Performance Testing

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1 December 2016
24 November 2016

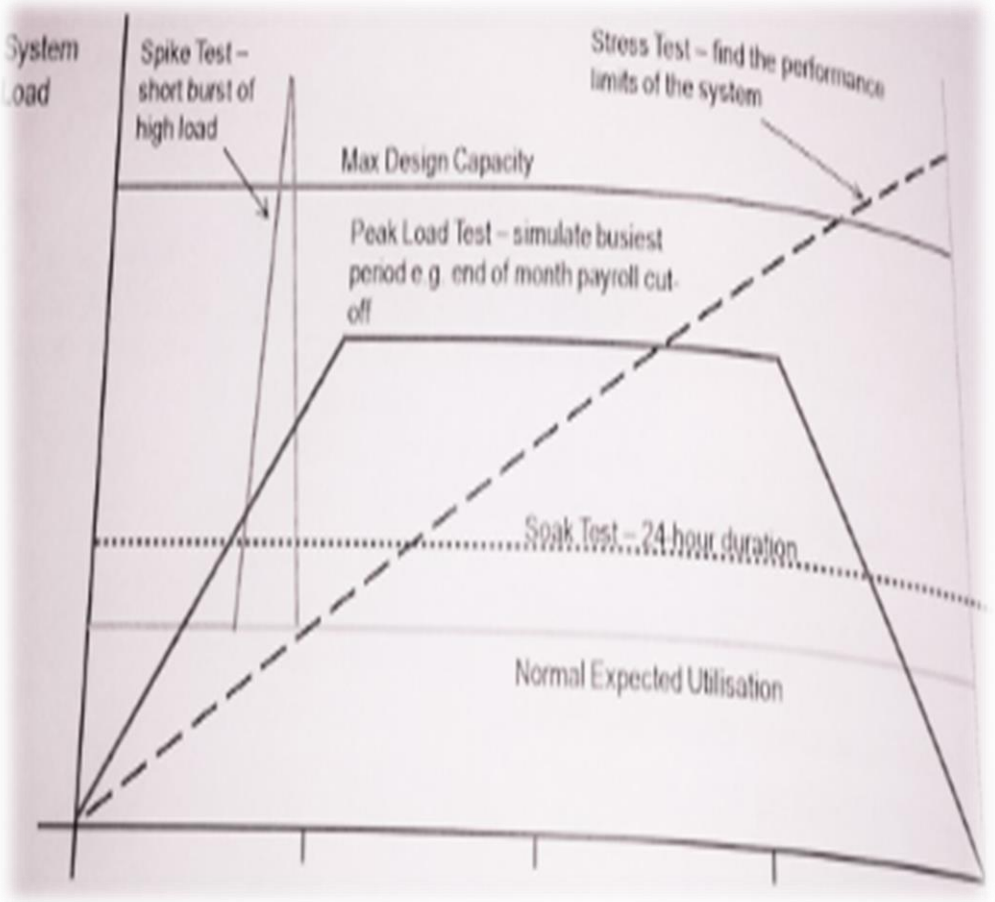
Performance Testing – Agenda

- Introduction
- Apache JMeter™ 3.0
- Summary

