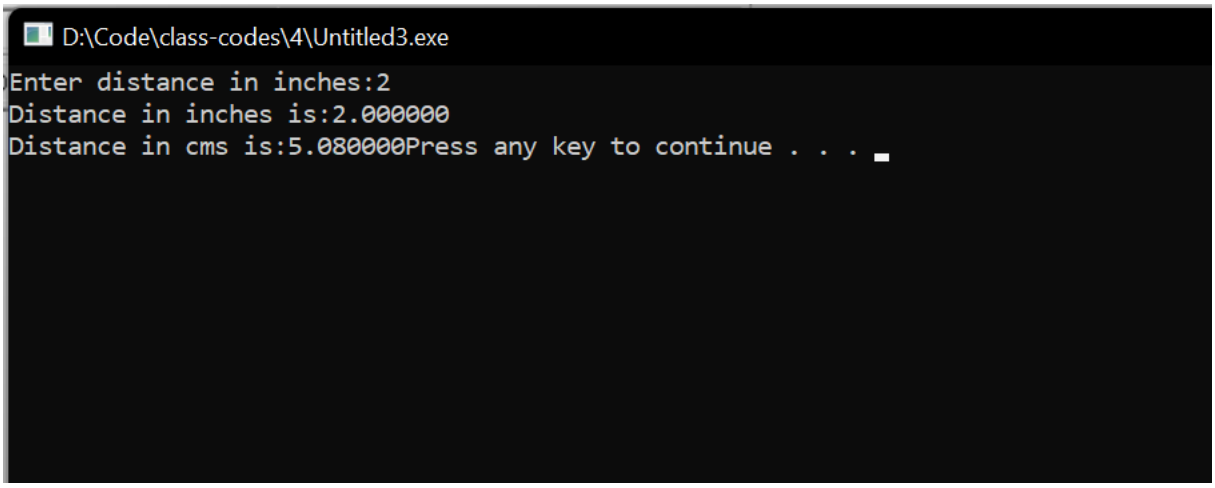


10. Write a program that takes distance in inches and prints the corresponding value in cms. (Note that 1 inch = 2.54 cm)

SOURCE CODE:

```
 #include<stdio.h>
int main()
{
        float a,b;
        printf("Enter distance in inches:");      //in inches
        scanf("%f",&a);
        b=a*2.54;                        //in cms
        printf("Distance in inches is:%f\n",a);
        printf("Distance in cms is:%f",b);\
}
```

OUTPUT:


D:\Code\class-codes\4\Untitled3.exe
Enter distance in inches:2
Distance in inches is:2.000000
Distance in cms is:5.080000Press any key to continue . . .