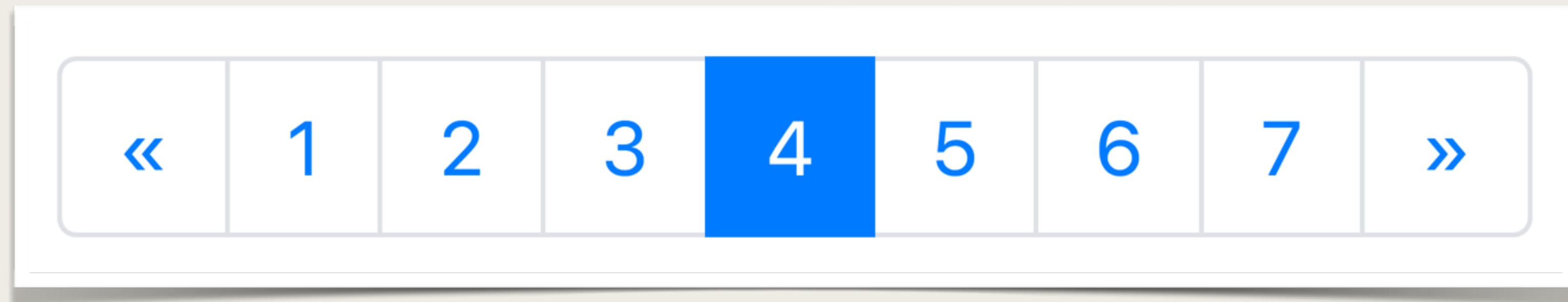


Pagination

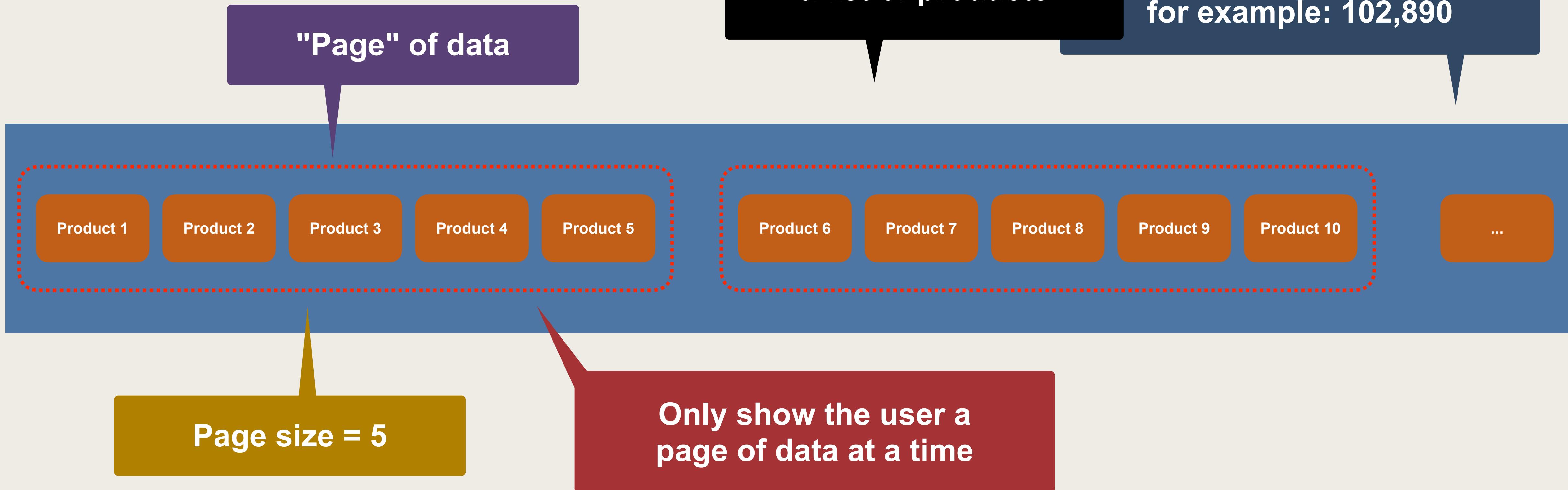


Pagination

- Pagination is useful for handling large amounts of data
- Show the users a small subset of data: "page" of data
- The user can click links to view other pages