http://media.nbcchicago.com/images/1200*676/messy-desk+2.jpg

Performance Testing – Theory

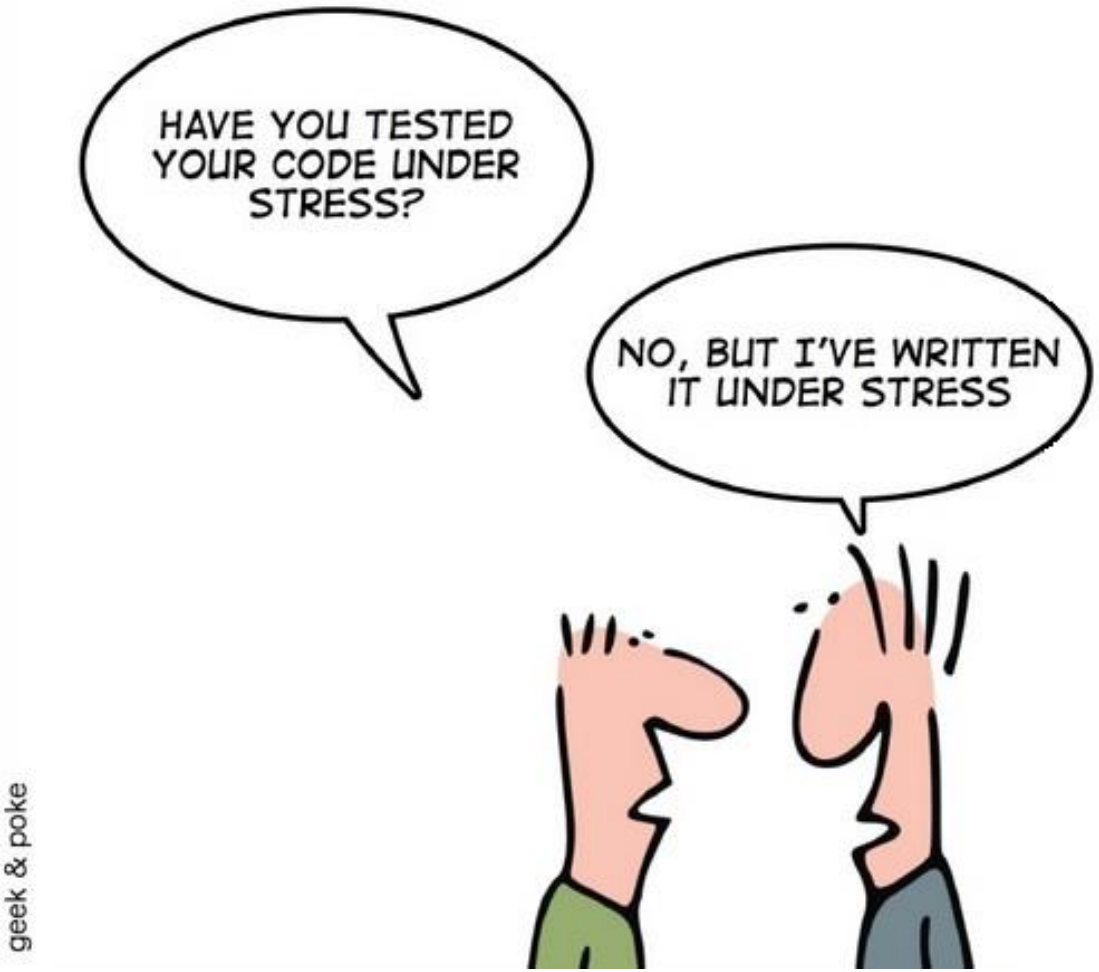
- Load testing
- Stress testing
- Endurance testing
- Spike testing



Advanced Software Testing – ISTQB®

Performance Testing – Why?

