CS 677 S21 Lab 3 - Bookstore

Test Cases Document

Submitted By

Jagriti Singhal, Bhumika Kalavadia

Date: 23 April, 2021

PART 1: CONSISTENCY AND REPLICATION

CACHING AND CACHE INVALIDATION

Frontend logs

```
23:35:11.354 [qtp686989583-16] INFO  Pygmy - Buy request received for item:4
23:35:11.357 [qtp686989583-16] INFO  Pygmy - Calling Order microservice
23:35:11.385 [qtp686989583-18] INFO  Pygmy - Search request received for topic: distributed+systems
23:35:11.388 [qtp686989583-18] INFO  Pygmy - Returning result from search cache
23:35:11.393 [qtp686989583-18] INFO  Pygmy - Search response time in milliseconds : 7
23:35:11.424 [qtp686989583-12] INFO  Pygmy - Invalidate Cache entry for item: 4
23:35:11.444 [qtp686989583-16] INFO  Pygmy - Response for buy request: {
  "bookNumber" : 4,
  "message" : "Successfully bought book - Cooking for the Impatient Graduate Student"
}
23:35:11.445 [qtp686989583-16] INFO  Pygmy - Order response time in milliseconds : 87
23:35:12.425 [qtp686989583-17] INFO  Pygmy - Lookup request received for item: 4
23:35:12.429 [qtp686989583-17] INFO  Pygmy - Host: catalog Port: 8081
23:35:12.431 [qtp686989583-17] INFO  Pygmy - Calling Catalog microservice
23:35:12.457 [qtp686989583-17] INFO  Pygmy - Response for lookup request: {
  "bookNumber" : 4,
  "bookName" : "Cooking for the Impatient Graduate Student",
  "topic" : "graduate school",
  "cost" : 60,
  "count" : 0
}
```

Here we can see the following -
1. Buy request received for item 4
2. Search request for topic
3. Search request served through **cache**
4. **Invalidate cache** for item 4
5. Lookup request for item 4
6. Lookup request served through catalog server

DB CONSISTENCY

Catalog logs

```
23:35:31.478 [qtp1632413663-17] INFO  Pygmy - Buy update request received for item: 1
23:35:31.479 [qtp1632413663-17] INFO  Pygmy - Update response time in milliseconds : 0
23:35:31.482 [qtp1632413663-11] INFO  Pygmy - Invalidating frontend cache
23:35:31.490 [qtp1632413663-11] INFO  Pygmy - Frontend cache invalidated successfully
23:35:31.491 [qtp1632413663-11] INFO  Pygmy - Syncing DB across all replica
23:35:31.500 [qtp1632413663-11] INFO  Pygmy - DB sync successful
23:35:31.500 [qtp1632413663-11] INFO  Pygmy - Update response time in milliseconds : 25
23:35:32.547 [qtp1632413663-16] INFO  Pygmy - Query by Item request received for item: 4
```

On receiving a buy request, the catalog server does the following
1. Invalidates front end cache
2. Sync DB across replica