

WAAROM WORDT BDD VERWARD MET TESTEN?

BDD@TESTNET.ORG



DENNIS DE BOOIJ



DE IRONIE VAN BDD

BEHAVIOUR DRIVEN DEVELOPMENT:

EEN SOFTWAREONTWIKKELPROCES

OM VERWARRING TE VERMINDEREN

OVER WAT SOFTWARE ZOU MOETEN DOEN





DE IRONIE VAN BDD

BEHAVIOUR DRIVEN DEVELOPMENT:

EEN SOFTWAREONTWIKKELPROCES

DAT ZELF VAAK VERWARD WORDT MET

SOFTWARE TESTEN





Dan
North

Agile Troublemaker, Developer,
Originator of BDD

Behaviour-Driven Development is not about Testing

Dan North
@tastapod

BEAU
TY IN
C DE
IT 2019

Bdd in United Kingdom

1,204 results

Set alert



Software Quality Assurance Tester

Golden Charter Ltd

Glasgow, Scotland, United Kingdom (On-site)

3 weeks ago

ELEXON

Operations & Test Assurance Analyst

Elexon

London, England, United Kingdom (Hybrid)

Actively recruiting

2 weeks ago



QA Analyst

Noir

Greater Manchester, England, United Kingdom (Hybrid)

Actively recruiting

2 days ago • 5 applicants



Automation Tester

Sky

Leeds, England, United Kingdom

Actively recruiting

3 weeks ago • 0 applicants



User Testing Automation Specialist | S2 |

Operations | National

Santander UK

Milton Keynes, England, United Kingdom (On-site)

Actively recruiting

BDD Testing

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[Basics of BDD testing](#)

[TDD testing vs BDD testing](#)

[Contact us](#)

Behavior-driven development testing

Behavior-driven development testing

Development and testing that meets the needs of your clients

[MORE BDD ARTICLES HERE](#)



It's just what I asked for, but not what I want.

—*The Night Before Implementation* poem, Author Unknown



Behavior-Driven Development

Behavior-Driven Development (BDD) is a test-first, Agile Testing practice that provides Built-In Quality by defining (and potentially automating) tests before or as part of specifying system behavior. BDD is a collaborative process that creates a shared understanding of requirements between the business and the Agile Teams. Its goal is to help guide development, decrease rework, and increase flow. Without focusing on internal implementation, BDD tests are business-facing scenarios that attempt to describe the behavior of a Story, Feature, or Capability from a user's perspective.



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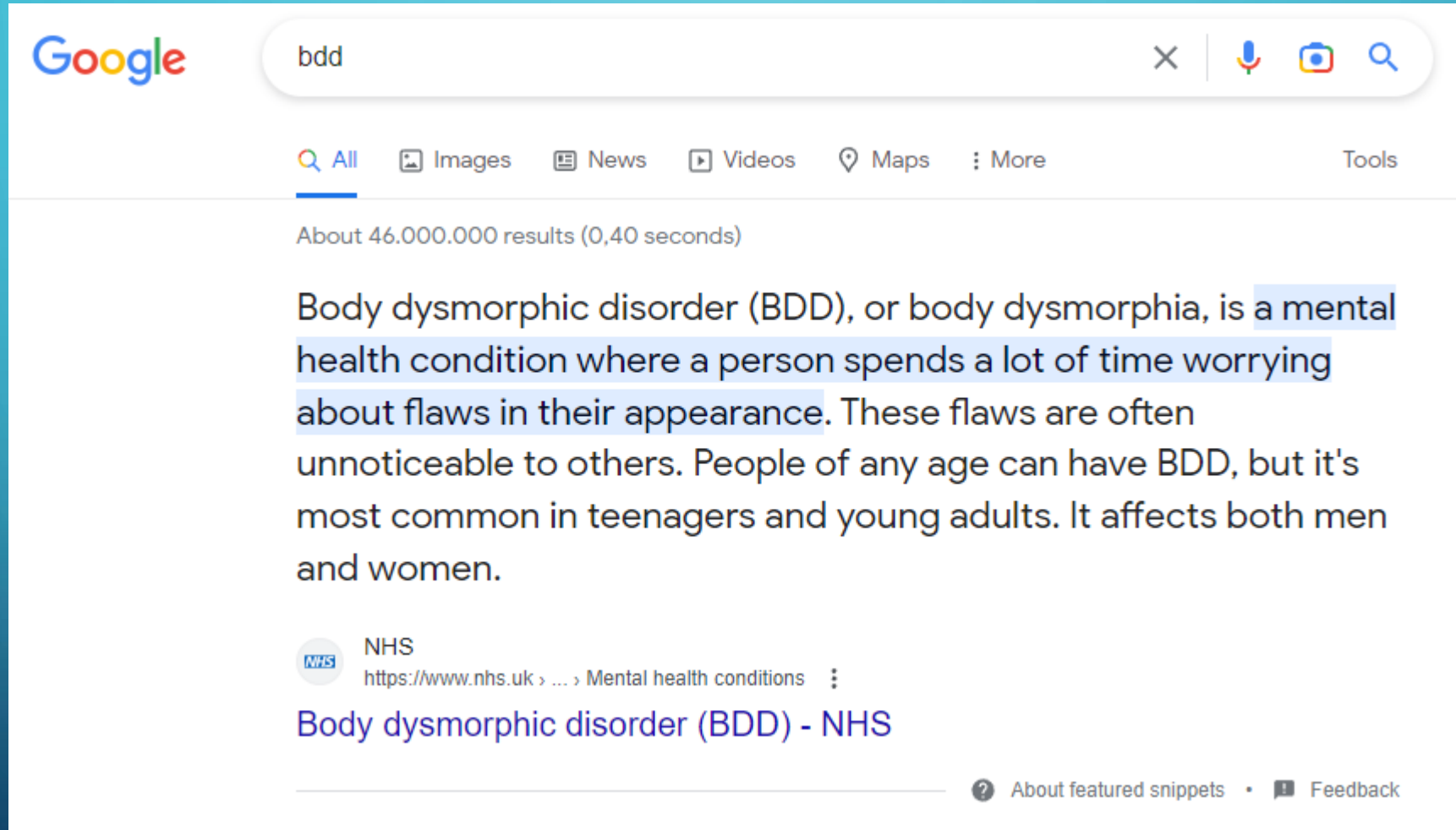