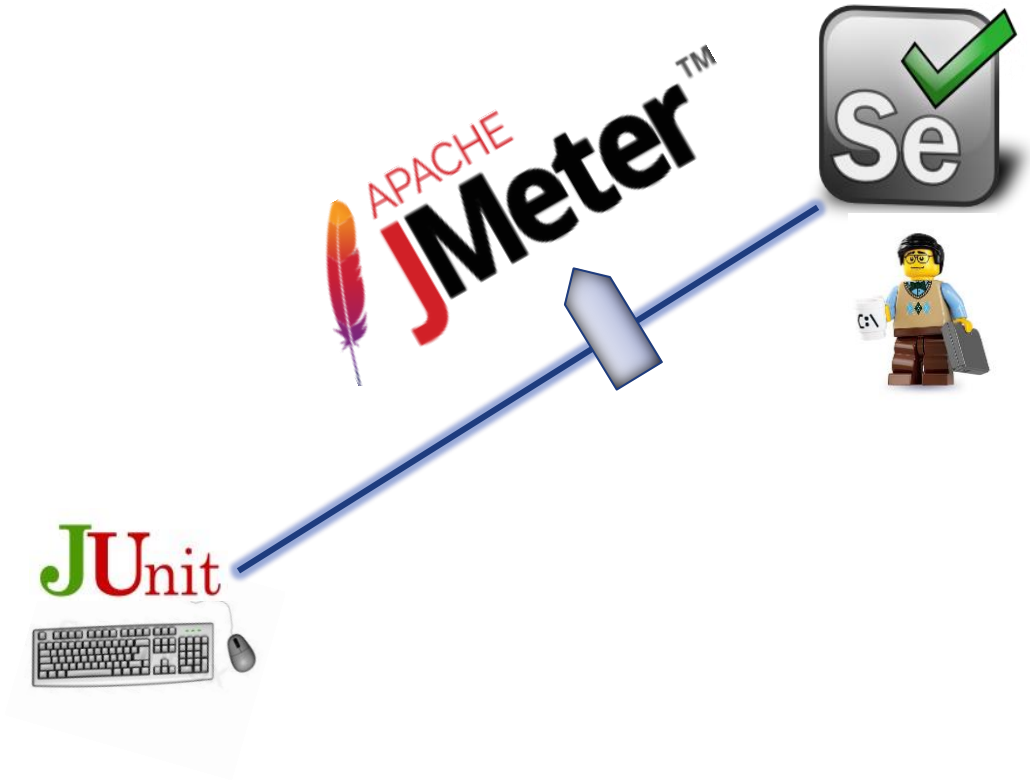
- Make sure it will work
- To SAVE
- To compare



http://www.techbrother.com/wp-content/uploads/2013/09/geek_and_poke_coders-test-s.jpeg

Performance Testing – Tools

The **Apache JMeter™** application is open source software, a 100% pure Java application designed to load test functional behavior and **measure performance**.

