

Novel Architectures for Big Data Analytics Lab 1: Redis Application

Mert Ozer

02/10/2017

Prerequisites:

- Python 2.7
- Redis
- Redis-py package (<https://redis-py.readthedocs.io/en/latest/>)

Usage:

1. Create one redis-server and one redis-cli.
2. Subscribe to channels from redis-cli.
3. Run client.py file.
4. Enter book information when it is asked. (isbn, author, edition and title)
5. Look to redis-cli instance to see relevant messages.
6. (optional) To check if book exist, open another redis-cli, get your book by isbn, wait some seconds and then recheck the book. Take in mind that books expire in 115 seconds.

Be careful

Program is not case sensitive. (it is easy to lower it and solve the problem but I believe some abbreviations might be missed.)

Outputs

- Png files are in the attachment if you want to look closely.
- One Client listening channel “**harry potter**”
- One Client listening channel “**George**”

1) Screenshot after entering these inputs.

Please enter ISBN of the book **123456789**

Please enter edition number of the book **2**

Please enter author of the book **Mert Ozer**

Please enter title of the book **harry potter**

```
disLab ~/PycharmProjects/redisLab
client.py
internal Libraries

19 edition = int(input("Please enter edition number of the book "))
20 edition = str(edition)
21 break
22 except:
23     print("That's not a valid option!")
24
25 unique = isbn + edition
26 # check if book is in the database.
27 if (r.hget("books:"+unique,"isbn") == None):
28
29     # get author from admin:
30     while True:
31         try:
32             author = str(raw_input("Please enter author of the book "))
33             title = str(raw_input("Please enter title of the book "))
34             break
35         except:
36             print("That's not a valid option!")
37
38     ...
39     book = {}
40     book["isbn"] = isbn
41     book["author"] = author
42     book["edition"] = edition
43     book["title"] = title
44     # add book
45     r.hset("books:"+unique,book)
46     # they expire in 115 seconds.
47     r.expire("books:"+unique,115)
48     # publish in the channels
49     for field in book:
50         r.publish(book[field],getBookInformation())
51
52     # if it has multiple item publish all of them
53     if " " in book[field]:
54         for word in str(book[field]).split():
55             r.publish(word,getBookInformation())
56
57
58
59
60
61
62 else:
63     print("Book with "+isbn+" isbn and with edition number "+edition+"

mert@mert-Q550LF:~/redis-4.0.2/src$ ./redis-cli
127.0.0.1:6379> SUBSCRIBE "harry potter"
Reading messages... (press Ctrl-C to quit)
1) "subscribe"
2) "harry potter"
3) (integer) 1
1) "message"
2) "harry potter"
3) " Book with edition = 2, title = harry potter, isbn = 123456789, author =
Mert Ozer, be quick to borrow this book, you have 115 seconds left"

mert@mert-Q550LF:~/redis-4.0.2/src$
mert@mert-Q550LF:~$ cd redis-4.0.2/src/
mert@mert-Q550LF:~/redis-4.0.2/src$ ./redis-cli
127.0.0.1:6379> SUBSCRIBE George
Reading messages... (press Ctrl-C to quit)
1) "subscribe"
2) "George"
3) (integer) 1
```

(sc1.png)

