The Soft Skills of Automation

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Papa
Hi, I’m Jenny!
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My pronouns are she/her.

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Part one: Automation is...

Expectations
Human/Machine Work Scale
Code Awareness Scale
Types of Automation
Frameworks
The Plan

Part two: Soft Skills of Automation

Can this be automated?
Should this be automated?
How do we automate this?

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I am and have been many things. Mushroom seller, tester, speaker, goth, manager, troublemaker… But not a developer.

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Part one: Automation is...
Expectations

Find your place in the world.
Gain a deeper understanding of automation.
Start practicing automation-first mindsets.
We’re not gonna code today.

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Expectations

What do you want?

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Expectations

Respect the manual tester. You know so much. Everything in your career has lead you here.
What do you think Automation is?
Automation is testing in which machines do most of the work.
Automation is...

UI tests
Unit tests
Integration tests
Security scans
Low code/no code tools
Scripts

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This is a spectrum, not a binary.
I call this the Human/Machine Work Scale.
Human/Machine Work Scale

Humans do most of the work

Machines do most of the work
Human/Machine Work Scale

Humans do most of the work

Manual testing
Exploratory testing
Accessibility testing
API testing
Load testing
Pen testing
Unit tests
CI/CD
Machines do most of the work
Human/Machine Work Scale

So, where are you?

Humans do most of the work

Machines do most of the work
The future sees us moving towards more machine-assisted testing.
Our next concept is the Code Awareness Scale.
Code Awareness Scale

No knowledge of code

Full knowledge of code
Code Awareness Scale

- No knowledge of code
- Black box testing
- Unit testing
- Full knowledge of code
Code Awareness Scale

No knowledge of code

Black box testing

Unit testing

Full knowledge of code
Code Awareness Scale

- Black box testing
- Gherkin or cucumber
- Accessibility
- Testing refactors
- UI tests
- API tests
- Unit testing

No knowledge of code

Full knowledge of code
Code Awareness Scale

So, where are you?
The more comfortable we are with the code, the better prepared we are to test the code.
Moving towards being more code-aware

Learn to code…or at least read code.
Learn the SDLC at your company.
Learn Git or other versioning.
Get deep into logs and analytics.
Review unit tests.

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If you are already deeply code aware, you may want to work on skills that are less code aware.
Moving towards being less code-aware

Practice strict exploratory testing with charters
Run a bug bash
Review manual test cases
Get involved in UAT or accessibility testing
Teach someone else to use the app
Part two: Soft Skills
Principles of Automation

- Test design emphasizes reliability, value, and speed.
- Collaboration determines what types of tests to write.
- Features must be written to be testable.
- Code reviews are for everyone.
- Automation code is production code.
What are your goals?

• Fulfilling a personal goal or professional growth
• Getting regression down from 8 hours
• Increase confidence in our releases
• Prevent show stopper bugs
• Support the team in working better together
Can this be automated?

- What are the inputs to the system?
- What variables act on the system?
- What data do we need?
- Is it written in a testable way?
This was a very simple example.
Sometimes, this is a guess.
Can this be automated?

• Think about if the UI changes dramatically between runs.
• Are there elements that are hard to automate?
• Can we tell if it breaks?
• Is it valuable?
Should this feature be automated?
Should this be automated?

- What’s already automated?
- Is this a good candidate for automation?
- Is this a good candidate for another type of automation?
- Do we have time and resources?

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Unit tests can hit all the logical branching in your code and confirm that given inputs return expected outputs. They can’t speak to the interactions between unrelated code paths or inputs, but in isolation, they tell us a certain unit of code works like we intend.

@iamsellek
@jennydoesthings
https://www.saucedemo.com/
What does automating this look like?
What does automating this look like?

- What elements do we need to interact with?
- What steps does a computer need to take beyond what a human does?
- What data does the test need?
- What setup does the test need?

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Bonus soft skill: Be lazy.
Wait, no.
Bonus soft skill: Don’t over-automate.
Next Steps

• Set a goal to create automation-ready implementations.
• Write pseudo code and have it reviewed by other testers.
• Earmark test cases for automation (include reasoning!)
• Start learning (shout out to TAU!)
• Pair with developers.
• Start looking at unit tests.

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Any questions?
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Papa!
Credits

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