

The banner features a dark blue background. In the top right corner is the 'software ni' logo with the tagline 'THE VOICE OF NI SOFTWARE'. The main title 'TechTeach' is in large orange letters, followed by 'Session 5: Unit Testing' in white. Below this, it says 'Two-part series: 9 & 16 April, 3.30pm, MS Teams'. A horizontal line of white icons representing various tech and education concepts is in the center. At the bottom, the text 'Supporting teachers to deliver computing education' is in orange.

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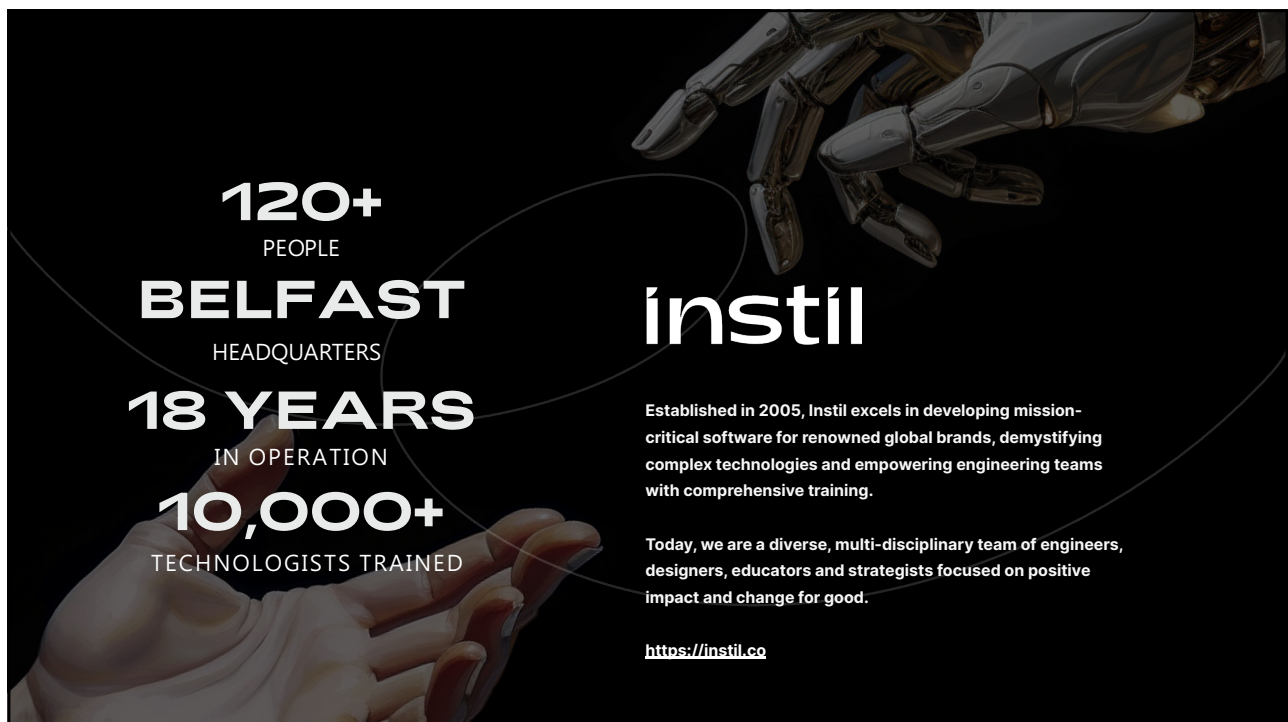
TechTeach

Session 5: Unit Testing

Two-part series: 9 & 16 April, 3.30pm, MS Teams

Supporting teachers to deliver computing education

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The banner has a dark background with a robotic hand at the top right and a human hand at the bottom left. Text on the left lists statistics: '120+ PEOPLE', 'BELFAST HEADQUARTERS', '18 YEARS IN OPERATION', and '10,000+ TECHNOLOGISTS TRAINED'. The 'Instil' logo is in the center. Text on the right describes the company's mission and team. A URL is at the bottom.

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Instil

Established in 2005, Instil excels in developing mission-critical software for renowned global brands, demystifying complex technologies and empowering engineering teams with comprehensive training.

Today, we are a diverse, multi-disciplinary team of engineers, designers, educators and strategists focused on positive impact and change for good.

<https://instil.co>

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IS TESTING IMPORTANT?

