elasticsearch

for developer

Search DSL

book_06.txt

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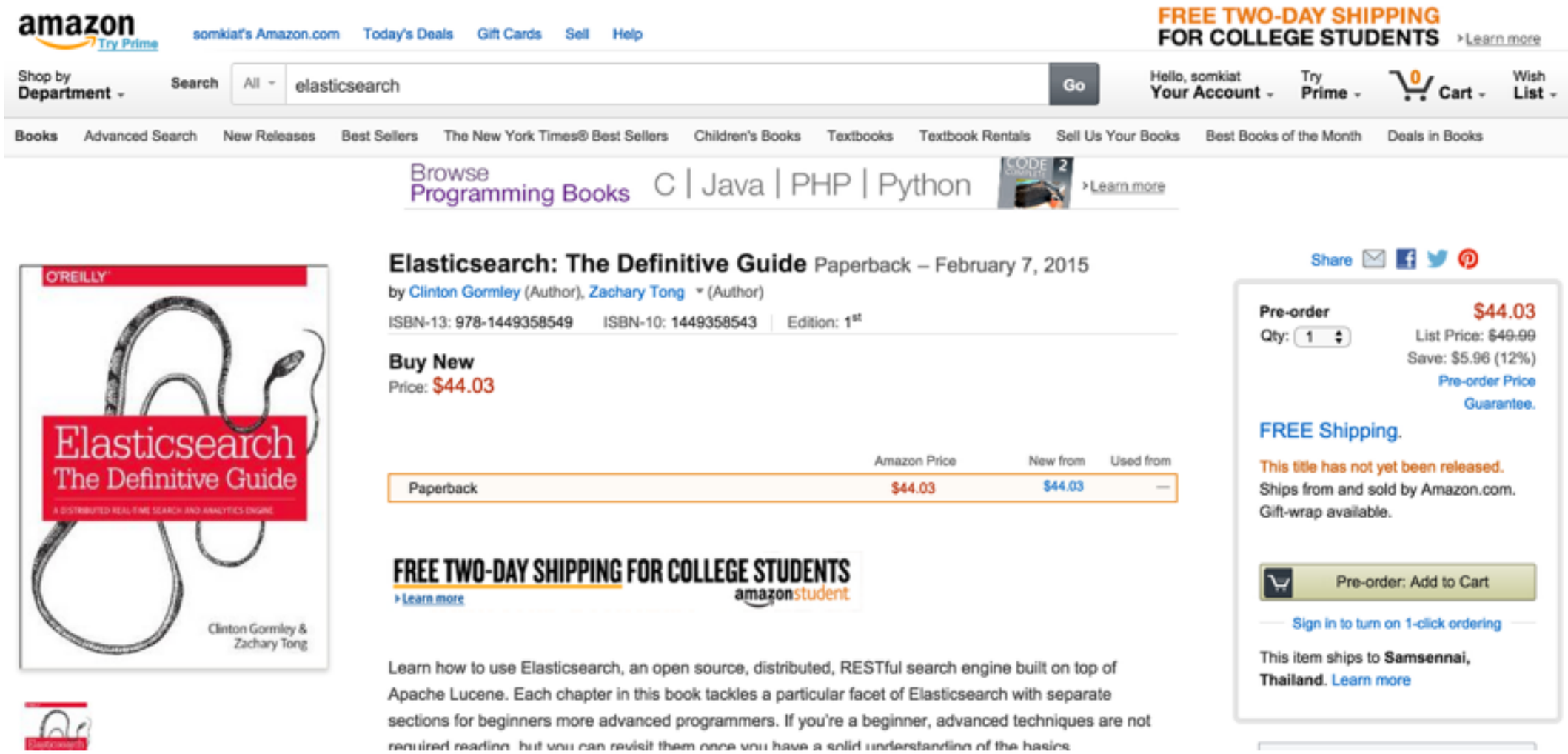