Pagination Concepts



Pagination

- We will need pagination support on the back-end: Spring Boot
- Also need pagination support on the front-end: Angular

Pagination

- Our Spring Boot backend uses Spring Data REST
- Spring Data REST provides pagination support out of the box ... yes!!!

www.luv2code.com/spring-data-rest-pagination

Spring Data REST - Parameters

- By default, Spring Data REST returns: 20 elements
- We can customize this by passing in parameters

Parameter	Purpose
page	The page number to access. 0-based ... defaults to 0.
size	The size of the page to return (items per page). Defaults to 20

Spring Data REST - Pagination Examples

- Get the first page, with page size of 10

```
http://localhost:8080/api/products?page=0&size=10
```

Remember:
Pages are 0-based
First page is at position 0

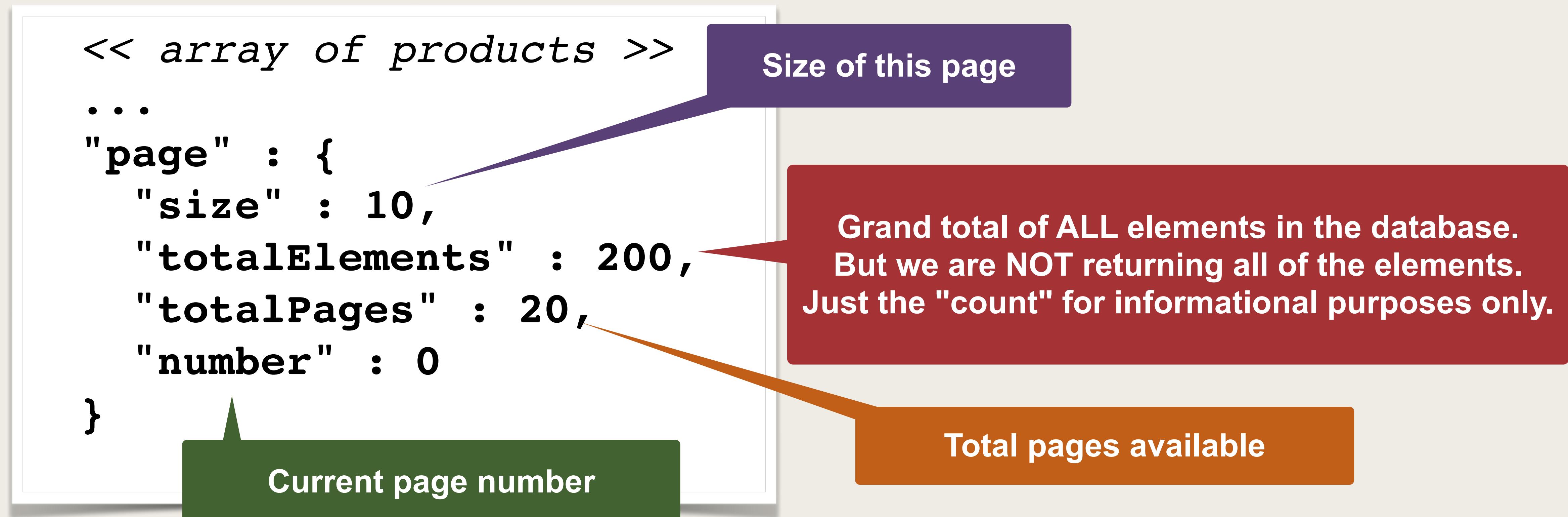
- Get the second page, with page size of 10

```
http://localhost:8080/api/products?page=1&size=10
```

Second page is at position 1

Spring Data REST - Response Meta Data

- The response meta data has valuable information



Pagination with Angular

- There are many pagination solutions available for Angular
- We will make use of a popular component framework: **ng-bootstrap**

