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Project

Test-report

- How did you test your code?

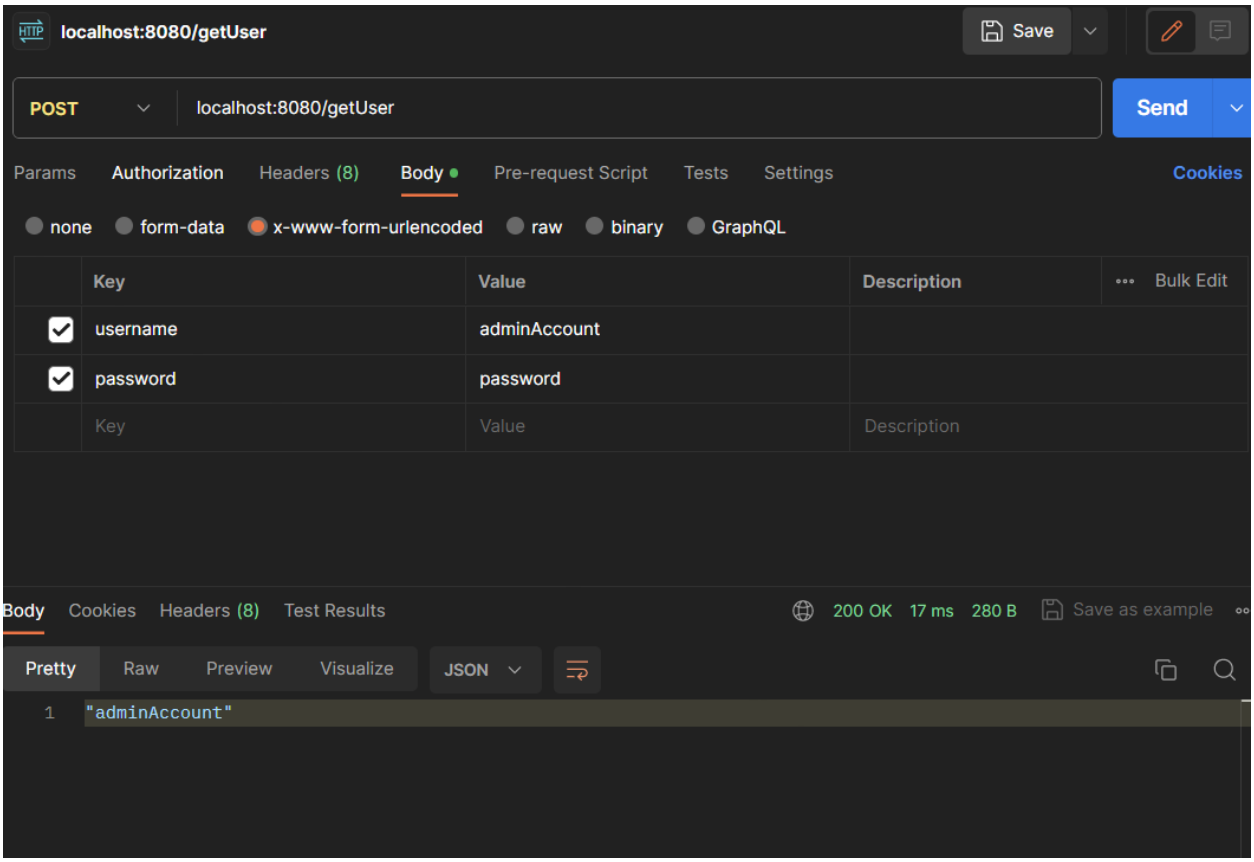
  I used docker to create a container and run my server.js file and then I used loadtest on my local machine to test my server.

  Example loadtest command:

  npx loadtest -n 10 -c 1 --data '{"topic":"DevamTopic","data":"helloworld"}' -T "application/x-www-form-urlencoded" -m POST http://localhost:8080/addPost

  I also used Postman to test my API were performing operations as expected.

  Example Postman test:



I have also logged the ouput in my APIs at places on console to visually test the functionality.

- How long does it take to process a single post (performance)?

  For my first test with this command:

  npx loadtest -n 10 -c 1 --data '{"topic":"DevamTopic","data":"helloworld"}' -T "application/x-www-form-urlencoded" -m POST http://localhost:8080/addPost

  I had a mean latency of 43.9 ms. So, a single post took 43.9 ms to process.

  Test result:

Target URL: http://localhost:8080/addPost

Max requests: 10

Concurrent clients: 8

Running on cores: 8

Agent: none

Completed requests: 10

Total errors: 0

Total time: 0.177 s

Mean latency: 43.9 ms

Effective rps: 56

Percentage of requests served within a certain time.

50% 48 ms

90% 66 ms

95% 66 ms

99% 66 ms

100% 66 ms (longest request)

- Does the size of the data submitted to the server impact the performance?

I could not see any consistent changes in the server's performance on changing the size of the data. To test I tried to post very big strings and one very small string with only 1 character but there were no major differences. Big strings had 26 ms mean latency and one character string had 27.7 ms mean latency. I don't know how it would react if we tried to submit big files or images or videos. I don't know how to test it with such files, so I didn't do it here.

- How does the number of requests impact the performance of the server?

  My server's performance was not as consistent this time so I can't say how it performs. For n = 10, my mean latency was 43.9 ms, for n = 50, it decreased to 13.7 ms, for n = 100 it was 21.3ms.

- How does the level of concurrency impact the performance of the server?

  With increasing c, I noticed that my mean latency kept decreasing. For n = 100, c = 10 it was 90.8ms and for n = 100, c = 100, it decreased to 63.5 ms. So, my server's performance increased with increasing c. But this is very small tests to say for sure.

- How did you test your frontend?

  For testing front-end I have used visual testing which means I had my app running and I tested everything manually.

  What did I test?

  I tested if the buttons were calling proper functions when clicked. (I used alert () in most of the function calls to test this).

  Then I tested if the functions were performing as expected. Eg does clicking Delete channel from admin account deletes a channel properly?

  I also checked whether or not after deleting the user it's related posts are deleted.

  Like this I have tested the functionality of most of my features and I found out that they work fine.