

Java Fundamentals: Generics

The What and Why of Generics



Richard Warburton

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Why do we need Generics?

```
String result = (String) list.get(0);  
System.out.println(result);
```

Printing out a String

ClassCastException:

`java.lang.Integer cannot be cast to java.lang.String`

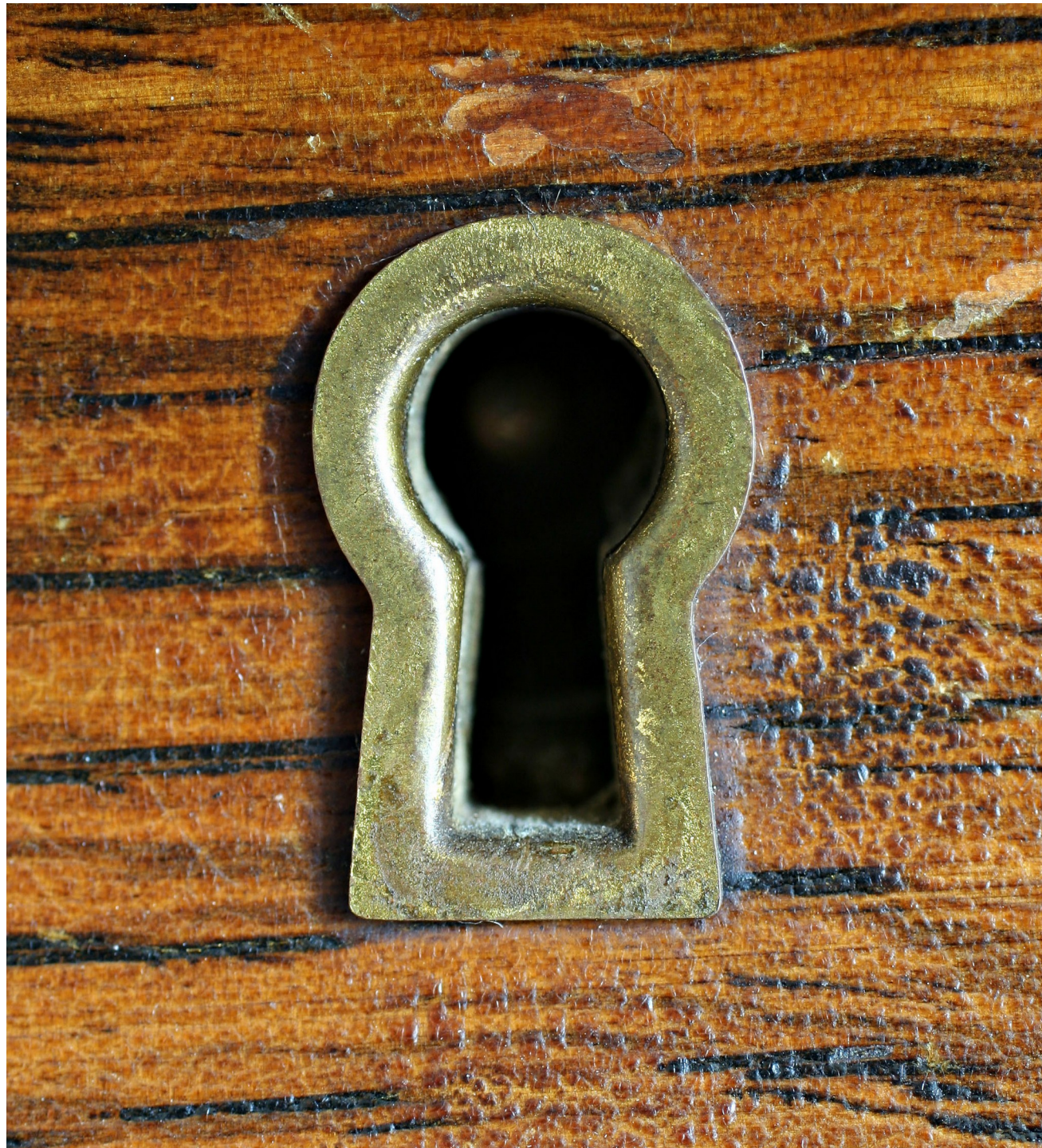
```
List list = new ArrayList();  
list.add("a");  
list.add("b");  
list.add(1);
```

Collections can contain any Object
We can add both Strings and Integers

```
List<String> list = new ArrayList<>();  
list.add("a");  
list.add("b");  
list.add(1);
```

A List containing only Strings

Generics stop runtime errors at
compile time





Generic
Collections

Classes and
Interfaces

Generics on
Methods

Wildcard
Generics

Rawtypes &
Compatibility

Reflection &
Lambdas

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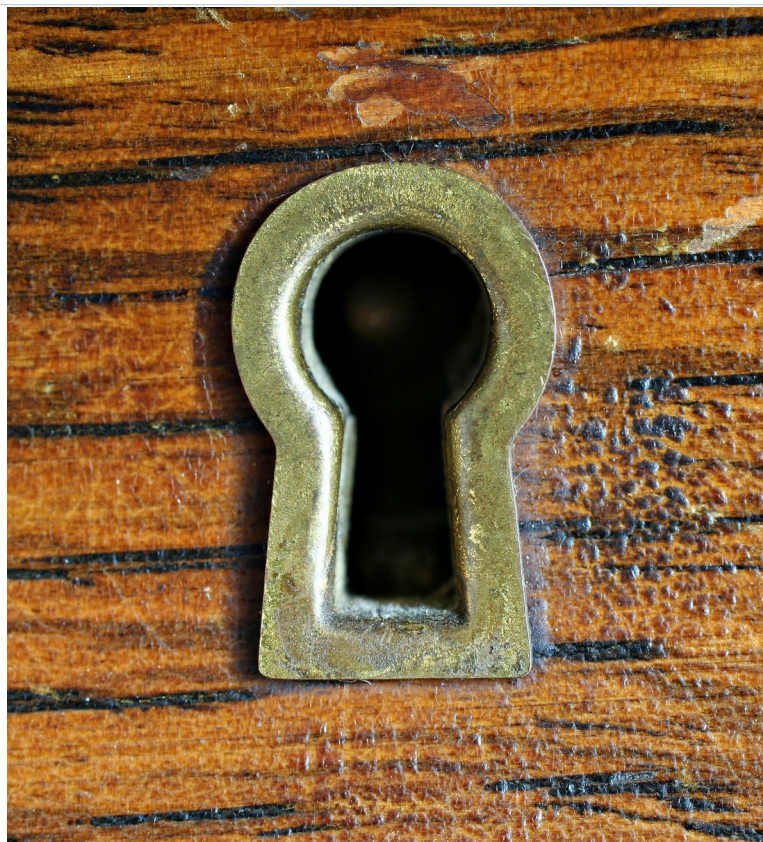
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