Not Your Ordinary Testing Tools

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What Makes a Tool a Testing Tool?

1. Used by QAs? SDETs?
2. Test Automation Tool?
3. Test Management Tool?

Testing tool – everything and anything that can be used to help improve software quality
Our Toolset

- Test Automation Tools
- Performance Testing Tools
- Test Management Tools
- Bug Tracking Tools
- CI/CD Tools
- Software Development tools
- Observability tools
- Log Management Tools
- Virtualization Tools
- Cloud Tools
- Database Tools
- Messaging and Event streaming Tools
- Other little helpers
Observability Tools: the tests you never wrote

• You cannot test it all
• Some things are very expensive to test in pre-production environments
• While observing production environment engineers can get a knowledge how system really behaves and what is normal and what is not
• Catch it before customers
Observability Tools: watch, learn, improve

- Required for Reliability testing
  - See what fails, when it fails, how it fails
- Performance testing supplement
  - See what is going on in the system during testing
  - Test observability itself
- Errors, exceptions, warning
- Check if system healthy enough to execute tests
Static Code Analysis Tools: Your Spy in a Code World

• Test code coverage – tells where you need to concentrate testing efforts
• Shows bugs. Literally. Just go ahead and open ticket
• Code complexity – the area needs more test coverage
• Developers have habits. Good ones and bad ones
• Smelly cat code
• Code duplication – make them fix it
Test Data Generators: because data matters

- Test Data Generated by humans is biased
- Useful for manual and automated tests
- Brings a lot of value in dynamic testing environments
- Replace production data when its not available or need to be masked
- Easy restoration of corrupted tests data
- Useful for load and performance testing
Test Data Generators

- **Simple and free**
  
  - Faker.js, generatedata.com
  
  - Generate random data, like person name or cat breed
  
  - Files with random values (json, csv)

- **Very sophisticated (and sometimes pricey)**
  
  - DATPROF, Accelario
  
  - Huge amount of data generated in seconds
  
  - Application data base schemas are used to generate data
  
  - Complex set of rules
  
  - Masking production Data
Logging: Test with Logs, Test the Logs

Watch them when running automated tests, watch them when testing manually

- Watch for errors/warnings that are not visible to users (remember “users” can be a real person and another app)

- Watch for errors that visible to ”user” and not logged

- Keep an eye on warnings too

- Don’t forget about console log when testing Web UI
Logging: Test with Logs, Test the Logs

• **Maintainability:** is it clear from the Error message what exactly had happened?
  
  !!! ERROR: Database is down !!!

• **Maintainability:** What about proper transaction and object identifiers? When testing distributed systems and microservices are they consistent?

• **Observability:** are your logs human and machine readable?

• **Security:** is there any sensitive information in the logs?
My Little Helpers: Manumatic Testing

*Note: When using online tool mind what information you are giving to it*

1. Screen Readers
   - Accessibility? Yes!
   - Usability? Yes!

2. CSV files
   - Superintendent - load multiple CSV files and write SQL

3. Comparing Text Files
   - DiffChecker
   - WinMerge

Note: When using online tool mind what information you are giving to it.
My Little Helpers: WWW

1. URL encoders
   - URL encode and decode

2. Proxies for Location Tests (testing that is often forgotten)
   1. WonderProxy
   2. Smartproxy

3. Link(web) Crawlers
   1. ScrapeStorm
   2. Scre@mingFrog
   3. Elastic Web Crawler
My Little Helpers: Just Send Me an Email

Testing all types of communication with users can be challenging, although much needed

- **Mailinator** – free and paid version. SMS and Emails. Has APIs and Webhooks
- **Litmus** – allows to view how emails render in different email clients, more useful for manual tests
- **Mailosaur** – manual and automated, works great with Cypress and Selenium
- **Mailtrap** – SMTP traffic capturer, has APIs and HTML/CCS validation
Keep them coming

• **Screen Capturers**
  1. Skitch (screenshots + ideas)
  2. Zephyr Capture for JIRA (Jira and Zephyr integration)
  3. PicPick

• **Checklists** (for those who does not like mind maps)

• **Notes** (Notes, Rocket Book)
Q&A
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