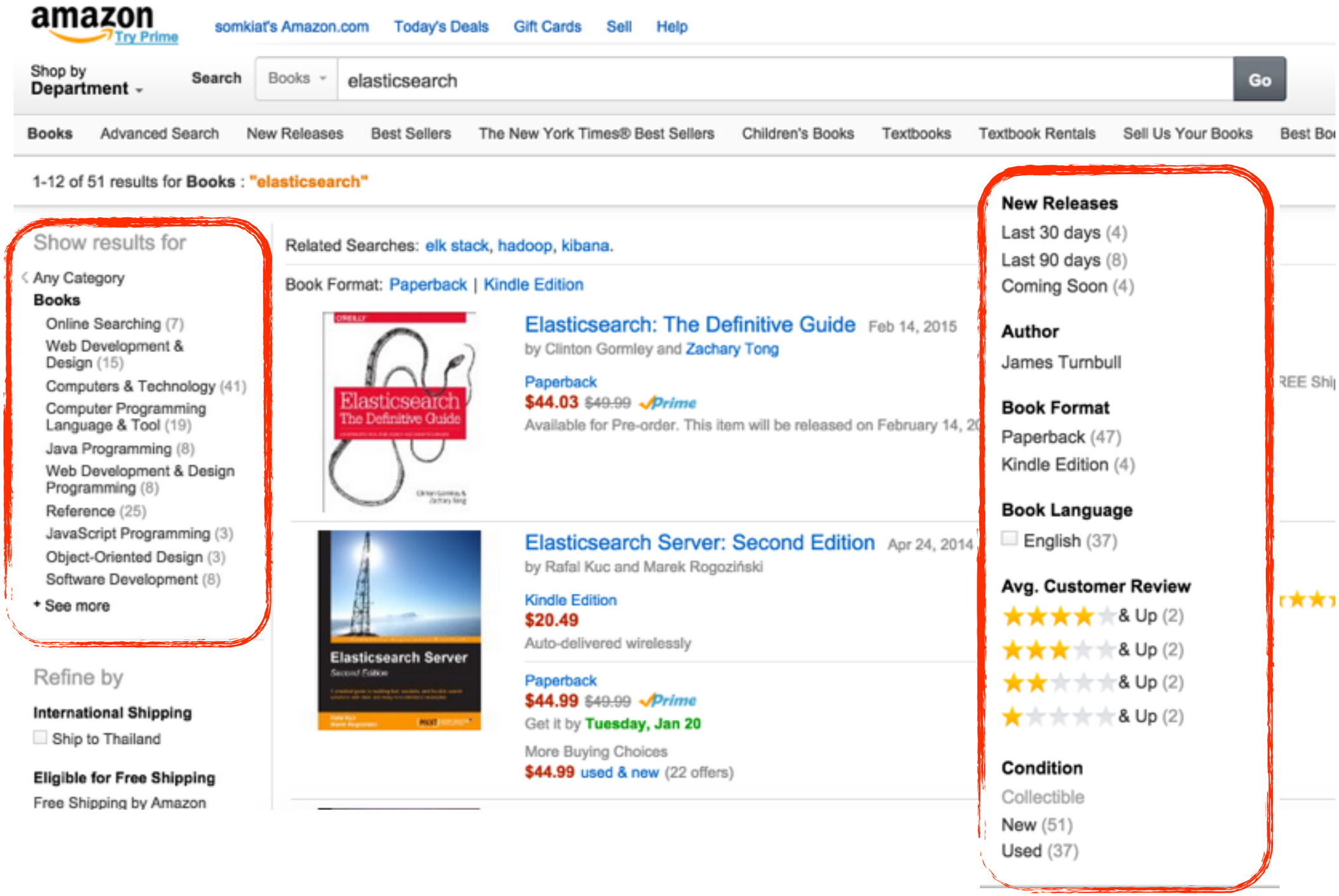
Siam Chamnankit Co., Ltd., Odd-e (Thailand) Co., Ltd. and Alliance

