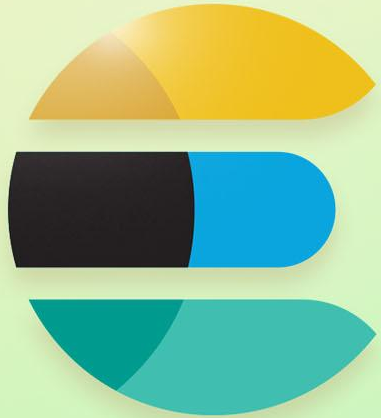
Query execution contexts



Query execution context

- What you have seen thus far (with one exception)
- Answers two questions;
  - *“Does this document match” (yes/no)*
  - *“How well does this document match”* (`_score` metadata field)
- Query results are sorted by `_score` descendingly
  - The most relevant documents appear at the top

Identifying the query context

```
GET /products/_search
{
  "query": {
    "match": {
      "name": "pasta"
    }
  }
}
```

Filter execution context

- Only answers one question; *“Does this document match?”* (yes/no)
  - No relevance scores are calculated
- Used to filter data, typically on structured data (dates, numbers, `keyword`)
  - Relevance scoring is irrelevant if we just want to filter out documents
- Improves performance
  - No resources are spent calculating relevance scores
  - Query results can be cached

Changing the execution context

```
GET /products/_search
{
  "query": { 1
    "bool": {
      "must": [
        { "match": { "name": "Beer" } }
      ],
      "must_not": [ 2
        { "term": { "tags.keyword": "Wine" } }
      ],
      "filter": [ 3
        { "term": { "tags.keyword": "Alcohol" } }
      ],
      "should": [
        { "match": { "description": "Beer" } }
      ]
    }
  }
}
```

1 Query execution context

2 3 Filter execution context

CodingExplained
CODE. SLEEP. REPEAT.

Changing the execution context

- It's sometimes possible to change the execution context
  - Only a few queries support it, though
- Typically done with the `bool` query and `filter` aggregation
- Queries that support this generally have a `filter` parameter

Lecture summary

- The query execution context calculates relevance scores
- The filter execution context ignores relevance scoring
  - Used for filtering data, typically with structured data (e.g. by date)
- The filter execution context improves performance
  - No resources spent calculating relevance scores
  - Queries can be cached
- Only a few queries support changing the execution context
  - Look for a `filter` parameter