

Let's get introduced to Java. If you didn't already know, Java is a simple language that allows for new learners to quickly pick up and harness its power to create many wondrous things. These can be either building a website to designing a robot's behaviors. Now for you to know, Java is an object-oriented language, which means that Java is structured more around objects and what they can do. For a little example, a cat would be an object and there would be methods on what color the cat is, type of fur, and breed of the cat. I will start these lessons with the building of objects so you can get in the mindset of what Java is. This video will cover the three parts of an object: the class, fields, and methods.

We will start with classes, which are the foundations to build new objects. Let's use the cat again as an example, there is a main structure to cats. When we look at different species, cats start to have differences among them. Tigers are different from lions and tabby cats will differ from Siamese cats. All of these different cats may not look the same, but they will have similarities between them. They are all carnivores, all have rough tongues, pointed teeth, and very sharp claws. So this means that a class will have behaviors that will be the same no matter the cat, and states that give the physical differences between each other.

Now that you understand what the overall meaning of an object is, we should talk about fields and what role they play in an object. Fields are the states from before that contain data of the object. Take the physical differences of cats, starting with claws. All cats have claws when they are born, but that does not mean that every claw is equal or even similar. Some, in the case of lions and tigers, are large and long, meant to latch onto large prey such as deer or antelope. At the opposite end of the spectrum, household cats may also have sharp claws, but not nearly as large as the big cats. Meant more for smaller prey such as mice, no household cat needs a claw as thick as a lions. The fur will also be different even among the big cats. Cheetahs have spotted fur, while tigers have stripes. They all have fur but the design or data of the fur will be different between cats. So now you can understand why it is right to say that fields are what you store data in.

The third part of an object we will cover in this video is the methods part. Now if fields are data where you put in the descriptions of an object, methods will be the behaviors of such an object. What I mean is that methods will be the actions an object can have done on it or what it can do. Let's go back to the cat. A cat stretches, paws at the ground, and, for some, meows. These are all behaviors that a cat will do, doesn't matter if it is a large or small cat. Methods can also be used for emotion as well. It is all about what behavior the object is going through and what you as the programmer want to give an object to do.

With these three descriptions of an object, there is a reason why I started off this course with a discussion on object-oriented programming and not showing you the first basics of Java. Here is the reason for my madness; you can learn all the little basics later, understanding how Java works at its core is more important in understanding the power of the language than just knowing how to type a small program. This course will work to use the basics to drive into you how to use Java. I will keep coming back to objects in each video and bring every little basic piece of knowledge to show how it would work in an object. Let us begin this journey.