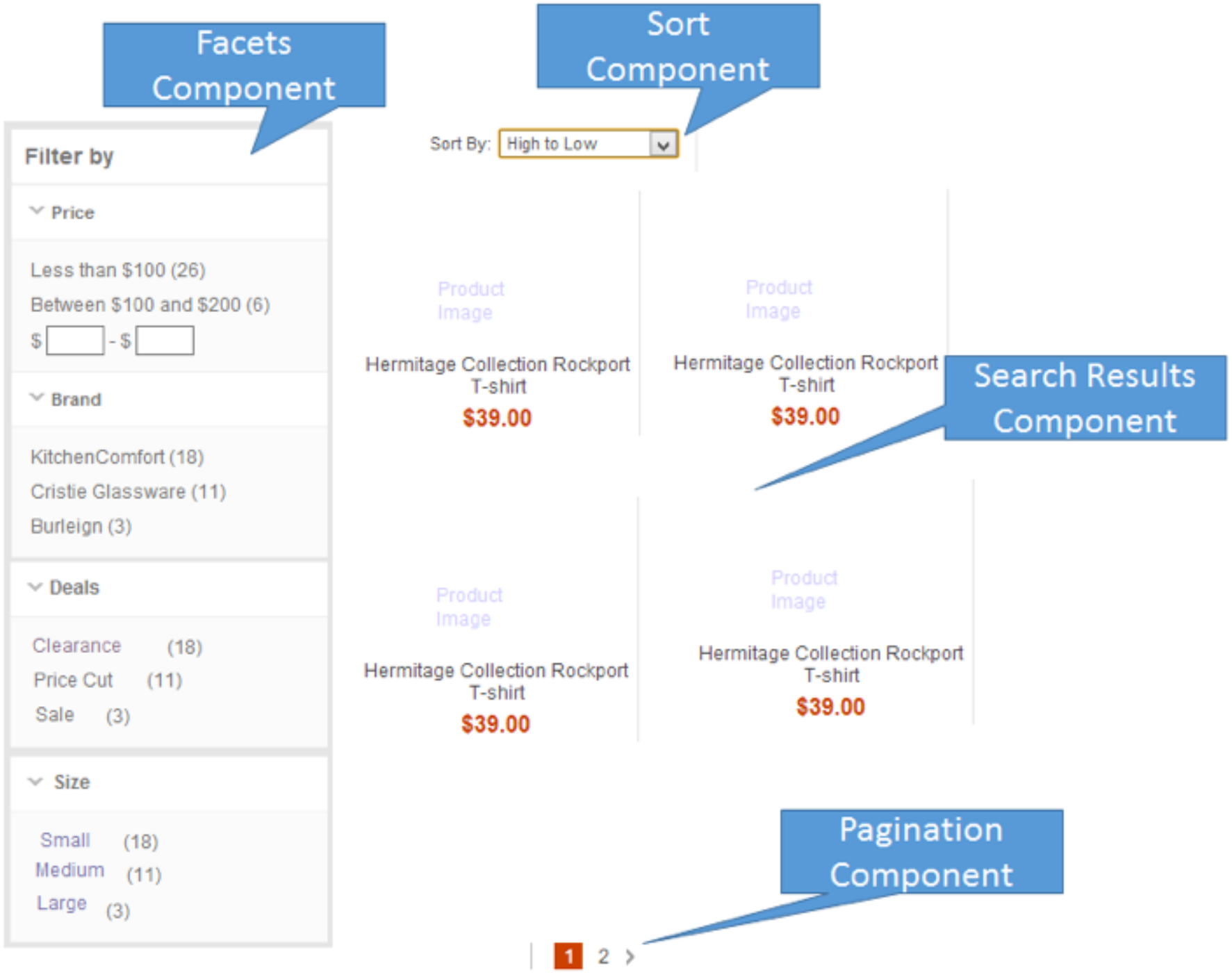
Requirement



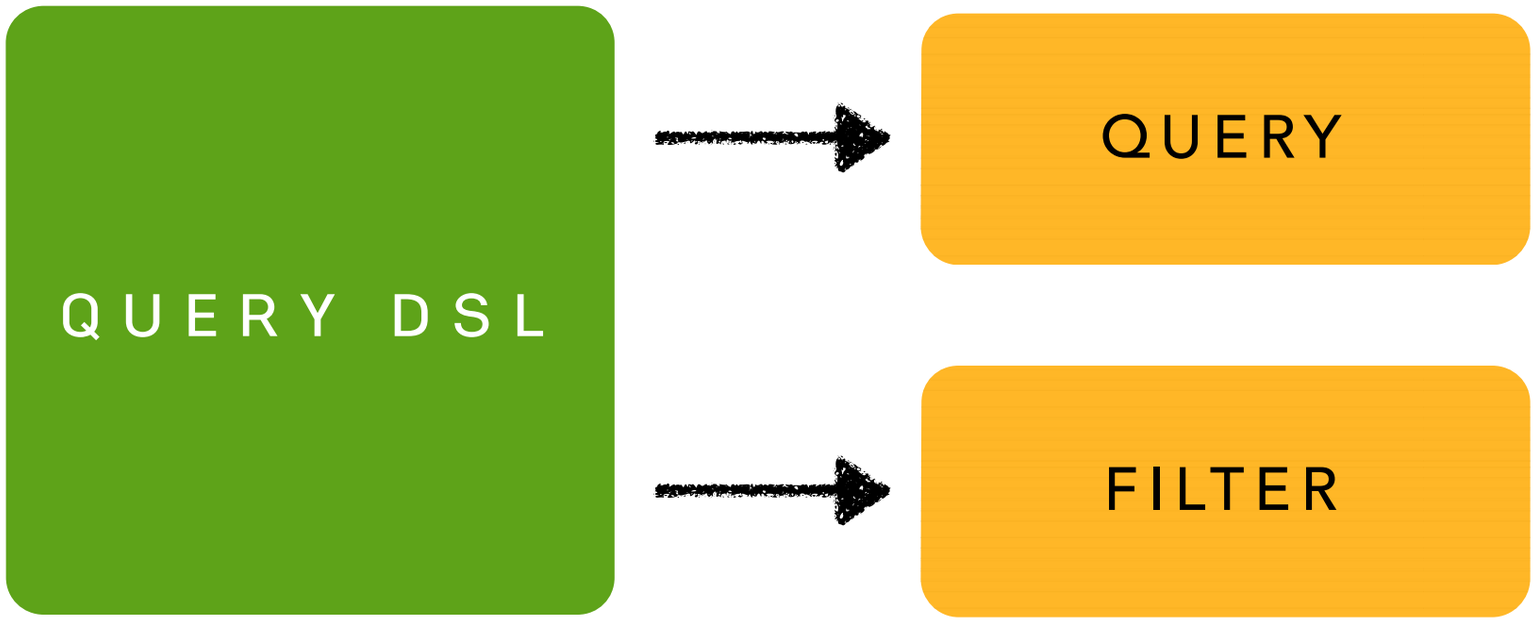
Requirement



Analysis


Facets Component
Sort Component
Search Results Component
Pagination Component
Filter by
Price
Less than $100 (26)
Between $100 and $200 (6)
$ - $
Brand
KitchenComfort (18)
Cristie Glassware (11)
Burleigh (3)
Deals
Clearance (18)
Price Cut (11)
Sale (3)
Size
Small (18)
Medium (11)
Large (3)
Sort By: High to Low
Product Image
Hermitage Collection Rockport T-shirt
$39.00
1
2

Query DSL



http://www.elasticsearch.org/guide/en/elasticsearch/guide/current/_queries_and_filters.html

Query DSL

Queries

match query
term query
terms query
multi match query
query string query
prefix query
wildcard query
range query
bool query

http://www.elasticsearch.org/guide/en/elasticsearch/reference/current/query-dsl-queries.html

Query DSL

Filters

query filter
term filter
terms filter
missing filter

range filter
or filter
and filter
exists filter

not filter
prefix filter
bool filter

http://www.elasticsearch.org/guide/en/elasticsearch/reference/current/query-dsl-filters.html

Let’s Start !

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Preparing index

DELETE /store

PUT /store

My Book

Name	Type	Value
Id	Number	1
Title	String	Elasticsearch
