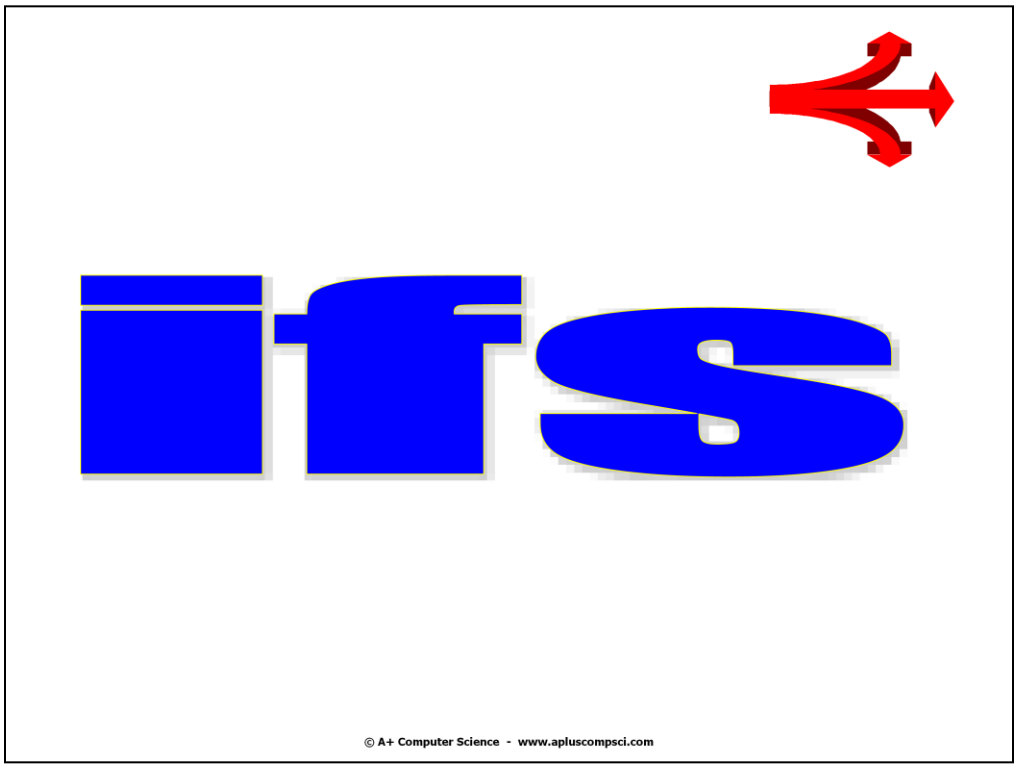
ifs
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What is an If?

the if statement

if I am hungry
I eat something

if I am tired
I go to sleep

If statements are just simple decision-making statements.

A condition is checked and something may or may not happen based on the evaluation of that condition.

the if statement

if it is dark
I turn a light on

if I can't hear the song
I make it louder

If statements are just simple decision-making statements.

A condition is checked and something may or may not happen based on the evaluation of that condition.

Logic

Relational

frequently used operators

Operator	Use
x==y	checks if x and y have the same value
x>y	checks if x is greater than y
x<y	checks if x is less than y
x>=y	checks if x is greater than or equal to y
x<=y	checks if x is less than or equal to y
x!=y	checks if x is not equal to y

