What's an exception?

An exception is an error that happens in code.

Some types of errors can be predicted and named.

Catching an exception

An exception is caught, first by creating a code block around the code, that might get the error.

This is done with the try statement code block.

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The try statement

The try statement actually has two code blocks.

The first is declared directly after the try keyword, and this code block ends, and is followed by the declaration of the catch keyword.

The catch keyword includes the declaration of variables, in parentheses, and then has its own code block.

```java
try {
    // statements that might get errors
} catch (Exception e) {
    // code to 'handle' the exception
}
```

The Scanner class

The Scanner class is described as a simple text scanner, which can parse primitive types and strings.

To use the Scanner class, we have to create an instance of Scanner.

You'll remember, this means we're creating an object of type Scanner.

We'll use the key word, new, to do it.

new keyword

The new keyword is used in what Java calls, a Class Instance Creation Expression.

In its simplest form, it's the word new, followed by the class name, and empty parentheses.

```
ClassName variableName = new ClassName();
```

And often in many cases, we can pass parameters in the parentheses, as we saw with methods.

```
ClassName variableName = new ClassName(argument1, argument2);
```
And we saw that we could do this with the String class, passing the text in the parentheses.

Instantiating Scanner

For reading input from the console or terminal, we instantiate a scanner object using new, followed by the Scanner class name, and passing in System.in, in the parentheses.

```java
Scanner sc = new Scanner(System.in);
```

For reading input from a file, we instantiate a scanner object using new, again with the Scanner class name, but pass in a File object, in the parentheses.

File is another class provided by Java, for reading and writing files.

```java
Scanner sc = new Scanner(new File("nameOfFileOnFileSystem"));
```

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Using the import statement

We haven't talked about the import statement yet, but this statement lets us use classes from other people's code.

In this case, Java provides a library of code, which includes the Scanner class, in a library called java.util.

```
import java.util.Scanner;
```

IntelliJ Auto-import setting

Way back in section four, when we configured IntelliJ with a number of different settings, I recommend that you enable these two options in the Auto Import menu.

Add unambiguous imports on the fly and Optimise imports on the fly.

If you enable these options then IntelliJ will automatically add and/or remove import statements as required.

Lets go back to the code so I can show you what I mean.