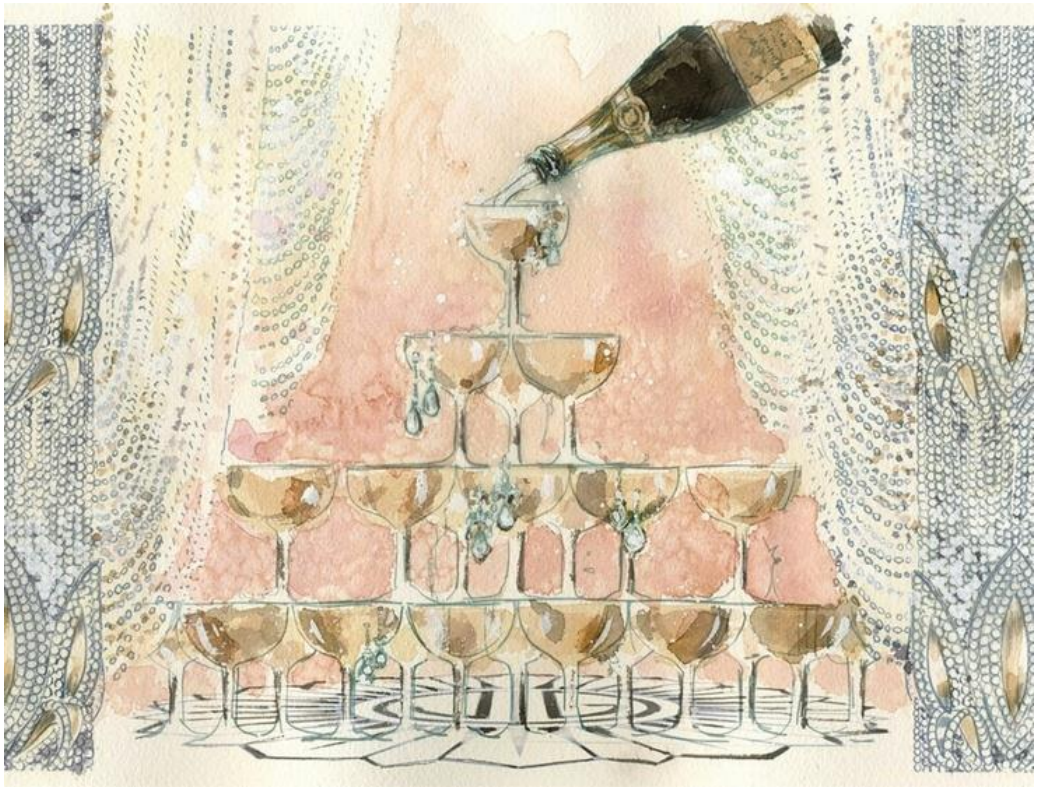


http://jmeter.apache.org/

http://www.testwarez.pl/apache-jmeter-3-0/

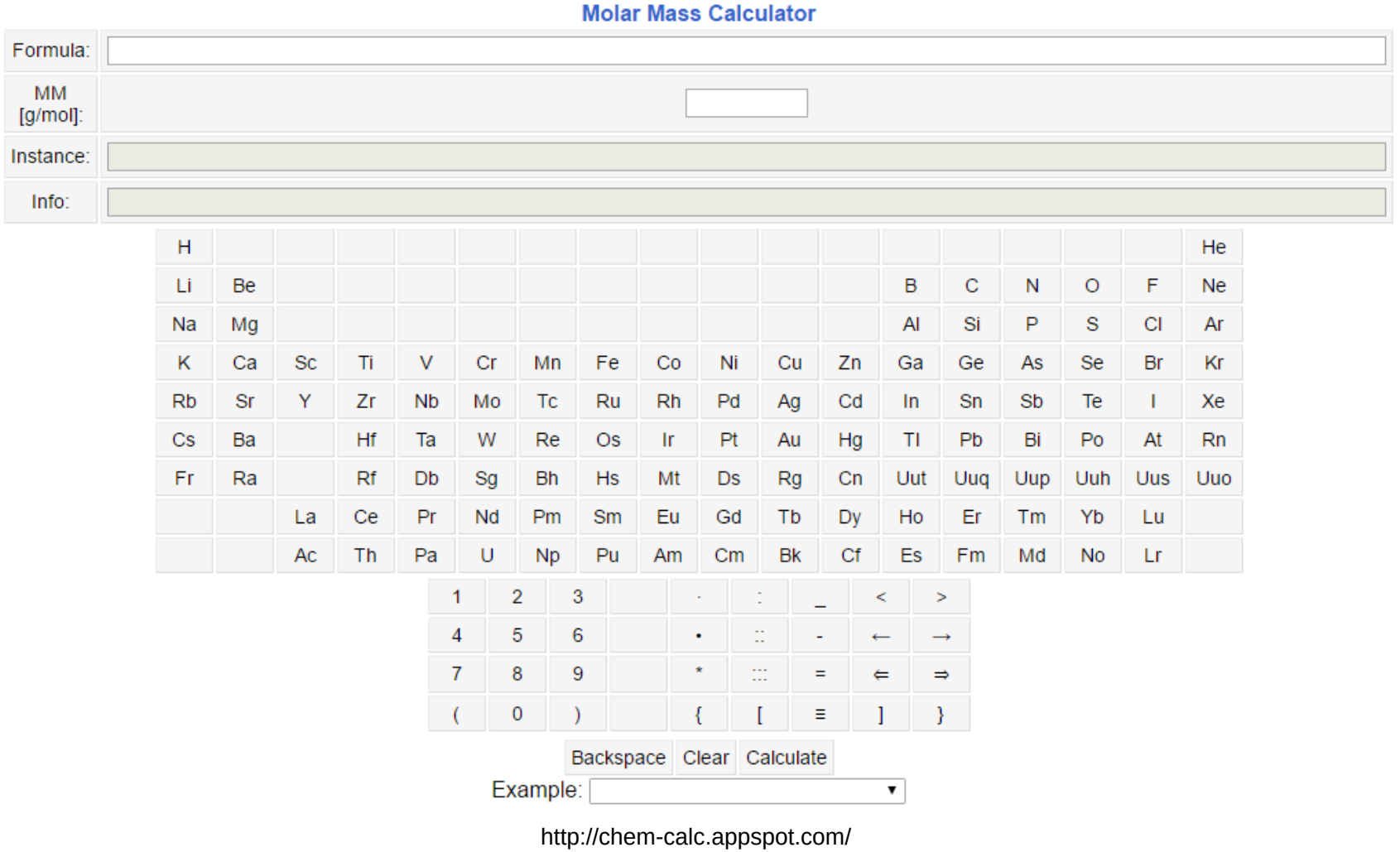
Performance Testing – Why?