Author_Name	String	[“A”, “B”]
Category	String	[“A”, “B”]
Isbn	String	1449358543
Price	Double	44.30
Page	Number	724
Active	Number	Inactive = 0, Active = 1
Published_Date	Date	2015-01-15
Short_Description	String	
Long_Description	String	

Preparing data

Create documents


```
{
    "took": 1,
    "timed_out": false,
    "_shards": {
        "total": 5,
        "successful": 5,
        "failed": 0
    },
    "hits": {
        "total": 5,
        "max_score": 1,
        "hits": [
            {
```

Query DSL

```
GET /_search
{
  "query": YOUR QUERY
}
```

Term query

```
GET /store/book/_search
{
  "query": {
    "term": {
      "title": {
        "value": "elasticsearch"
      }
    }
  }
}
```

http://www.elasticsearch.org/guide/en/elasticsearch/reference/current/query-dsl-term-query.html

Terms query

```
GET /store/book/_search
{
  "query": {
    "terms": {
      "title": [“search","the"],
      “minimum_should_match": 1
}}}
```

http://www.elasticsearch.org/guide/en/elasticsearch/reference/current/query-dsl-terms-query.html

Match query

```
GET /store/book/_search
{
  "query": {
    "match": {
      "title": "elasticsearch book"
    }
  }
}
```

http://www.elasticsearch.org/guide/en/elasticsearch/reference/current/query-dsl-term-query.html

