Performing Your First HTTP Requests

Sander Mak

FELLOW & SOFTWARE ARCHITECT

@Sander_Mak

HttpClient Module

module-info.java

```
module myapplication  {
   requires java.net.http;
}
```

What's New in Java 9

Java 9 Modularity: First Look

Synchronous HTTP Requests

```
send(HttpRequest request,
     HttpResponse.BodyHandler<T> responseBodyHandler)
     throws IOException, InterruptedException
```

↓

```
HttpResponse<T>
```

BodyHandlers

`ofString()`	`String`
`ofByteArray()`	`byte[]`
`ofFile(Path)`	`Path`
`ofLines()`	`Stream<String>`
`discarding()`	`Void`

Demo Scenario: LinkValidator

Input

List of URLs

Output

Still valid?

Status code in 2xx range

Demo

Performing Your First HTTP Request with HttpClient

Download JDK & IDE

jdk.java.net/11/

jetbrains.com/idea/download

Asynchronous HTTP Requests

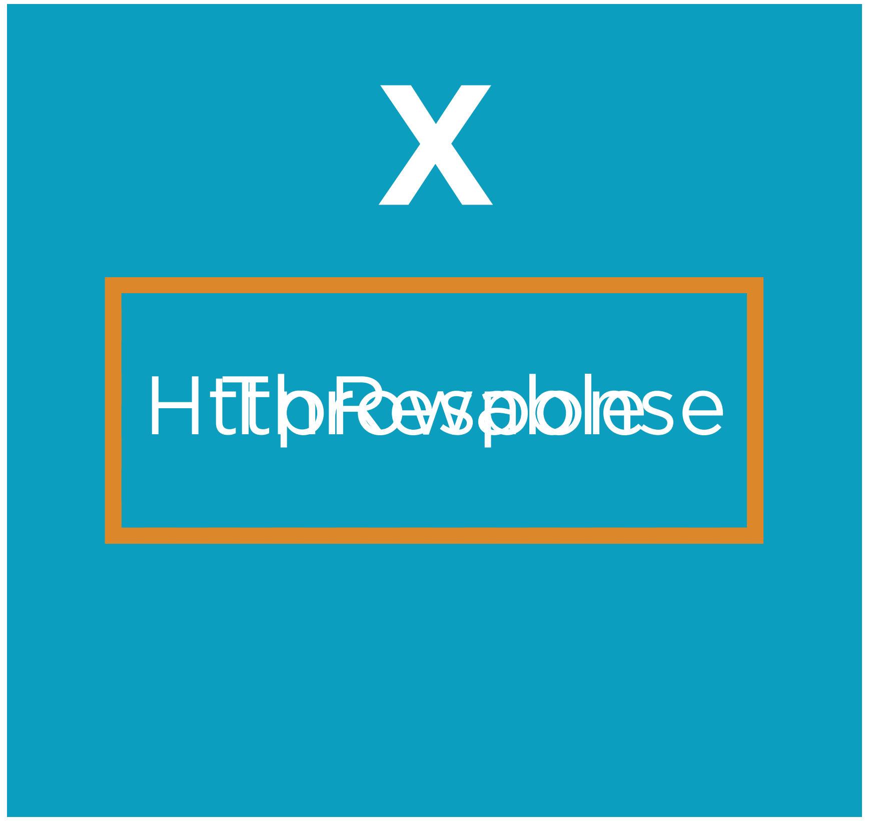
```
sendAsync(HttpRequest request,
     HttpResponse.BodyHandler<T> responseBodyHandler)
```

