

# 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](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

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