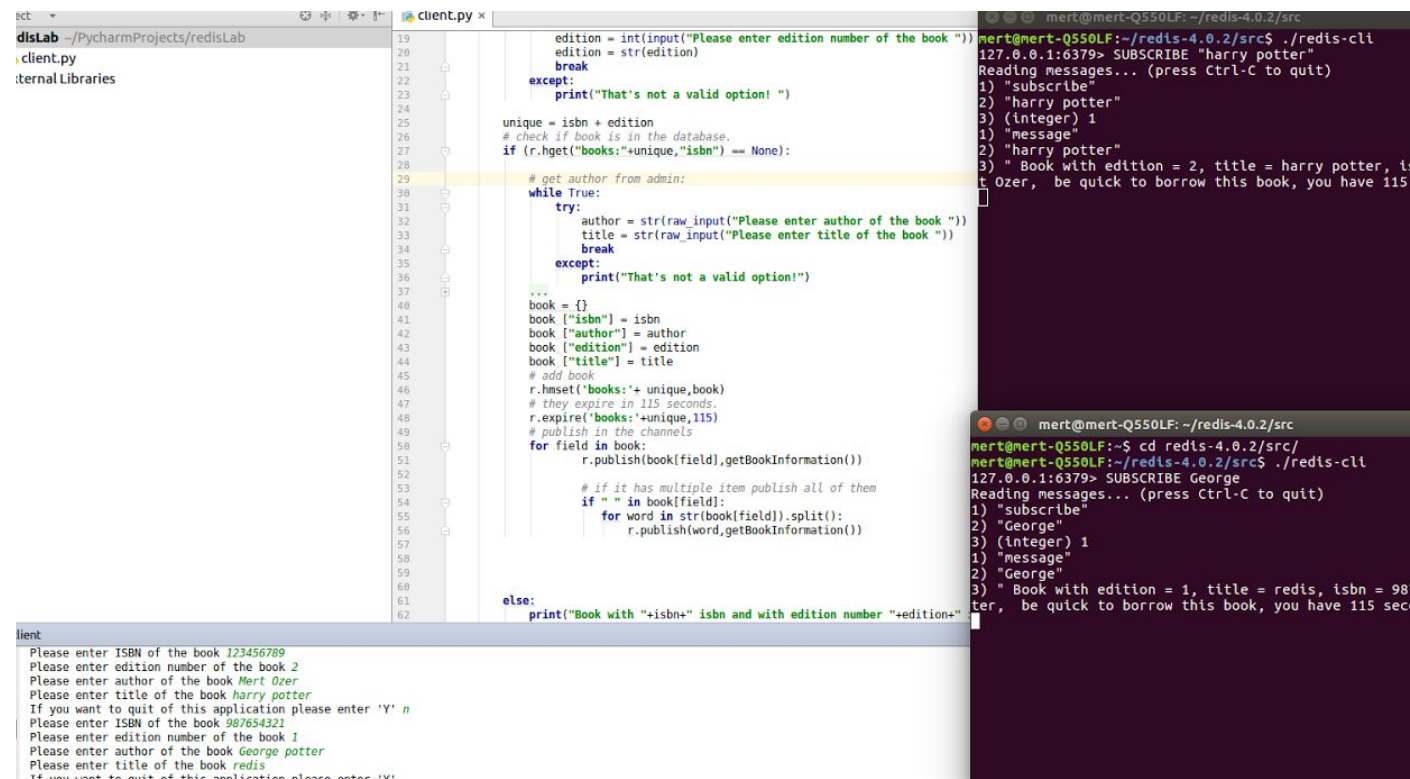
2) After entering these inputs

Please enter ISBN of the book **987654321**

Please enter edition number of the book **1**

Please enter author of the book **George potter**

Please enter title of the book **redis**



```
client.py
19 edition = int(input("Please enter edition number of the book "))
20 edition = str(edition)
21 break
22 except:
23     print("That's not a valid option!")
24
25 unique = isbn + edition
26 # check if book is in the database.
27 if (r.hget("books:"+unique,"isbn") == None):
28
29     # get author from admin:
30     while True:
31         try:
32             author = str(raw_input("Please enter author of the book "))
33             title = str(raw_input("Please enter title of the book "))
34             break
35         except:
36             print("That's not a valid option!")
37
38     ...
39     book = {}
40     book["isbn"] = isbn
41     book["author"] = author
42     book["edition"] = edition
43     book["title"] = title
44     # add book
45     r.hmset('books:'+ unique,book)
46     # they expire in 115 seconds.
47     r.expire('books:'+unique,115)
48     # publish in the channels
49     for field in book:
50         r.publish(book[field],getBookInformation())
51
52     # if it has multiple item publish all of them
53     if " " in book[field]:
54         for word in str(book[field]).split():
55             r.publish(word,getBookInformation())
56
57
58
59
60
61
62 else:
63     print("Book with "+isbn+" isbn and with edition number "+edition+"

lient
Please enter ISBN of the book 123456789
Please enter edition number of the book 2
Please enter author of the book Mert Ozer
Please enter title of the book harry potter
If you want to quit of this application please enter 'Y' n
Please enter ISBN of the book 987654321
Please enter edition number of the book 1
Please enter author of the book George potter
Please enter title of the book redis
If you want to quit of this application please enter 'Y' n

mert@mert-Q550LF: ~/redis-4.0.2/src
mert@mert-Q550LF:~/redis-4.0.2/src$ ./redis-cli
127.0.0.1:6379> SUBSCRIBE "harry potter"
Reading messages... (press Ctrl-C to quit)
1) "subscribe"
2) "harry potter"
3) (integer) 1
1) "message"
2) "harry potter"
3) " Book with edition = 2, title = harry potter, t
t Ozer, be quick to borrow this book, you have 115

mert@mert-Q550LF:~/redis-4.0.2/src
mert@mert-Q550LF:~$ cd redis-4.0.2/src/
mert@mert-Q550LF:~/redis-4.0.2/src$ ./redis-cli
127.0.0.1:6379> SUBSCRIBE George
Reading messages... (press Ctrl-C to quit)
1) "subscribe"
2) "George"
3) (integer) 1
1) "message"
2) "George"
3) " Book with edition = 1, title = redis, isbn = 98
ter, be quick to borrow this book, you have 115 sec
```

(sc2.png)

So we can see that even the fields are parsed and published to their channels.

Created channels from example 2:

987654321

1

George potter

George

potter

redis