

(Question 1)

HMSET user:11 username "johnsmith" age 24 city "Stanford"

HMSET users johnsmith 11

(Question 2)

DEL user:8

DEL users bob

(Question 3)

Does adding a school field to one of our user hashes add a school field to any of the other user hashes? No

How does this differ from how you'd add a new field to information about users in SQL? It should create this column for all other users (tuples).

(Question 4)

HSET user:3 warning "A warning for 3."

HSET user:5 warning "A warning for 5."

HSET user:10 warning "A warning for 10."

(Question 5)

cities:Seattle:users

cities:Tokyo:users

cities:Stanford:users

cities:Boston:users

cities:Chicago:users

(Question 6)

SADD cities:Seattle:users 1

SADD cities:Tokyo:users 2

SADD cities:Seattle:users 3

SADD cities:Chicago:users 4

SADD cities:Stanford:users 5

SADD cities:Stanford:users 6

SADD cities:Boston:users 7

SADD cities:Chicago:users 8

SADD cities:Chicago:users 9

SADD cities:Chicago:users 10

SADD cities:Stanford:users 11

(Question 7)

SCARD cities:Seattle:users

(integer) 2

SCARD cities:Boston:users

(integer) 1

SCARD cities:Tokyo:users

(integer) 1

(Question 8)

Do they provide the same functionality?

Yes, they provide the same functionality to some extent, such as

insert, delete, select, update.

How easy or hard are they to set up compared to each other?

SQL is easier to set up, compared with Redis.

Is there a performance difference when doing lookups?

Redis seems faster if the set is already exists. If SQL has index, the look-up performance of SQL would be same as Redis.

How about when modifying data?

When modifying data, it requires more work for Redis to update the hashes and sets.

(Question 9)

What new keys would you create if you wanted to query based on users's ages?

I would created a new key on users' ages.

How would you name them?

users:ages

Would you use a Set? A Hash? A Sorted Set?

I would use a Sorted Set.

Why?

Because the Sorted Set can sort ages according 'score' parameter, which is convenient for looking up.

(Question 10)

ZADD users:ages 29 "jill"

ZADD users:ages 16 "kirito"

ZADD users:ages 21 "sara"

ZADD users:ages 24 "ann"

ZADD users:ages 99 "joy"

ZADD users:ages 48 "firas"

ZADD users:ages 34 "matt"

ZADD users:ages 32 "bob"

ZADD users:ages 51 "grace"

ZADD users:ages 73 "phil"

ZADD users:ages 24 "johnsmith"

(Question 11)

ZRANGE users:ages 0 -1 WITHSCORES

1) "kirito"

2) "16"

3) "sara"

4) "21"

5) "ann"

6) "24"

7) "johnsmith"

8) "24"

9) "jill"

10) "29"

- 11) "bob"
- 12) "32"
- 13) "matt"
- 14) "34"
- 15) "firas"
- 16) "48"
- 17) "grace"
- 18) "51"
- 19) "phil"
- 20) "73"
- 21) "joy"
- 22) "99"

(Quesiton 12)

ZRANGE users:ages 0 0 WITHSCORES

- 1) "kirito"
- 2) "16"

(Quesito 13)

ZRANGE users:ages -1 -1 WITHSCORES

- 1) "joy"
- 2) "99"

(Question 14)

ZCARD users:ages

(integer) 11

ZRANGE users:ages 5 5 WITHSCORES

- 1) "bob"
- 2) "32"