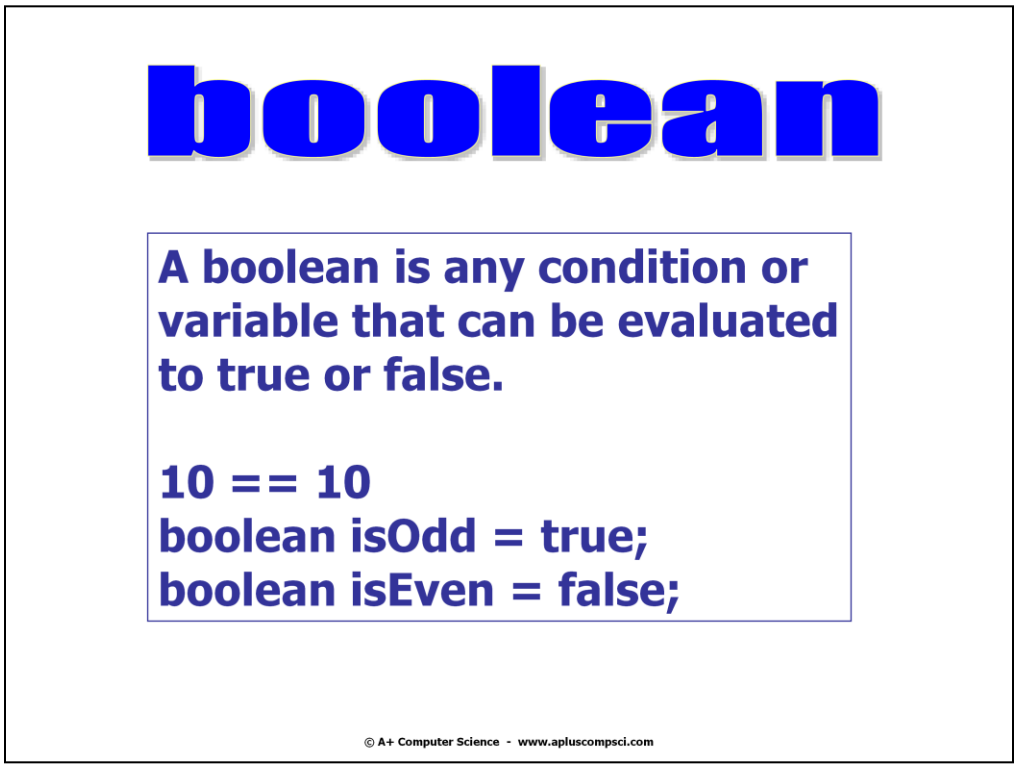
Relational operators are used to compare values for equality, less than, and greater than.

90<2 is false.

90>2 is true.

90==2 is false.

2==2 is true.



A boolean is a variable or condition that can be evaluated as true or false.

90<2 is false.

90>2 is true.

90==2 is false.

2==2 is true.

The if statement!

If Definition

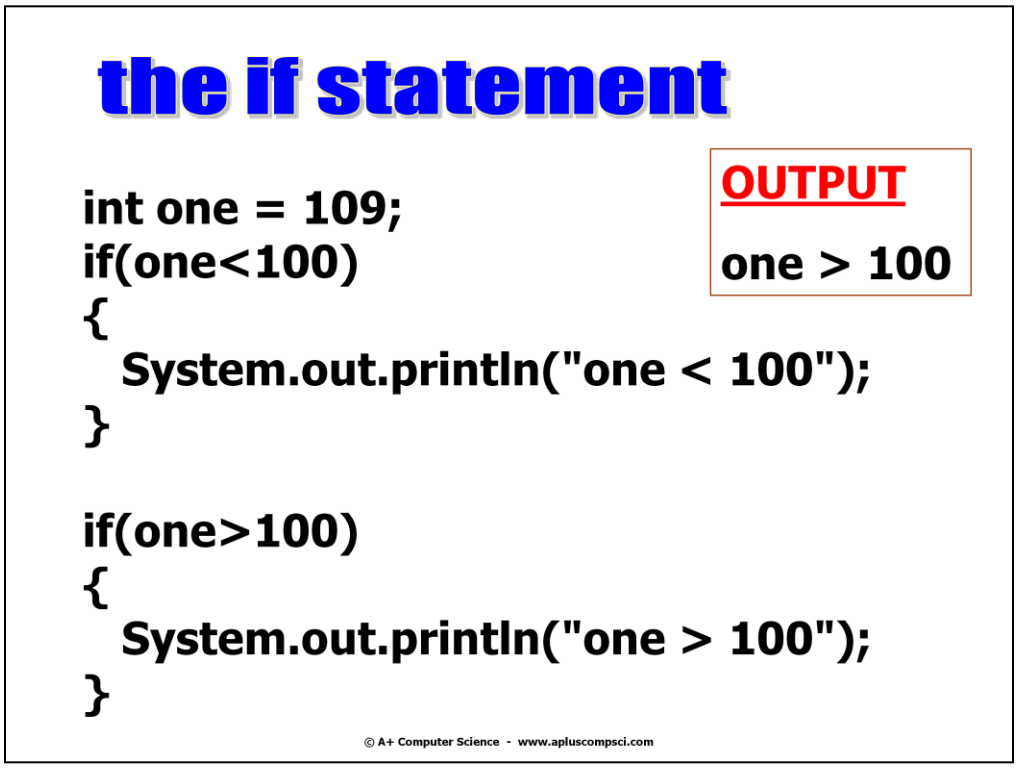
An if statement is a block of code that is associated with a condition. The block of code may execute once or not at all depending on the evaluation of the condition.