Multi match query

```
GET /store/book/_search
{
  "query": {
    "multi_match": {
      "query": "nosql",
      "fields": [
        "title",
        "long_description"
      ]
    }
  }
}
```

Query string

```
GET /store/book/_search
{
  "query": {
    "query_string": {
      "default_field": "title",
      "query": "elasticsearch AND book OR lucene"
    }
  }
}
```

Range query

```
GET /store/book/_search
{
  "query": {
    "range": {
      "price": {
        "gte": 10,
        "lte": 21
      }
    }
  }
}
```

http://www.elasticsearch.org/guide/en/elasticsearch/reference/current/query-dsl-range-query.html

Bool query

```
{
   "bool": {
        "must":     { "match": { "tweet": "elasticsearch" }},
        "must_not": { "match": { "name":  "mary" }},
        "should":   { "match": { "tweet": "full text" }}
    }
}
```

Filters

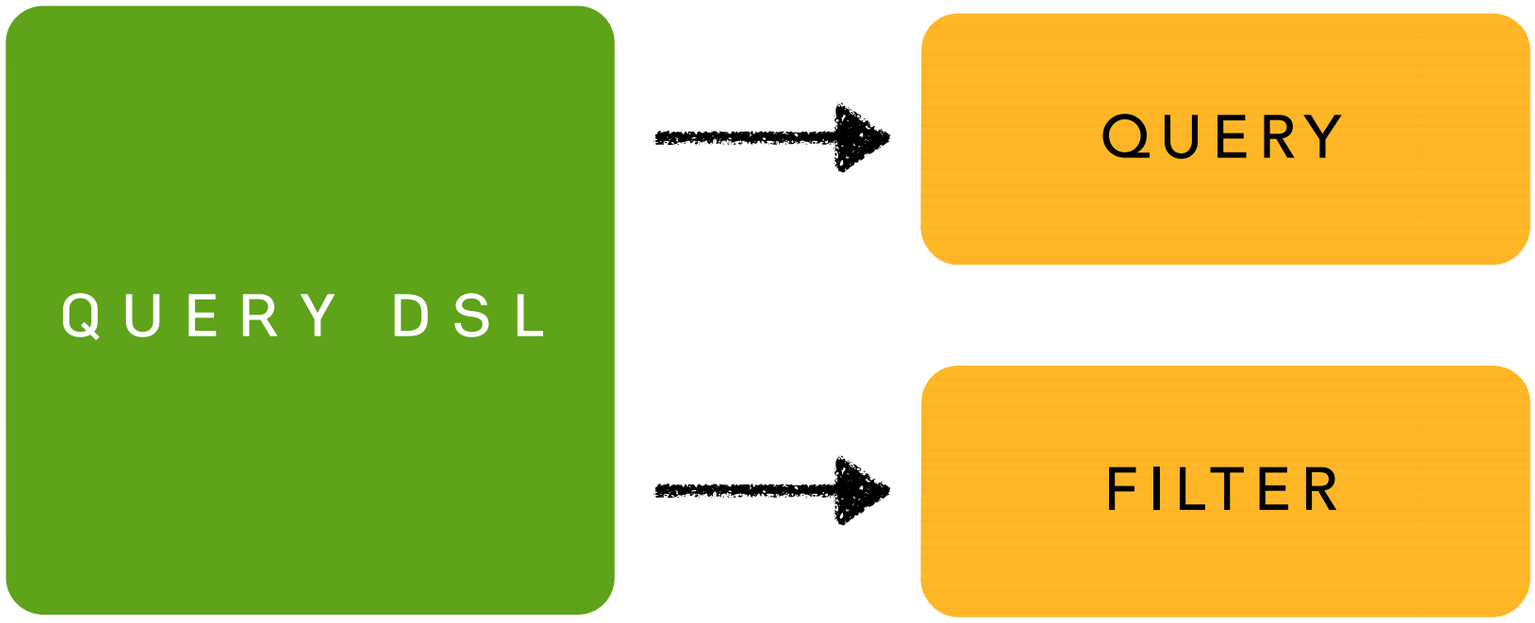
```
GET /store/book/_search
{
  "query": {
    "filtered": {
      "filter": {
        "term": {
          "title": "elasticsearch"
        }
      },
      "query": {
        "term": {
          "published_date": "2015-01-16"
        }
    }}}}
```

http://www.elasticsearch.org/guide/en/elasticsearch/reference/current/query-dsl-filtered-query.html

