# The Java API specifications: Java 11

The Java API —the *Application Programmer's Interface*— consists of thousands of classes that come with Java. Beginning with Java version 9, they are grouped into modules (we show 3 of them), in order to make Java more reliable, scalable, and efficient. A Java application can use just the modules that it needs. Each module contains a number of packages —package `java.lang` is an important one—, which contain the classes. Package `java.ang` contains classes `String` and `Math`, among others.

The documentation for all these things appears at this website for Java version 11:

docs.oracle.com/en/java/javase/11/docs/api/

*You* are becoming a Java application programmer, and you will look at documentation often. Our goal here is to introduce you to this website and to show you how you can easily get to the documentation for any class. *Bookmark the above URL so that you can find the API documentation easily and quickly*.

You can also get to the webpage for a particular class like `String` by typing the following into a search engine:

```
Java 11 String
```

As relative beginners, you don't need to know much about modules. You will always use the *default module*, which allows you to ignore the idea of module as you learn the rest of the Java language.

**The home webpage**

Here is an image of the home page of the version 11 API documentation. It provides an overview.

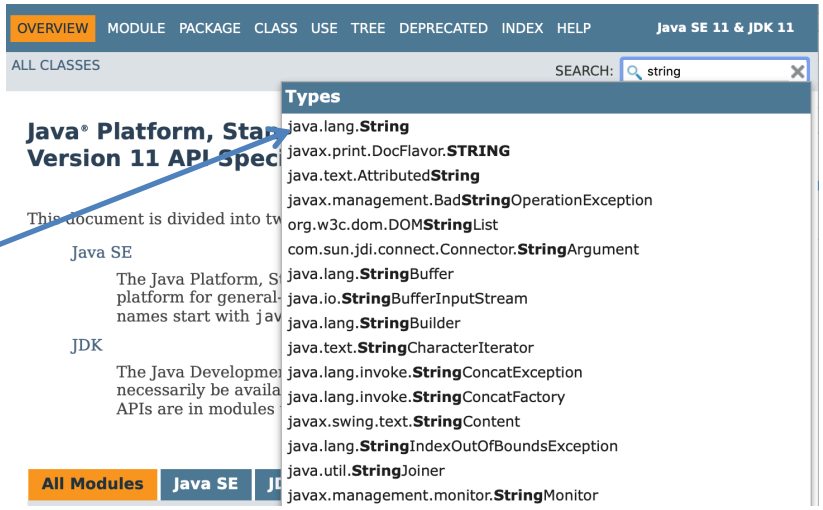
Note two important points.

1. Module `java.base` contains most of the packages and classes that you will be using. Scroll down to see over 50 more modules, but you won't need to look at them.
2. Now forget about modules. Concentrate on this *search* field, which you will use often, almost all the time, to get to the documentation for a particular class or package.


**Using the search field**

Type the name of any class into the search field in order to find the webpage for that class. For example, type `String` and a *Types* pane pops up (look to the right).

You see at the top of the new *Types* pane `java.lang.`**`String`**. That is most likely what you want. There are lots of other things below it, but don't be concerned with them. Just click `java.lang.`**`String`** or hit the return/enter key.



## Class String

The window changes to documentation for class String. That's why `Class` is highlighted. The class is in module `java.base`, and within that, in package `java.lang`. Also, it extends superclass class `Object`—you'll hear more about that later.

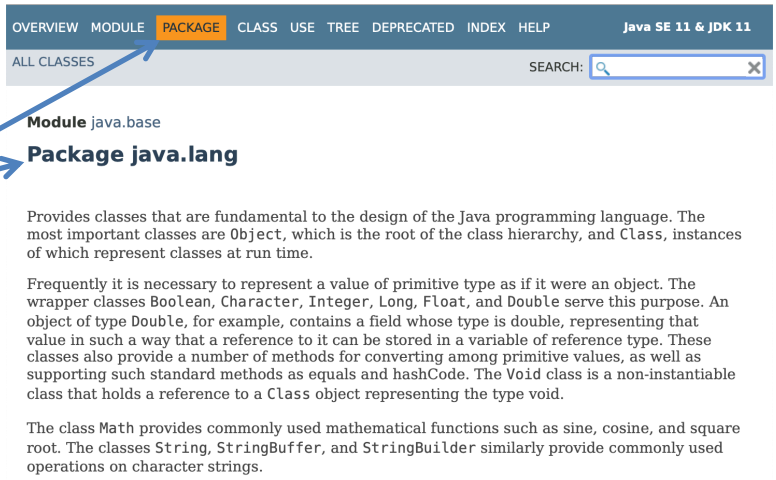
Below, you see a long discussion of class `String`, telling you something about its implementation. You should read this! You won't understand it all, but you will get some information on how strings of characters can be used and how they are stored. As you can imagine, a string of characters is stored as a `char[]` —an array of characters.


## Looking at packages

You may want to look at the classes in a package. We show how to do this.

Type `java.lang` into the search field and hit the return/enter key. The webpage for package `java.lang` appears.

We chose this package because it contains many classes that help define Java, like classes `String` and `Math` (which contains lots of mathematical functions, like abs(…)). Read the beginning to get an understanding of the classes that are in it.




Scroll down and you will see an "Interface Summary". You will learn about interfaces in about 3 weeks.


Scroll down further to get to the "Classes Summary". Click your mouse on any class to view the documentation for that class.