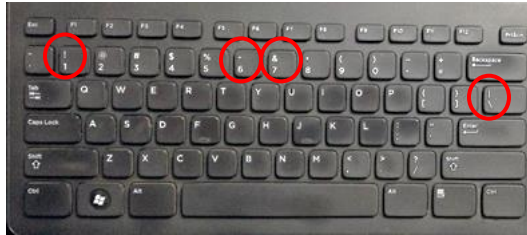


Logical Operators

AND OR Exclusive-OR

&& is Logical AND
 || is Logical OR
 ^^ is Logical XOR
 ! is Logical NOT



Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND
 || is Logical OR
 ^^ is Logical XOR
 ! is Logical NOT

Truth Table

Inputs		&&		^^
False	False	False	False	False
False	True	False	True	True
True	False	False	True	True
True	True	True	True	False

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

! is Logical NOT

Truth Table

Inputs				
False	False			
False	True			
True	False			
True	True			

There are only four possible combinations when there are two inputs

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

! is Logical NOT

Inputs		&&		^^
False	False	False	False	False
False	True	False	True	True
True	False	False	True	True
True	True	True	True	False

Inputs		AND	OR	XOR
0	0	0	0	0
0	1	0	1	1
1	0	0	1	1
1	1	1	1	0

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

! is Logical NOT

Inputs		&&		^^
False	False	False		
False	True	False		
True	False	False		
True	True	True		

↑
AND
If both inputs are TRUE,
the output is TRUE

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

Inputs		&&		^^
False	False	False		
False	True	False		
True	False	False		
True	True	True		

↑
AND
If both inputs are TRUE,
the output is TRUE

Test for time from 8:00am to 6:00pm

12:00am	8:00am	6:00pm	11:59pm
0	800	1800	2359

False	True	False
-------	------	-------

```
if ( time >= 800 && time <= 1800 )
{
    // do something
}
```

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

Inputs		AND	OR	XOR
False	False	False	False	
False	True	False	True	
True	False	False	True	
True	True	True	True	

OR

If either input is TRUE,
the output is TRUE

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

Inputs		AND	OR	XOR
False	False	False	False	
False	True	False	True	
True	False	False	True	
True	True	True	True	

OR

If either input is TRUE,
the output is TRUE

Test for time before 8:00am or after 6:00pm

12:00am	8:00am	6:00pm	11:59pm
0	800	1800	2359

True	False	True
------	-------	------

```
else if ( time < 800 || time > 1800 )
{
    // do something
}
```

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

Inputs		AND	OR	XOR
False	False	False	False	False
False	True	False	True	True
True	False	False	True	True
True	True	True	True	False



XOR

If either input, but not both is TRUE, the output is TRUE

Logical Operators

AND OR Exclusive-OR NOT

&& is Logical AND

|| is Logical OR

^^ is Logical XOR

! is Logical NOT

Input	NOT
False	True
True	False



NOT

Inverts the input