- Test Plan
  - Thread Group
  - Variables – Native, User Defined
  - Managers – Cookie, Header
  - Timers – Constant, Random
  - Conditions – IF, WHILE
  - Loops – LOOP, FOREACH
  - Listeners – Results Tree, Summary
  - Requests – HTTP(S), JDBC
    - Assertions – Response, Size
    - Extractors – Regular Expressions
  - (…)



https://s-media-cache-ak0.pinimg.com/736x/8b/03/44/8b03446af10afd99ce1d259d26c4af76.jpg

Performance Testing – Workshop



http://chem-calc.appspot.com/

Performance Testing – Exercises

level / exercise	E1	E2	E3	E4	E5	Extras
basic	**hello-world**	**multi-hello-world**	**multi-function-hello-world**	**setup-multi-function-hello-world**	**assert-setup-multi-function-hello-world**	**rec-play**
medium	**simple-get-post**	firebase-rest-api	google-translate-api	config-google-maps-api	regression-suite	JSR223
advanced	sqlite-jdbc	**stress-test**	ftp-test	jms-queue	chess-game	**blaze-meter**

https://github.com/AdBj/tw16-jmeter-workshop

GET:

api/v1/get?chemform={c}

https://github.com/AdBj/tw16-jmeter-workshop/tree/master/TW16-JMeter30/A.Bala-JMeter3.0-Workshop/L2-medium/E1-simple-get-post

Performance Testing – Tasks

POST:

