>> Now let's have a brief discussion about the concept of iterators. An iterator is an object that allows you to process a collection of items one at a time. It lets you step through each item in turn and process it as needed. As you can imagine, most objects aren't iterator objects, but, but some are.

And the way you would recognize them is, is really pretty straight-forward. It has a hasNext method, should sound familiar, and this returns true if there's at least one more item to process in the object. And also has a next method that returns the next item, and these are defined, these methods and objects are defined by using the Iterator interface.

Now you'll find out out more about this as you continue your studies in Java. But for now, let's think of a one that's common to us, the Scanner class, it's an iterator. Recall, it facilitates scanning or reading from a file or from a string or System.in. And, as you know, it has a hasNext, in fact, the Scanner also has hasNextInt, hasNextDouble, and so on.

And of course, it has a next that, returns the next scanned token. And of course, it has other, other versions of that, nextInt, nextDouble, and so on. So, just a brief words, a few brief words about, the concept of iterators. If someone, one of your friends mentions that an object is an iterator, you'll know what it means.

It means that it has a hasNext to tell you if there's any more data in it to be processed. And it also has a next that lets you get at it. All right, this module had lots of stuff in it, all good stuff. A lot of important topics and I really encourage you to go through the examples on your own.

In jGRASP, I would run the ones that have a canvas with them. I would run those in the canvas. But it's important that you understand the details of these if statements and boolean expressions, while statements. They're boolean expressions of course, and in general, just how to use loops and if statements.

Of course, we also introduced the array in this class, a nice easy way to store data and then revisit it. And it could be a large amount of data coming in from a file, for example. There were some details on comparing data and we had to be careful about comparing, two doubles for equality, for example, and so on.

Again, topics that you should be familiar with now. And of course, we talked about the block statement and indentation, how that can sometimes be misleading, but using braces, usually, makes all that, not an issue. Then details on if statements and whiles. And then we finished up by, looking at file input using the Scanner class.

Turns out reading from a file is, is not difficult. Really, no more difficult than reading from the keyboard. We just need to you know, open a scanner on a file. And then of course, it's a good idea always to close, close that scanner since it's dealing with a file.

And then we just touched on briefly on the idea of iterators.