Search data :: Filtered

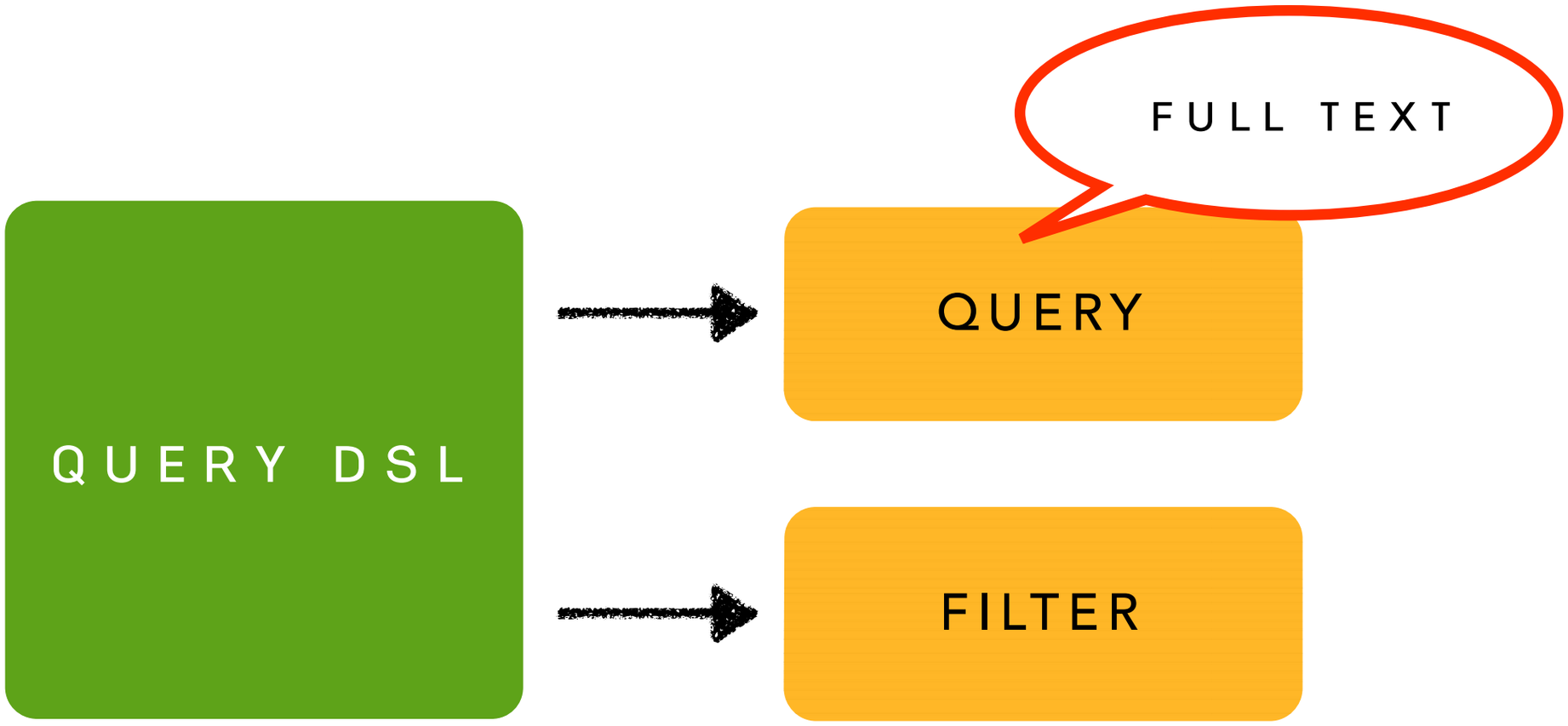
```
GET /store/book/_search
{
  "query": {
    "filtered": {
      "filter": {
        "term": {
          "title": "elasticsearch"
        }
      },
      "query": {
        "term": {
          "published_date": "2015-01-16"
        }
      }
}}}}
```