↓

```
CompletableFuture<HttpResponse<T>>
```

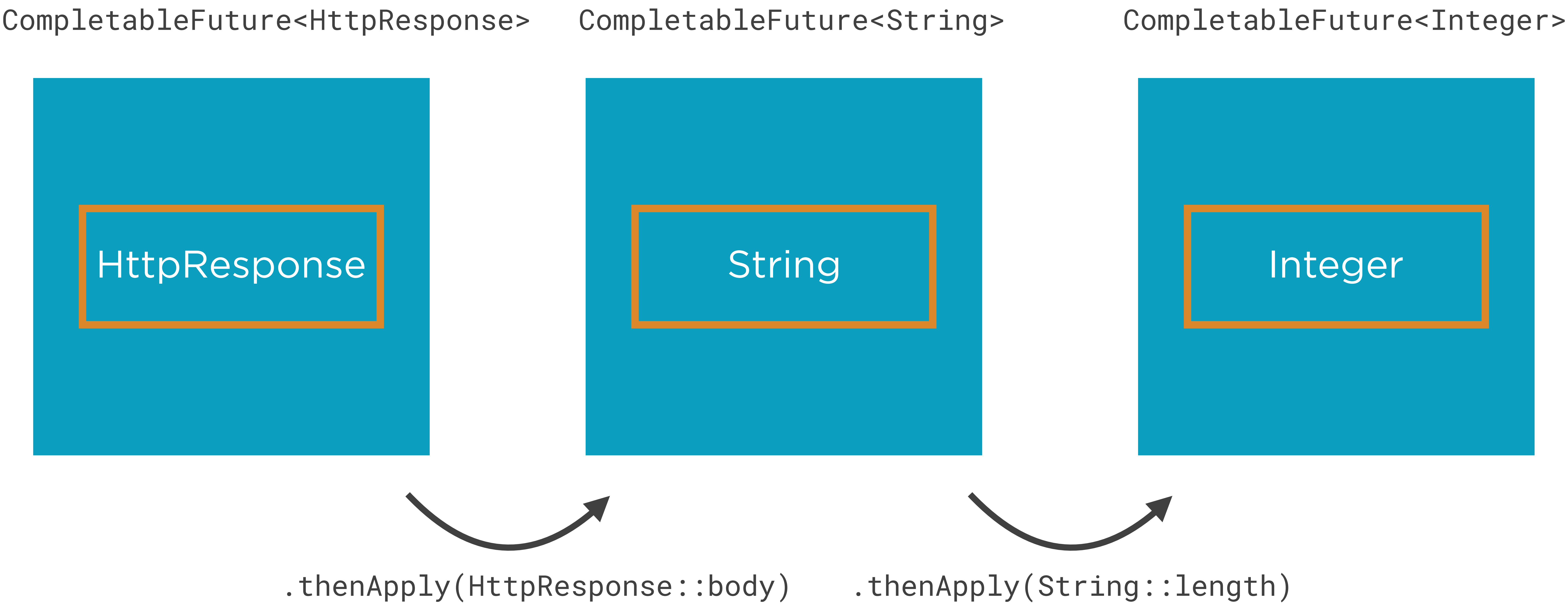
Asynchronous HTTP Requests

`CompletableFuture<T>`

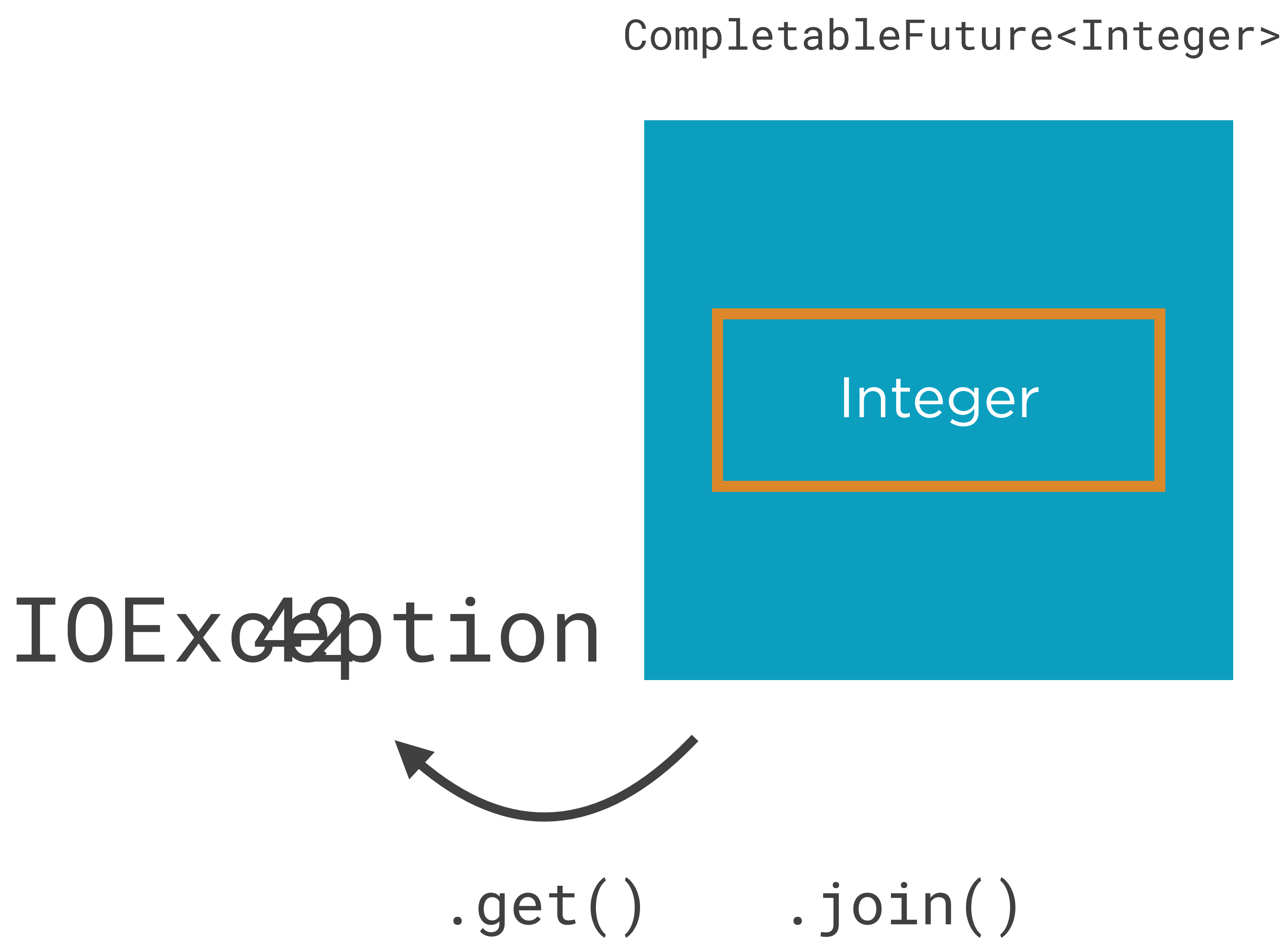


```
complete(T value)
completeExceptionally(Throwable ex)
```

Asynchronous HTTP Requests


CompletableFuture<HttpResponse>
CompletableFuture<String>
CompletableFuture<Integer>
HttpResponse
String
Integer
.thenApply(HttpResponse::body)
.thenApply(String::length)

Asynchronous HTTP Requests



CompletableFuture<Integer>

Integer

IOException

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.get()

.join()

Using sendAsync

```
HttpClient client = ..
HttpRequest request = ..

CompletableFuture<HttpResponse<String>> responseFuture =
   client.sendAsync(request,
                    HttpResponse.BodyHandlers.ofString());

responseFuture.thenAccept(response ->
   System.out.println(response.body());
```

Demo

Performing Asynchronous HTTP Requests

Summary

- BodyHandlers
- Synchronous vs. asynchronous
- CompletableFuture