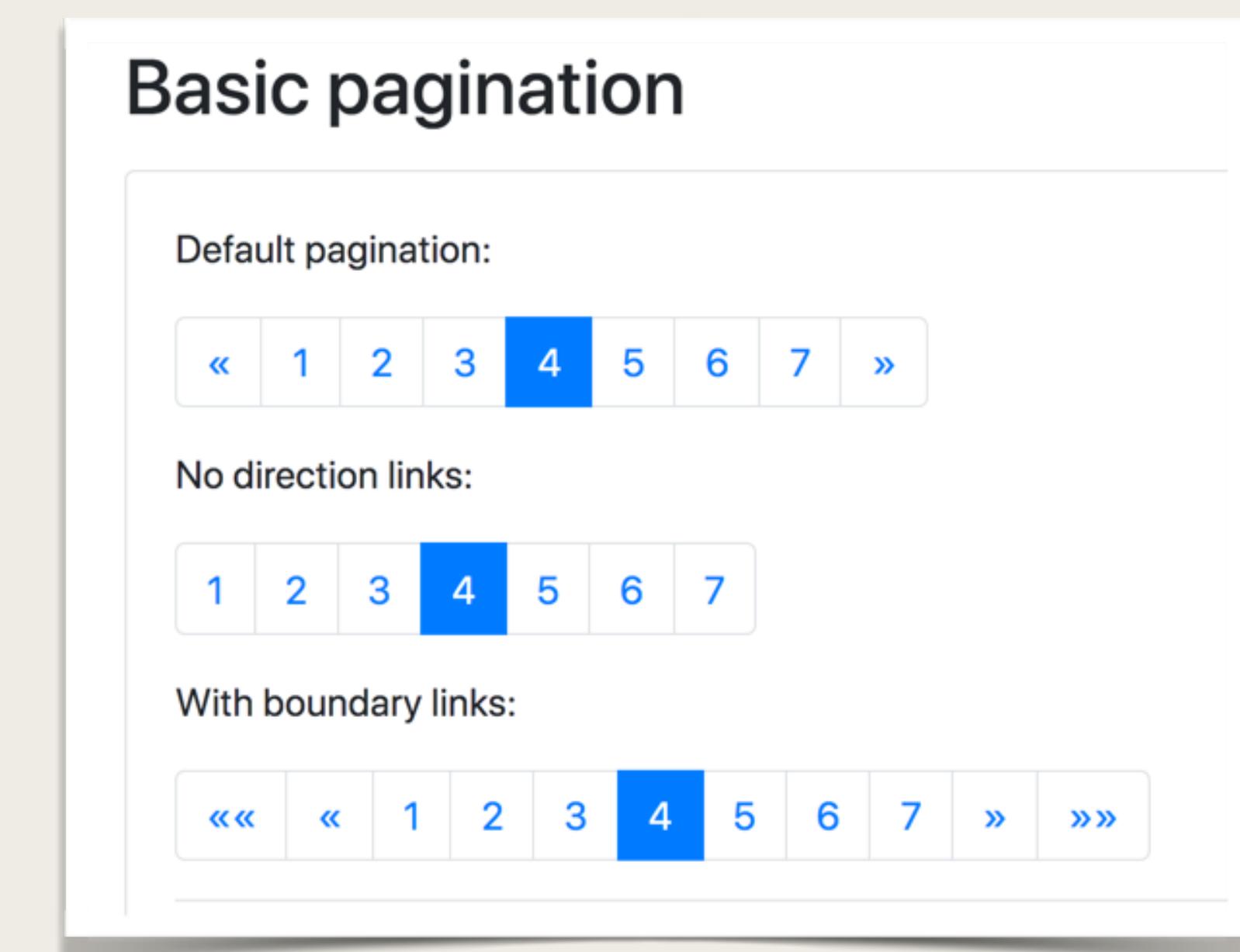
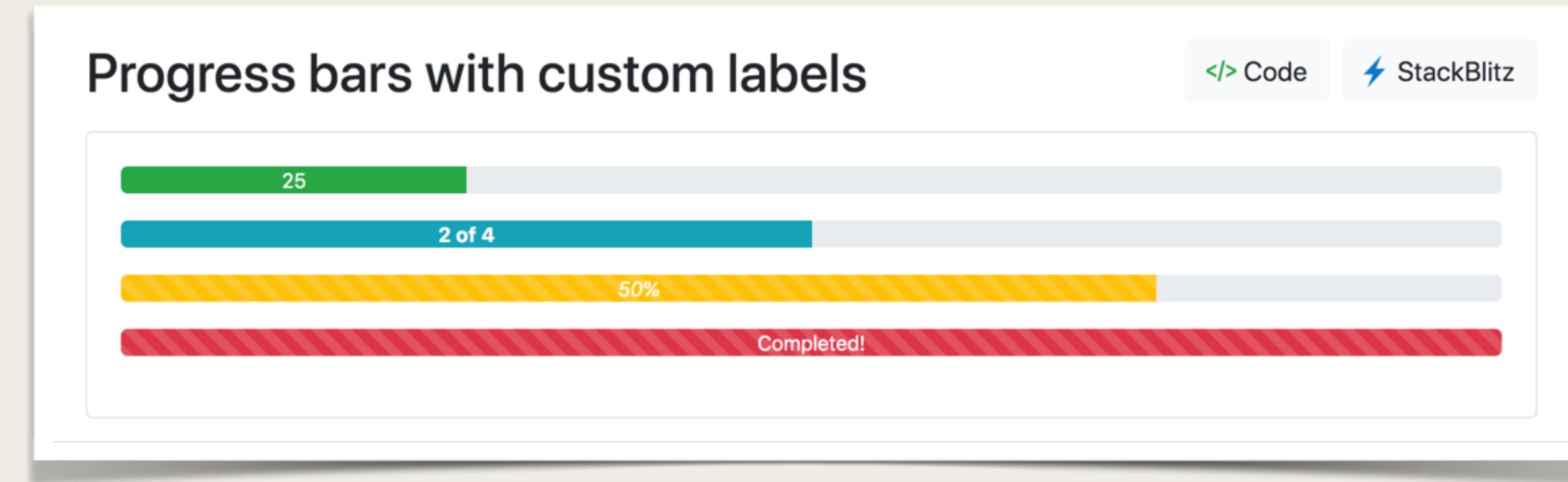