the if statement

```
if (  boolean condition placed here  )
{
   do something 1;
   do something 2;
}
```

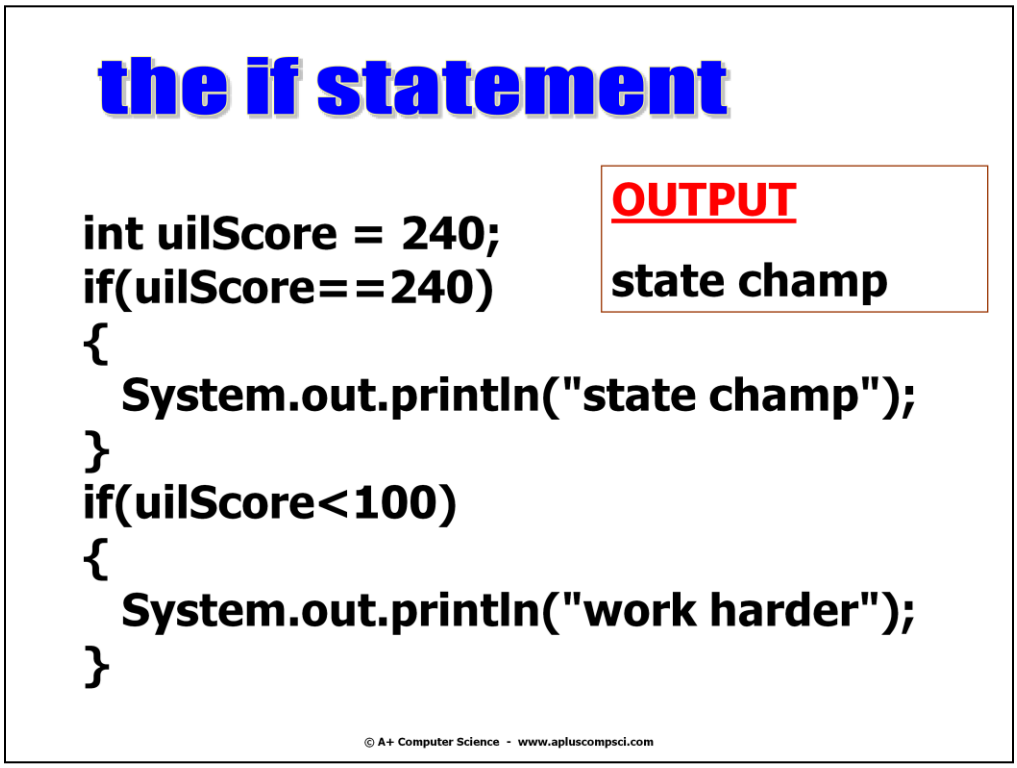
`do something 1` and `do something 2` will occur if the condition is true.

If the condition is false, `do something 1` and `do something 2` will not occur.



