# Create a random number generator

When you roll a die, you're taking a chance. The chance is that you're going to get a number from one to six appear on the die when it is finished rolling. In code, you simulate the die using a random number generator. In Java, to create the random number generator, you'll use the random class. This class, when it is instantiated, allows you to generate a random number using a range that you define. In our code, we need to create the generator for our app. Open the MainActivity.java file. We'll create a field in our class to hold the instance of the random class.

At the top, above the onCreate method, create a field to hold our random class instance. We'll use the class name Random, and then we'll call it rand. You'll need to import this class using the Alt Enter shortcut for the IDE. When the activity starts, we need to create our instance of the random class and assign it to the field. We can do this at the bottom of the onCreate method. We'll access our instance, rand, and we'll set that to a new instance of the Random class.

Now, we'll use our generator in the rollDice method. Inside the method, we'll create a new toast message to display a random number. Later, we'll use this to create a value for a unique die. But let's look at the basic use of the generator first. First, create an integer called num. Then, we want to access our random number generator, and want it to get an integer. We'll use the next int method to do exactly that; rand.nextInt, notice that's a capital I.

You need to provide the max limit for the generator. This will force the generator to return an integer from zero to up to, but not including, the limit. So if we put in six, we'll get the numbers zero, one, two, three, four and five. Since we want one through six, we can add one to the end of this and get the numbers one through six from the generator. Then we can build a string using the number generated to build a message. We'll create a new string called randomValue, and we'll set that equal to the string Number generated, and then we concatenate num.

Now we can create a new toast to display the result. Toast makeText getApplicationContext, then we'll put in our randomValue text, then define the length of our toast. Then, we'll append the show method. If we run the app, we can see what happens. When you click the button, you will get a toast message that will display the result of the random number generator. Using this random number generator, we can simulate the dice we'll roll in the game to build a random chance to make the game different each time.