

If-Else Syntax

```
if ( Expression )  
    StatementA  
else  
    StatementB
```

NOTE: StatementA and StatementB each can be a single statement, a null statement, or a block.

Example: mail order

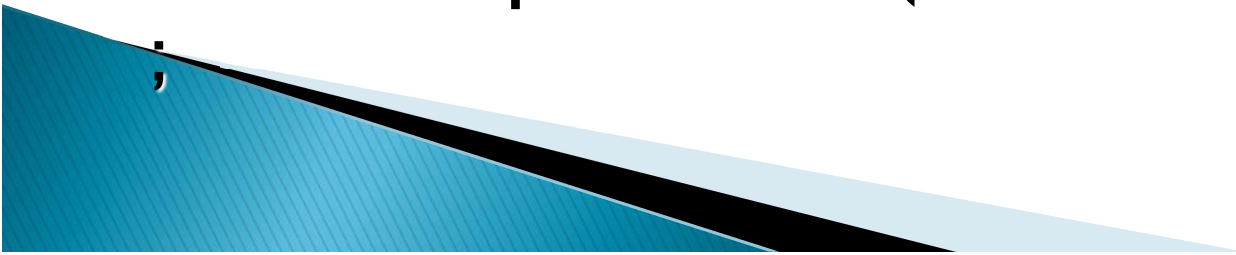
Write a program to calculate the total price of a certain purchase. There is a discount and shipping cost:

- **The discount rate is 25% and the shipping is 10.00 if purchase is over 100.00.**
- **Otherwise, The discount rate is 15% and the shipping is 5.00 pounds.**

Note: These braces cannot be omitted

```
if ( purchase > 100.00 )  
{  
    discountRate = .25 ;  
    shipCost    = 10.00 ;  
}  
else  
{  
    discountRate = .15 ;  
    shipCost    = 5.00 ;  
}
```

```
totalBill = purchase * (1.0 - discountRate) + shipCost  
;
```



Switch statement

- Used to select one of several alternatives
- BASED on the value of a single variable.
- This variable may be an int or a char but **NOT** a float (or double).

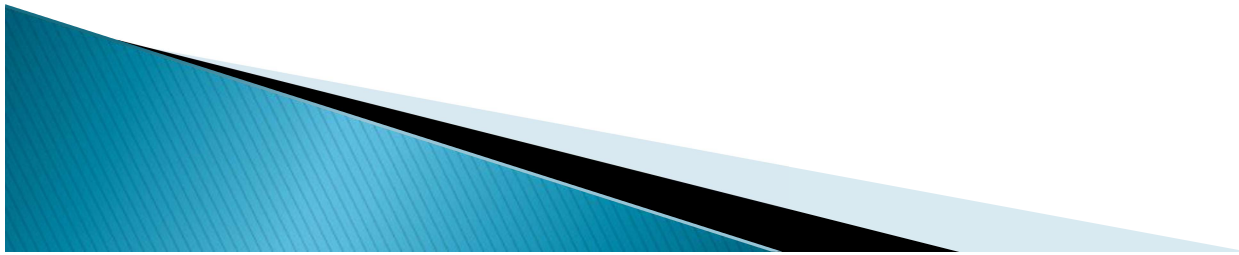
Example

```
char grade ;  
printf(“Enter your letter grade: “);  
scanf(“%c”, &grade);  
switch ( grade )  
{  
    case ‘A’ : printf(“ Excellent Job”);  
                break;  
    case ‘B’ : printf ( “ Very Good “);  
                break;  
    case ‘C’ : printf(“ Not bad “);  
                break;  
    case ‘F’ : printf(“Failing”);  
                break;  
    default : printf(“ Wrong Input “);  
}
```

Example: Light bulbs

Write a program to ask the user for the brightness of a light bulb (in Watts), and print out the expected lifetime:

<u>Brightness</u>	<u>Lifetime in hours</u>
25	2500
40, 60	1000
75, 100	750
otherwise	0



```
int bright ;
printf("Enter the bulb brightness: ");
scanf("%d", &bright);
switch ( bright )
{
    case 25 : printf(" Expected Lifetime is 2500 hours");
               break;
    case 40 :
    case 60 : printf ( "Expected Lifetime is 1000 hours ");
               break;
    case 75 :
    case 100 : printf("Expected Lifetime is 750 hours ");
                break;
    default : printf("Wrong Input ");
}
}
```