



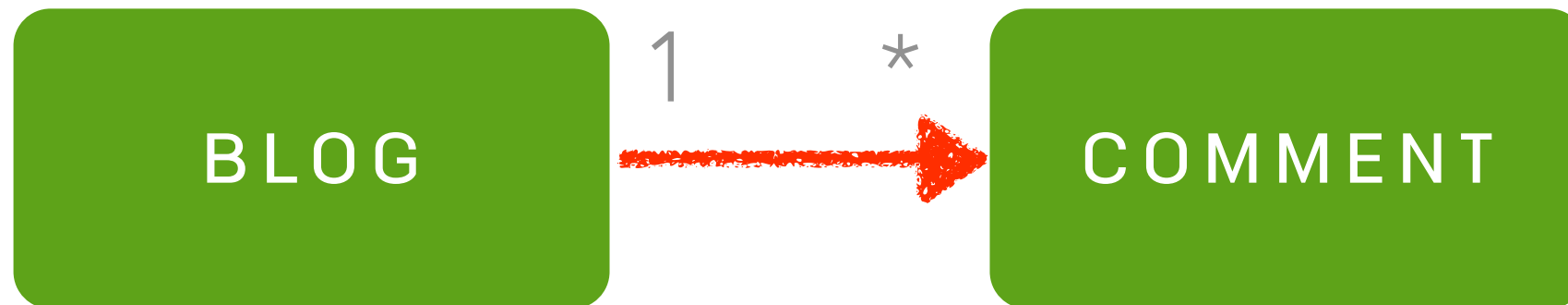
elasticsearch
for developer

Modeling Data

modeling_data.txt

Relationships

Problem



Solutions

- **Join**
- **Denormalization**
- **Nested object**
- **Parent/Child**

Join

Create user document

```
PUT /blog/user/1
{
  "name" : "somkiat",
  "email": "somkiat.p@gmail.com"
}
```

Join

Create post document

PUT /blog/post/1

```
{  
  "title" : "Hello relationship",  
  "body"  : "Hi, all",  
  "user"  : 1  
}
```

Denormalization

```
PUT /blog/post/1
{
  "title": "Hello relationship",
  "body": "Hi, all",
  "user": {
    "id": 1,
    "name": "somkiat",
    "email": "somkiat.p@gmail.com"
  }
}
```

Denormalization

Search blog post by user & title

GET /blog/post/_search

```
{  
  "query": {  
    "bool": {  
      "must": [  
        { "match": {"title": "hello"}},  
        { "match": {"user.name": "somkiat"}}  
      ]  
    }  
  }  
}
```


Workshop with problem

Search + Count # of blog post by username

GET /blog/post/_search

GET /blog/post/_search

```
{  
  ...  
  "aggs": {  
    "users": {  
      "terms": {  
        "field": "user.name"  
      }  
    }  
  }  
}
```



```
"aggregations": {  
  "users": {  
    "doc_count_error_upper_bound": 0,  
    "sum_other_doc_count": 0,  
    "buckets": [  
      {  
        "key": "somkiat",  
        "doc_count": 3  
      },  
      {  
        "key": "puisungnoen",  
        "doc_count": 2  
      },  
      {  
        "key": "unknown",  
        "doc_count": 1  
      }  
    ]  
  }  
}
```

Expected result

Search + Count # of blog post by username

```
"aggregations": {  
  "users": {  
    "doc_count_error_upper_bound": 0,  
    "sum_other_doc_count": 0,  
    "buckets": [  
      {  
        "key": "somkiat puisungnoen",  
        "doc_count": 2  
      },  
      {  
        "key": "somkiat unknown",  
        "doc_count": 1  
      }  
    ]  
  }  
}
```

Solutions

- Update mapping of post
- Reindex data
- Try to query

Update mapping

PUT /blog/_mapping/post

```
{  
  "properties": {  
    "user": {  
      "properties": {  
        "name": {  
          "type": "string",  
          "fields": {  
            "raw": {  
              "type": "string",  
              "index": "not_analyzed"  
            }  
          }  
        }  
      }  
    }  
  }  
}
```

Nested object

Embedded document

PUT /blog/user/1

```
{
  "name" : "somkiat",
  "email": "somkiat.p@gmail.com" ,
  "comments": [
    {
      "name": "user 1",
      "comment": "comment 01",
      "rating": 4
    },
    {
      "name": "user 2",
      "comment": "comment 02",
      "rating": 2
    }
  ]
}
```

<https://www.elastic.co/guide/en/elasticsearch/guide/current/nested-objects.html>