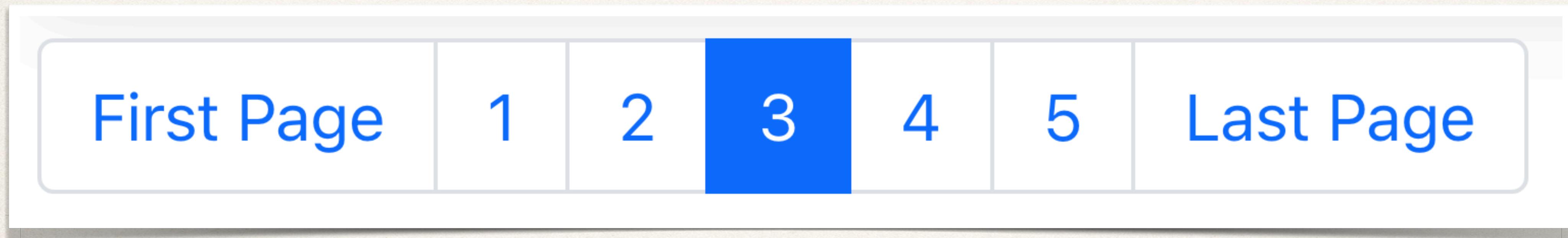


Pagination

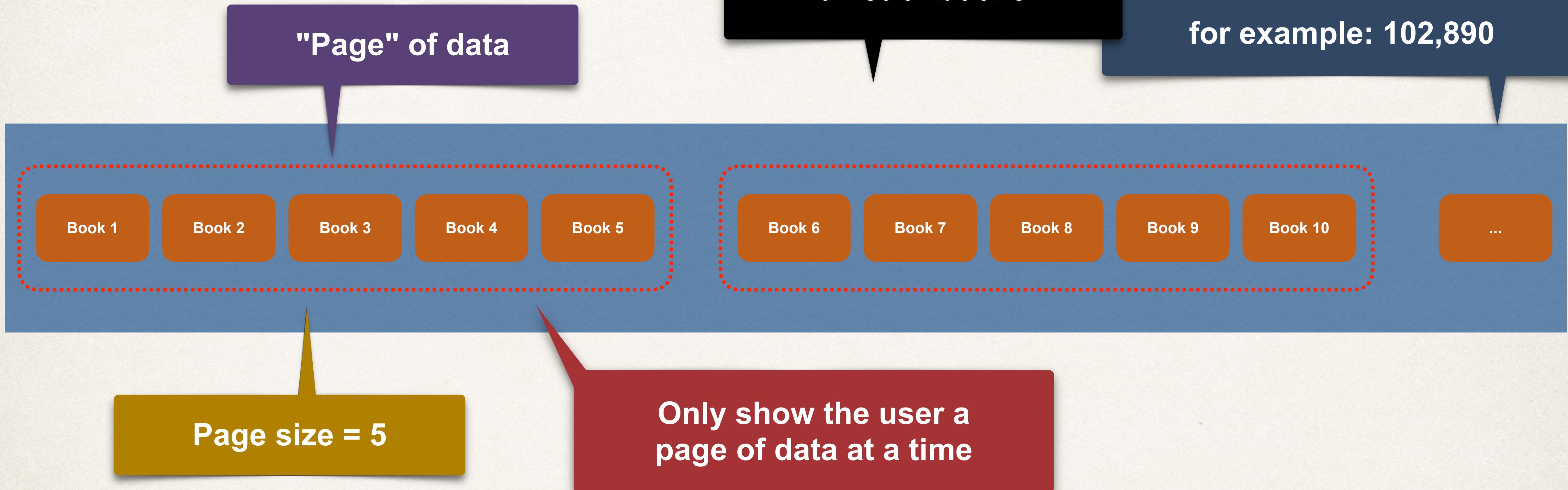


Pagination

- 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: React

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/books?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/books?page=1&size=10
```

Second page is at position 1

Spring Data REST - Response Meta Data

- The response meta data has valuable information

```
<< array of books >>
...
"page" : {
    "size" : 10,
    "totalElements" : 200,
    "totalPages" : 20,
    "number" : 0
}
```

Size of this page

Grand total of ALL elements in the database.
But we are NOT returning all of the elements.
Just the "count" for informational purposes only.

Current page number

Total pages available

Pagination with React

- Basic example of pagination component
- Create a new Pagination component that we can reuse within our application

Pagination.tsx

```
export const Pagination: React.FC<{}> = (props) => {  
  < **Pagination Logic** />  
  
  return (  
    <nav>  
      ..... * More Code * .....  
    </nav>  
  );  
}
```

SearchBooksPage.tsx

```
<Pagination  
  currentPage={currentPage}  
  totalPages={totalPages}  
  paginate={paginate}>  
</Pagination>
```