WAAROM WORDT BDD VERWARD MET TESTEN?

- What's in a name....
- BDD definiëren
- BDD fases
- Aantrekkelijk voor testers

What's in a name....



The image shows a Google search interface with the search term 'bdd' entered in the search bar. The search results page displays a featured snippet from NHS. The snippet text is: 'Body dysmorphic disorder (BDD), or body dysmorphia, is a mental health condition where a person spends a lot of time worrying about flaws in their appearance. These flaws are often unnoticeable to others. People of any age can have BDD, but it's most common in teenagers and young adults. It affects both men and women.' Below the snippet, the source is identified as NHS with the URL 'https://www.nhs.uk > ... > Mental health conditions'. The title of the result is 'Body dysmorphic disorder (BDD) - NHS'. At the bottom right of the search results, there are links for 'About featured snippets' and 'Feedback'.

Google

bdd

All Images News Videos Maps More Tools

About 46.000.000 results (0,40 seconds)

Body dysmorphic disorder (BDD), or body dysmorphia, is a mental health condition where a person spends a lot of time worrying about flaws in their appearance. These flaws are often unnoticeable to others. People of any age can have BDD, but it's most common in teenagers and young adults. It affects both men and women.

NHS
https://www.nhs.uk > ... > Mental health conditions

Body dysmorphic disorder (BDD) - NHS

About featured snippets • Feedback

What's in a name....



BDD can stand for several things, depending on the context. Here are some common meanings:



1. **Behavior-Driven Development:** BDD is a software development methodology that focuses on defining the behavior of a system from the user's perspective. It promotes collaboration between developers, testers, and non-technical stakeholders to create a common understanding of the desired behavior of the software. BDD often uses natural language specifications and tools like Cucumber or SpecFlow to automate testing and documentation.
2. **Business Development District:** BDD can also refer to a Business Improvement District (BID) or Business Development District (BDD). These are geographically defined areas within which businesses work together to improve the economic, social, and physical environment. They often fund and manage initiatives like marketing, public safety, and infrastructure improvements to promote business and economic growth.
3. **Behavior-Driven Design:** While less common, BDD can also refer to Behavior-Driven Design. This concept is related to user experience and product design. It emphasizes designing products and interfaces based on user behavior and expectations.
4. **Bounded Domain Decomposition:** In the context of numerical methods and scientific computing, BDD can refer to Bounded Domain Decomposition. It is a technique for solving partial differential equations by dividing a domain into subdomains and solving the problem iteratively.

To provide more specific information, please let me know which of these meanings you are interested in, or if you have a different context in mind.

Regenerate

The background is a dark blue gradient. In the corners, there are white line-art illustrations of circuit traces and nodes. A large, faint, light-blue circle is centered in the background.