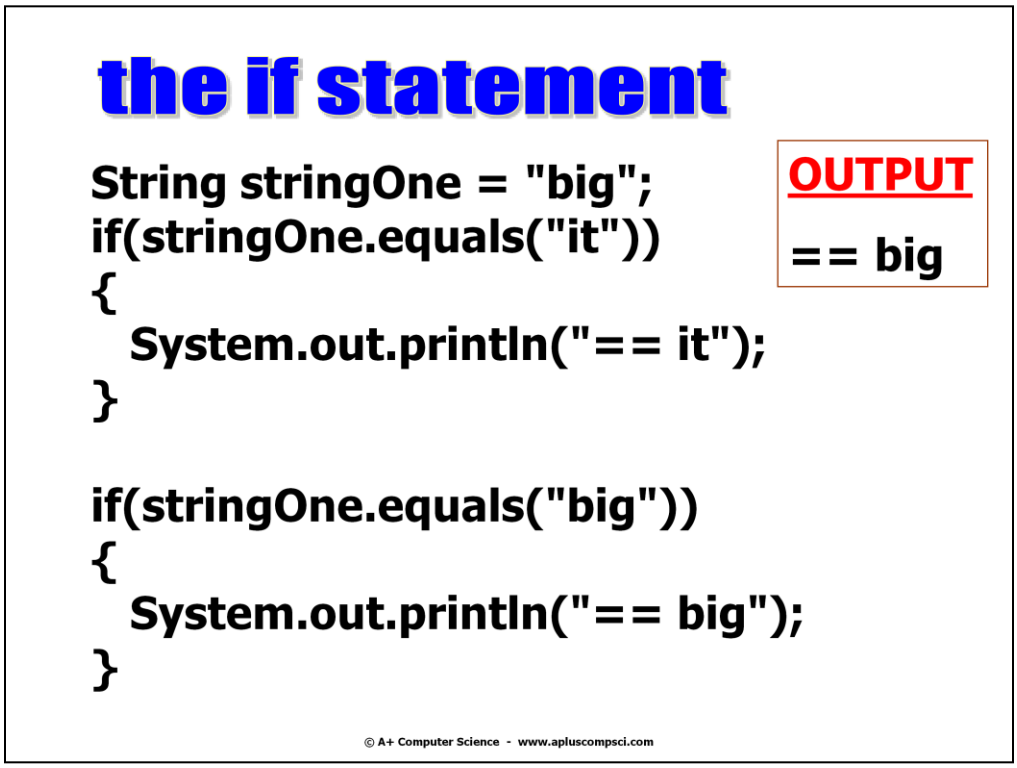
If one is less than 100, the example above will display `one < 100`.

If one is greater than 100, the example above will display `one > 100`.



If `uilScore` is equal to 240, the example above will display `state champ`.

If `uilScore` is less than 100, the example above will display `work harder`.



`stringOne` is a reference. `stringOne` stores the location / memory address of the String `"big"`.

To determine if `stringOne` equals `"it"`, the `equals()` method must be used.

If the == operator is used, the location / memory addresses would be compared.

the if statement

```
boolean isOdd = true;
if(isOdd == true)
{
  System.out.println("isodd");
}

if(isOdd == false)
{
  System.out.println("iseven");
}
```

OUTPUT

```
isodd
```

If `isOdd` is true, the example above will display `isodd`.

If `isOdd` is false, the example above will display `iseven`.


open
ifone.java
Complete the code
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open ifoneuil.java

open iftwo.java

open ifonestring.java

open ifoneboolean.java

open ternary.java

nesting ifs

```
int num=7;
if(num>2)
{
  if(num<10)
    System.out.println(">2<10");
  if(num>10)
    System.out.println(">2>10");
}
```

OUTPUT

```
>2<10
```

Nesting occurs when one thing is placed inside of another thing.

In the example, `if(num>2)` contains 2 ifs. The 2 ifs have been nested in side of `if(num>2)`.

`if(num>2)` is true, the 2 nested ifs will be evaluated.

open ifnesting.java

common errors

```
If(total >= 25);
{
}

if(total = 10)
{
}
```

NEVER put a semi-colon before an OPEN BRACE.

NEVER use one equal = when comparing values.

ALWAYS use two == equals when looking to see if two things are the same. 2 eyes 2 ==

{ and ; rule

Never put a ;
before an open { brace

;{ **illegal**

}; **legal**


Start work
on the labs
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