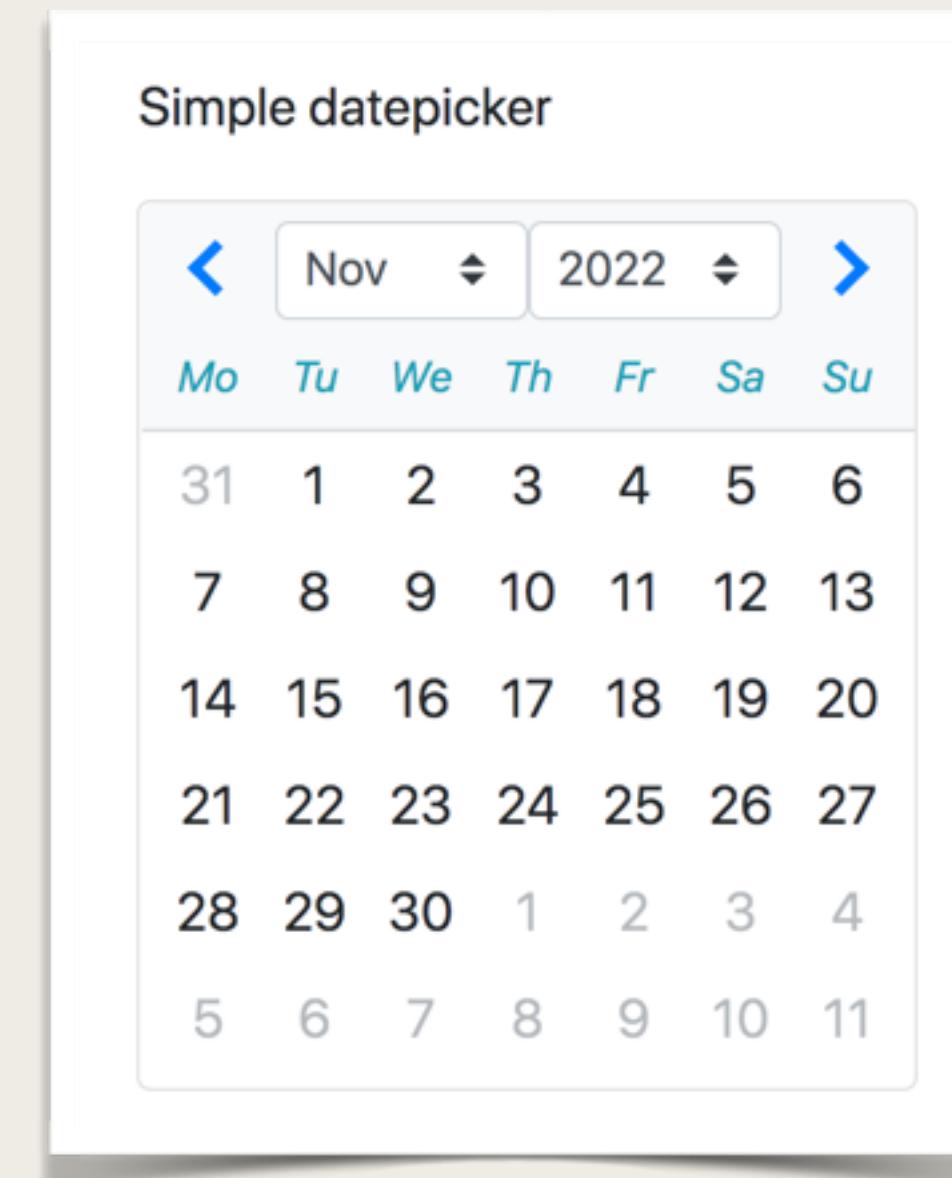