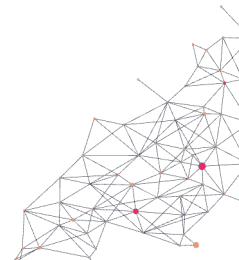

Most developers spend time every day writing tests. Some practice **Test Driven Development (TDD)** which requires writing tests before writing production code.

“Testers don't like to break things; they like to dispel the illusion that things work.”

Kaner, Bach, Pettichord

<https://www.wiley.com/en-gb/Lessons+Learned+in+Software+Testing:+A+Context+Driven+Approach-p-9780471081128>

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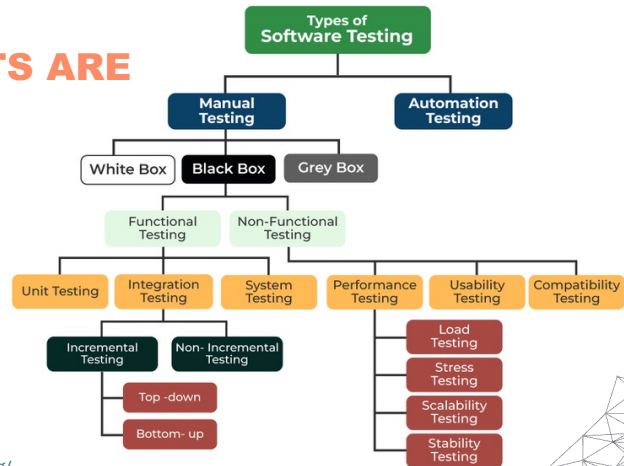
WHY TEST?

- Figure out what the code should do
- Have confidence that the code we've written actually works
- Allow us to change the code knowing we haven't broken it (avoid Regressions)
- Explain what the software does – as documentation for future developers
- To get feedback on the code – the test is a client/user of our code

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WHAT SORT OF TESTS ARE THERE?

This is not exhaustive. There are **many** variations on testing.

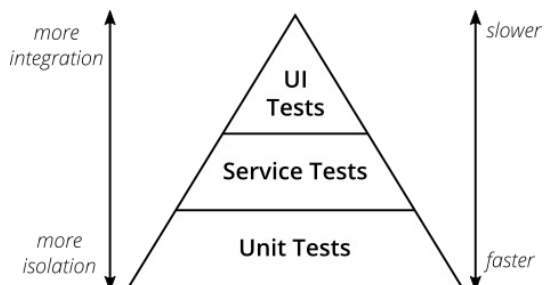


<https://www.geeksforgeeks.org/types-software-testing/>

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WHAT SORT OF TESTS ARE THERE?

A common way to think about testing is the testing Pyramid



<https://martinfowler.com/articles/practical-test-pyramid.html>

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THE TESTING QUADRANT

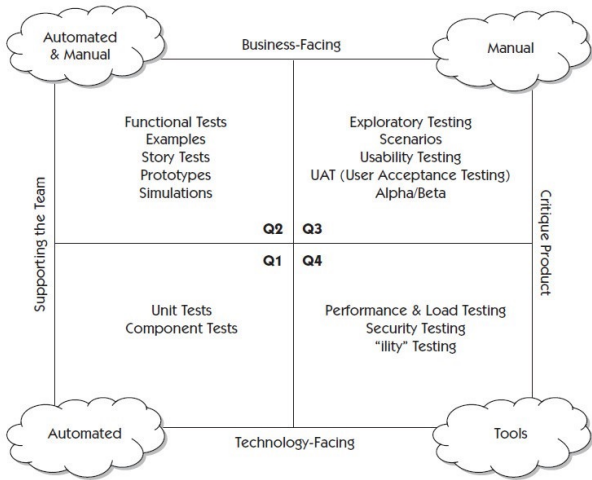
The testing quadrant is a useful model to think about testing.

Based along two axes. Are the tests:

- *Technology Facing* or *Business Facing*?
- There to *support the team* or *critique the product*?


Unit Testing is in Q1 – **Support the Team** from a **Technology Perspective**.

"Am I building the product right?" rather than "Am I building the right product?"



<https://www.onpathtesting.com/blog/what-are-agile-testing-quadrants>

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LET'S SEE SOME TESTS

Let's look at some unit tests. Next session, we'll go into more detail on the structure of a test, but we should end this session by seeing some.

<https://github.com/ryangadams/tech-teach-unit-testing-demo-april-24>

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Next week in part 2:

We'll write some unit tests live and talk more about technique.

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Questions?

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(non-work related)

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