Query vs. Filter



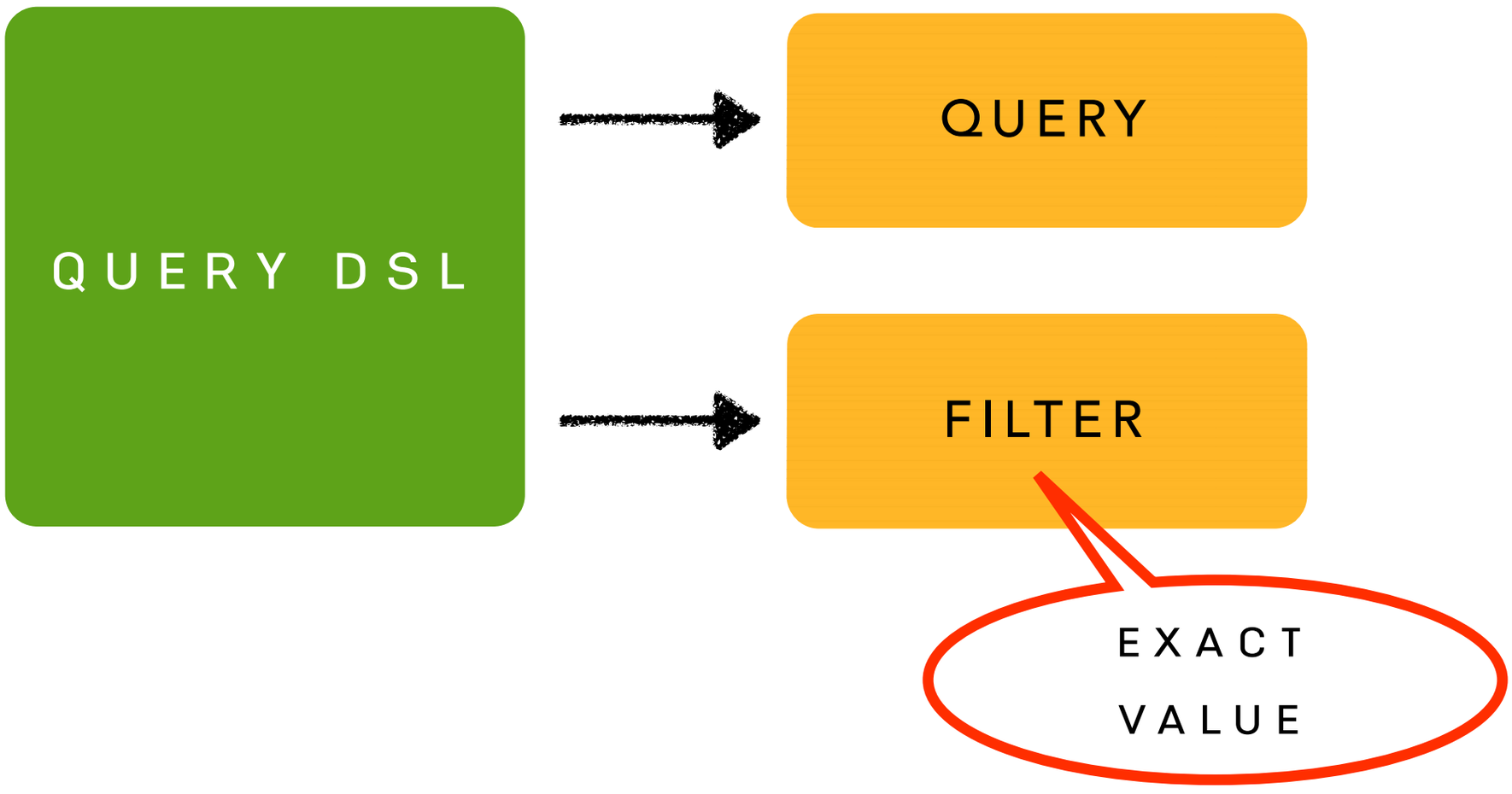
http://www.elasticsearch.org/guide/en/elasticsearch/guide/current/_queries_and_filters.html

Query vs. Filter



http://www.elasticsearch.org/guide/en/elasticsearch/guide/current/_queries_and_filters.html

Query vs. Filter



http://www.elasticsearch.org/guide/en/elasticsearch/guide/current/_queries_and_filters.html

Query vs. Filter

QUERY

- Can’t caching
- Relevant
- Required memory !!