api/v1/calc

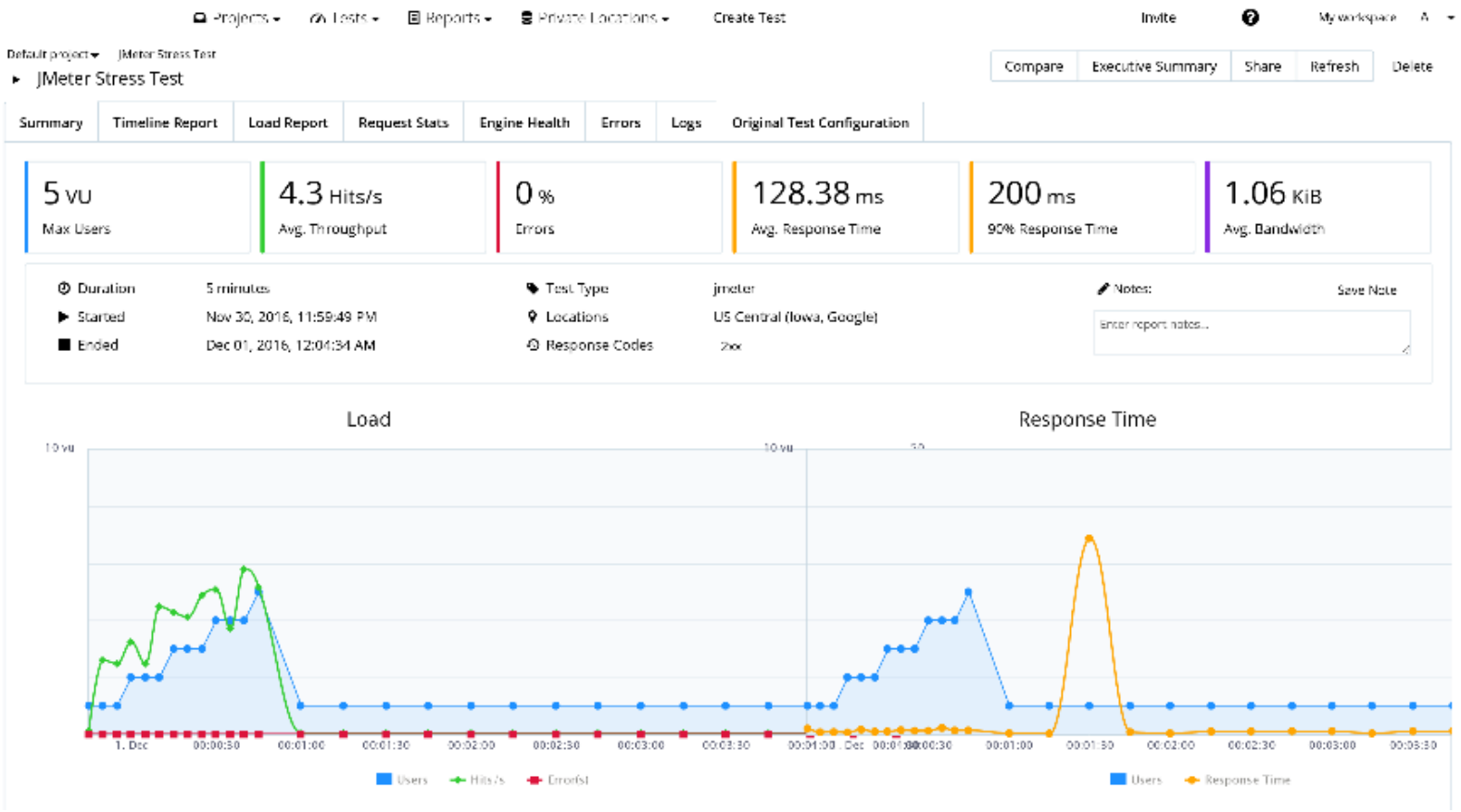
chemform={c}

https://github.com/AdBj/tw16-jmeter-workshop/tree/master/TW16-JMeter30/A.Bala-JMeter3.0-Workshop/L2-medium/E1-simple-get-post

Performance Testing – Stress

http://notesbyanerd.com/wp-content/uploads/2015/01/google-app-engine.png

Performance Testing – Results



https://a.blazemeter.com/app/#/projects/42579/masters/15775473/summary?_k=qf2c3i

Performance Testing – Summary

Apache JMeter™ 3.0 qualities:

- ✓ speed
- ✓ portability
- ✓ multithreading
- ✓ usability
- ✓ configurability
- ✓ upgradability
- ✓ automation
- ✓ free

https://www.knife-depot.com/images/articles/best-pocket-knife-victorinox-swisschamp.jpg

Performance Testing – Homework

https://www.blazemeter.com/new_images/new_top_black_logo.svg

Performance Testing – References

- Bayo Erinle – JMeter Cookbook
- Bayo Erinle – Performance Testing with JMeter
- Adam Roman – Testowanie i jakość oprogramowania. Metody, narzędzia, techniki
- Adam Roman, Karolina Zmitrowicz – Testowanie oprogramowania w praktyce. Studium przypadków
- Apache JMeter™ 3.0 – http://jmeter.apache.org/index.html
- Custom Plugins for Apache JMeter™ 3.0 – http://jmeter-plugins.org/
- GitHub API – https://developer.github.com/v3/
- REST – https://www.ics.uci.edu/~fielding/pubs/dissertation/top.htm
- Firebase RESTful API – https://firebase.google.com/docs/reference/rest/database/
- Google Maps API – https://developers.google.com/maps/documentation/distance-matrix/
- BlazeMeter – https://www.blazemeter.com/

Thank you!

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