

Database report 2

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Database Statistics before testing

Table	Entry amounts
USERS	10
COMMENTS	13 346
VIDEOS	530
USER_HAVE_VIDEOS	529

Base insertion times

Entry amounts	Table	Time (ms)
13 346	COMMENTS	338
530	VIDEOS	38

Test plan

Following test plan has been created to check the performance of the database.

To simulate the website traffic ten users in total have been created (their data corresponding to the data inside USERS table). Some user accounts were used with multiple threads as if multiple webbrowsers were opened with logged in accounts.

ID	USERNAME	USERPASS
1	DevDuck	devduck_pass
2	Dani	dani_pass
3	Joseph_Anderson	joseph_pass
4	MovieBitches	moviebitches_pass
5	TVGry	tvgry_pass
6	blair_walnuts	blair_pass
7	Luxe_Alexander	luxe_pass
8	Deligracy	deligracy_pass
9	Bungo21	bungo21_pass
10	NNiezapominajka	nniezapominajka_pass

They have been granted access to comments tables.

Additionally, 5 administrator accounts with allowance to make more than one instance login were created and used in several threads.

DUE TO the calculation limits of the computational server (laptop) where database is located and scripts were executed, maximum amount of threads in most tests has been lowered to 25. It was done to gather the most reliable data (during initial testing a lot of connection problems and memory overflows occurred)

The real-life state of the database was monitored using simple bat scripts with super-admin account.

Test 1 – comments

Step	Description
1	2 Users access database simultaneously (with possible brakes) Adding, reading and removing comments

2	5 Users access database simultaneously (with possible brakes) Adding, reading and removing comments
3	10 Users access database simultaneously (with possible brakes) Adding, reading and removing comments
4	10 Users and 5 Administrator thread are accessing database (with possible brakes) Adding, reading and removing comments
5	10 Users and 15 Administrators threads are accessing database (with possible brakes) Adding, reading and removing comments

Test 2 – likes

Step	Description
1	10 Users are liking and disliking videos, 5 Administrator thread is counting the likes on randomly chosen videos
2	10 Users are liking and disliking videos, 15 Administrator threads are counting the likes on randomly chosen videos
3	10 Users are liking and disliking videos assigned to Administrators, 5 Administrator threads are counting likes on videos assigned to them
4	10 Users are liking and disliking videos assigned to Administrators, 15 Administrator threads are counting likes on videos assigned to them
5	20 Users are liking and disliking videos assigned to Administrators, 20 Administrator threads are counting likes on videos assigned to them (Checking the terminal problems)

Test 3 – videos

Step	Description
1	10 Users are adding and removing videos, 10 Users are liking and disliking videos, 5 Administrators are counting likes
2	20 Users are adding and removing videos, 10 Users are liking and disliking videos, 10 Administrators are counting likes

Test execution and results

Testing was done initially using Python scripts, but due to the threadings problems with Python they were moved and executed via Java scripts.

Test 1 – comments | Results

This part of test didn't pose much of a problem for the database (due to simple Queries). Most of the problems occurring were connection timeouts or problems and when one of the threads were trying to read or remove already non-existent comments. One of the threads crashed the Java script execution while trying to access one of the removed comments multiple times (it was due to using time seeding for random generator)

Test 2 – likes | Results

This test posed more problem to the whole system. Apart from connection timeouts or problems the amounts of likes on videos differed highly from the real state. Assigning two administrators to the same group of videos and checking what numbers they return was quite interesting. Only seconds apart likes were changing drastically, especially when Users were constricted to only some parts of the video database.

Test 3 – videos | Results

Test 3 was the most problematic. A lot of connection problems and timeouts occurred. Huge number of errors popped up when users tried to like and dislike videos that were in the same time being deleted, the same occurred for administrators showing number of likes.