Components in ng-bootstrap

<https://ng-bootstrap.github.io/>

Components

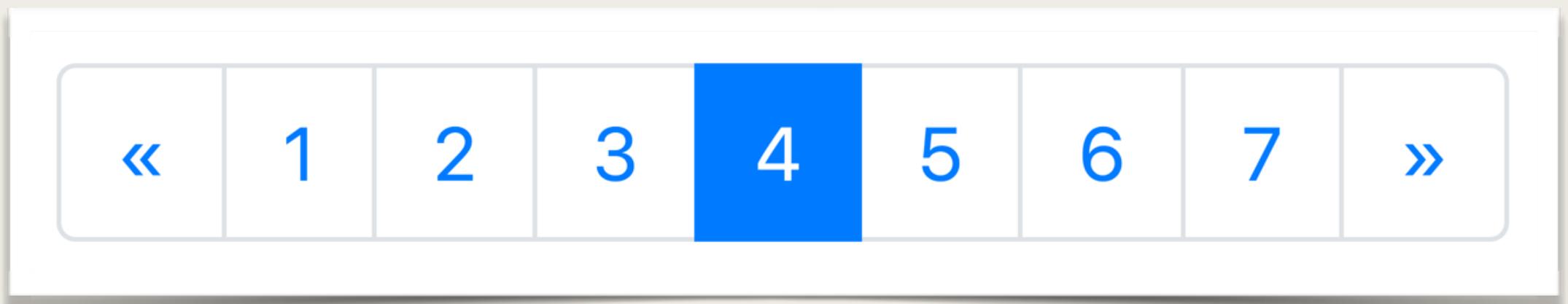
- Accordion
- Alert
- Buttons
- Carousel
- Collapse
- Datepicker**
- Dropdown
- Modal
- Nav
- Pagination
- Popover
- Progressbar
- Rating
- Table
- Tabset
- Timepicker
- Toast
- Tooltip
- Typeahead



Pagination component

<https://ng-bootstrap.github.io/>

Parameter	Purpose
page	The page number to access. 1-based ... defaults to 1
pageSize	The size of the page (items per page). Defaults to 10
collectionSize	The total number of items
pageChange	Event handler for page change events



Pagination component

<https://ng-bootstrap.github.io/>

- Basic example of pagination component

```
<ngb-pagination [page]="thePageNumber"  
    [pageSize]="thePageSize"  
    [collectionSize]="theTotalElements"  
    (pageChange)="listProducts()">  
</ngb-pagination>
```

We will create code to combine
this for our project

Component will generate
links for pagination

