### Supporting Paging



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### Coming Up



### Paging through data right up to the data store

Enabled by the principle of deferred execution

Returning pagination metadata



# Paging through Collection Resources

#### Collection resources often grow quite large

- Implement paging on all of them

Paging helps avoid performance issues

## Paging through Collection Resources

## Parameters are passed through via the query string

http://host/api/authors?pageNumber=1&pageSize=5

### Paging through Collection Resources



Limit the maximum page size



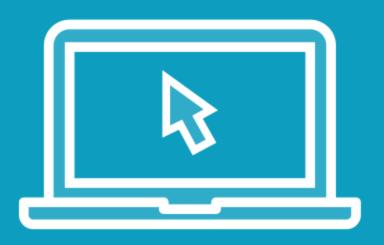
Page by default



Page all the way through to the underlying data store



### Demo



Paging through collection resources



Returning Pagination Metadata Must at least include links to the previous and next pages

Could include additional information: total count, amount of pages, ...



```
{
    "results": [ {author}, {author}, ...],
    "metadata": { "previousPage" : "/api/...", ...}
}
```

#### Pagination Metadata

Response body no longer matches the Accept header: this isn't application/json, it's a new media type

Breaks the self-descriptive message constraint: the consumer does not know how to interpret the response with content-type application/json

Returning Pagination Metadata When requesting application/json, paging metadata isn't part of the resource representation

Use a custom header, like X-Pagination



## Implementing a PagedList<T> Class

#### Custom PagedList<T> class

- CurrentPage
- TotalPages
- HasPrevious
- HasNext

Class can be reused for all collection resources



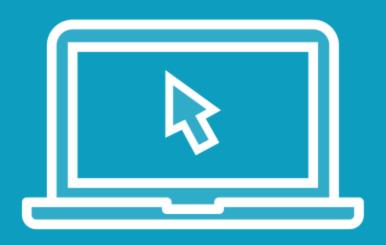
### Demo



Improving reuse with a
PagedList<T> class



### Demo



Returning pagination metadata



### Summary



## When correctly implemented, paging will improve performance

## Pass page size and page number as query string parameters

- Limit page size
- Provide default values for page size and page number



### Summary



## Page all the way through to the underlying data store

- Deferred execution
- Skip(), Take()

Page by default

Return pagination metadata

## Up Next: Supporting Sorting