FILTER

- Easy to caching
- Quick to calculate
- Reusable

http://www.elasticsearch.org/guide/en/elasticsearch/guide/current/_queries_and_filters.html

Pagination

```
GET /store/book/_search
{
  "from": 0,
  "size": 2
}
```

Sorting

```
GET /store/book/_search
{
"sort": [
    {
      "published_date": {
        "order": "desc"
      }
    }
  ]
}
```

Multiple Sorting

```
GET /store/book/_search
{
"sort": [
    {
      "published_date": {
        "order": "desc"
      }
    }
  ]
}
```

http://www.elasticsearch.org/guide/en/elasticsearch/guide/current/_sorting.html

Workshop

Search all together !!

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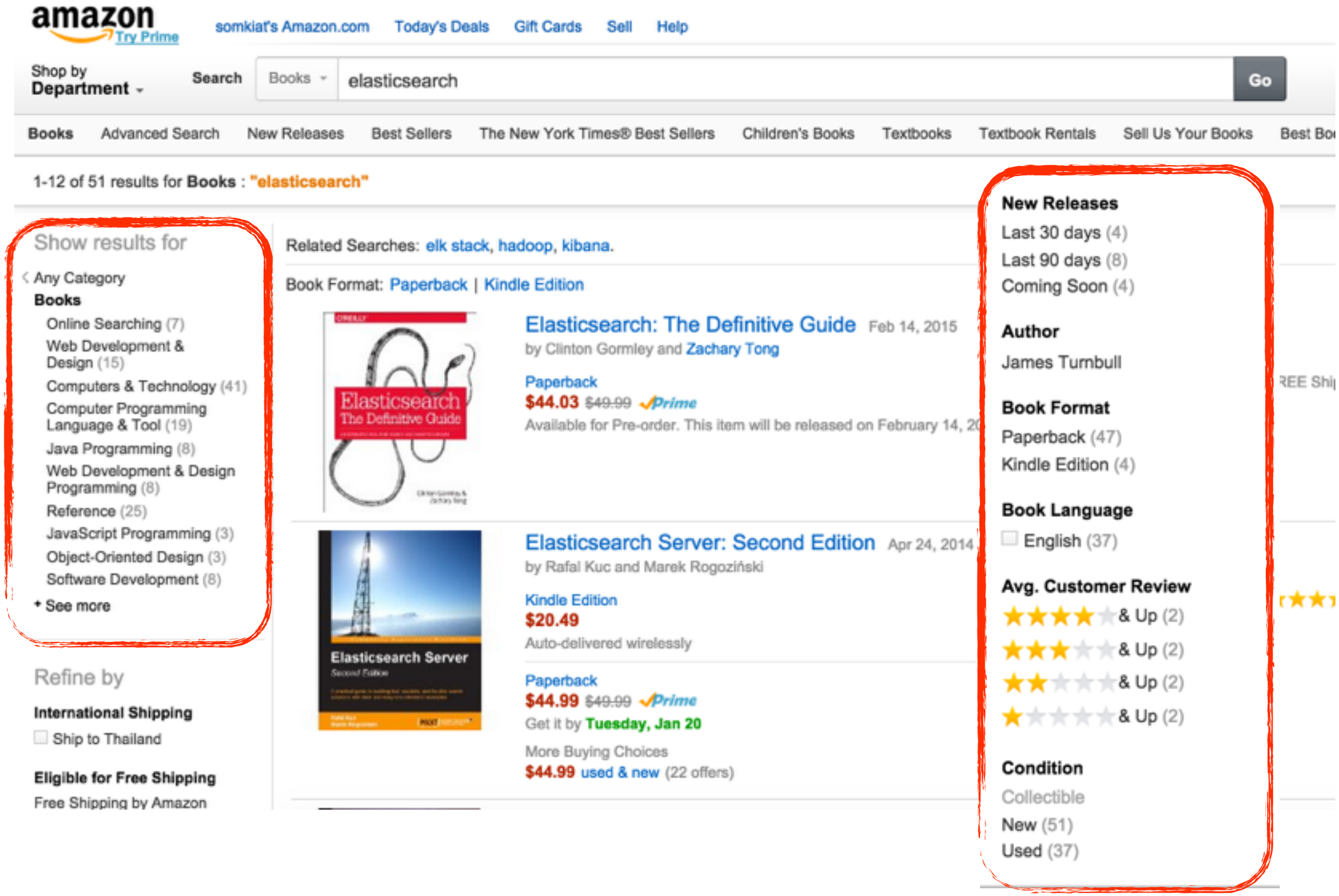
What's next ?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