Conditionals are the one way that we add decisions to our code. Its how we add logic to our programming.

Let's take an example of user login. When we go to login on a website, we type a password on the form, and there is code that checks the password that we typed in against the password in the database, and if both the passwords match we get logged in to the site and we get redirected to another page and if that do not match then we get an error message of some sort.

There are two different paths given the same exact code.

Another example would be when we buy something online, when we type in our credit card information and if it works, if the transaction goes through, we might get a confirmation email, we might see a success screen and if there is some problem with the information we provided or we do not have funds in the account, we are going to get an error message. Again, two different outcomes.

There are three conditional keywords that we need to remember through out this lecture.

If

Else if

Else

These are three JavaScript keywords, and yes *Else if* is technically two English words but to JavaScript that is just one keyword.

The example we are going to use for conditionals is a bouncer at a concert venue.

If you are younger than 18

    You cannot enter the venue

If you are between 18 and 21

    You can enter but cannot drink

Otherwise

    You can enter and drink

The idea is that we are going to have an *age* variable and if that age of the person is younger than 18, unfortunately that person cannot enter our venue, if that person is older than 18 but not yet 21 that means they can enter but we need to draw an X on their hand so they cannot drink and lastly anyone else who is greater than 21 then they can get in and drink.

So those are three things that we will try and write them in code.

The first thing that we are going to see is the *if* keyword

```
if (age < 18) {
        console.log ("Sorry, you are not old enough to enter the venue")
        }
```

The *if* keyword takes a single condition inside its parentheses which it will evaluate to be *true* or *false*. If it evaluates to be true then whatever we provide inside the curly braces, in this case the console.log statement, will be executed. The console.log will only be printed out if the age of the person is less than 18, if it is greater than 18 or equal to 18, we will not see the text getting printed out. So, that's the first part, that's our bouncer checking if the person is too young to get in.

Next up we are going to learn about *else if*. The way that else if works, is that it follows an *if* statement, it is a secondary condition

```
if (age < 18) {
        console.log ("Sorry, you are not old enough to enter the venue");
}
else if (age > 18 && age < 21) {
        console.log ("You can enter, but cannot drink");
}
```

In this case we are checking if age is less than 18 then they cannot get in, the next thing to check only after we check the first one is, are they older than 18 or less than 21. So, *else if* works the exact same way as if where we pass an expression in parentheses that will evaluate to be true or false, if its true, the code inside the curly braces will be executed but if it is not true, then nothing happens. So, *else if* works just like *if*, except it must follow an *if* statement. So, the statement we have inside the curly braces after the *else if* statement is a little bit redundant, which is why we must re-factor the statement and write the above code as below

```
if (age < 18) {
        console.log ("Sorry, you are not old enough to enter the venue");
}
else if (age < 21) {
        console.log ("You can enter, but cannot drink");
}
```

The reason we re-factored it, is because it is redundant, the only way the above *else if* part is going to run if the *if* part before it, is false. So, its when we already figured out that the age is not less than 18 and it is greater than or equal to 18.

The last part is the otherwise section which is *else.*

```
if (age < 18) {
        console.log ("Sorry, you are not old enough to enter the venue");
}
else if (age < 21) {
        console.log ("You can enter, but cannot drink");
}
else {
        console.log ("Come on in. You can drink");
}
```

In this case if you are not less than 18, and you are not between 18 and 21, that means you can come on in and you can drink. Else does not have an expression in parentheses, its different in that we just write *else* and whatever we put in curly braces will only be run as a last-ditch effort. So, *if* statement will be tested first and if that is not true then we will test the *else if* statement and if that is not true then we will run the *else* statement. But remember if along the way any *if* or *else if* statement comes out to be true then that statement will be run, and the *else* statement will not be run.