BDD

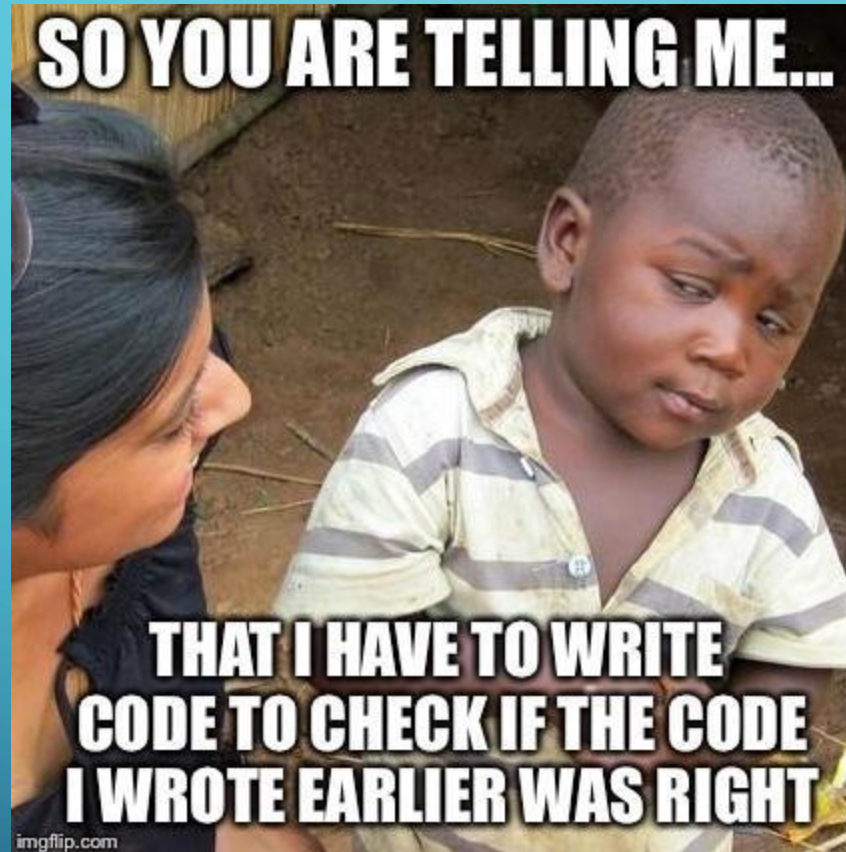
Hoe het begon...

The background is a dark teal gradient. In the corners, there are decorative white line-art patterns resembling circuit boards or neural networks, with lines connecting to small circles.

TDD

Test Driven Development

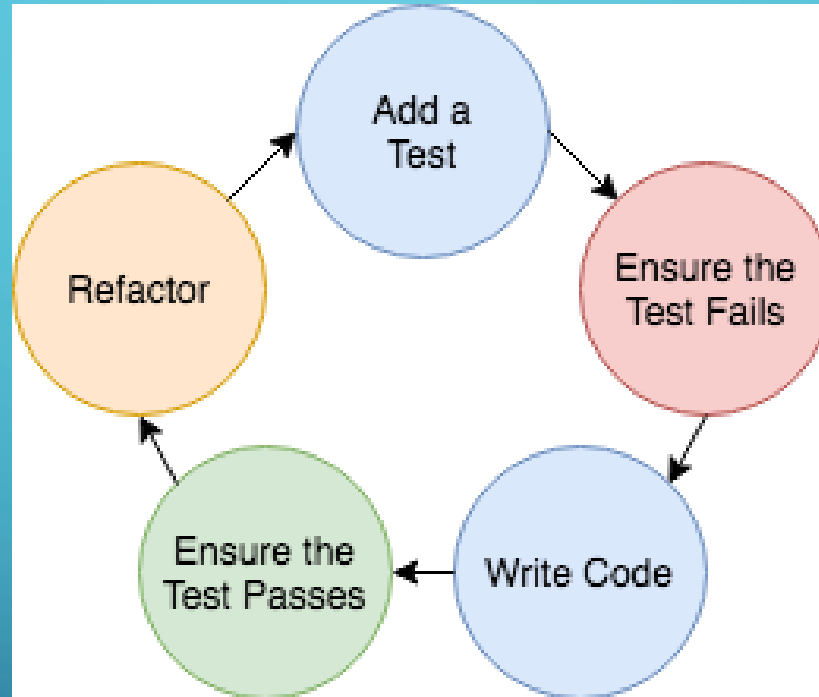
UNIT TESTS



TDD



TDD



Test Driven Development

Test Driven Development: vragen


- Wat moet ik testen?
- Hoeveel test ik in een test?
- Hoe moet ik mijn testen noemen?
- Hoe snap ik waarom een test faalt?

Test Driven Development: doel?

- Het doel van TDD is om je code goed te ontwerpen
- Maar, sommige ontwikkelaars dachten: ik ben klaar met testen want ik doe TDD
- Of, in werkelijkheid, vele ontwikkelaars dachten: Ik ben klaar met testen want ik heb units tests geschreven (na het schrijven van de productiecode)

Two unit testen. Nul integratietesten.



 **Ben Halpern**
Posted on 9 nov 2019

Two integration tests. Zero edge case tests.



Kenny Bastani on Twitter



Test



Behaviour

imgflip.com

Behaviour Driven Development

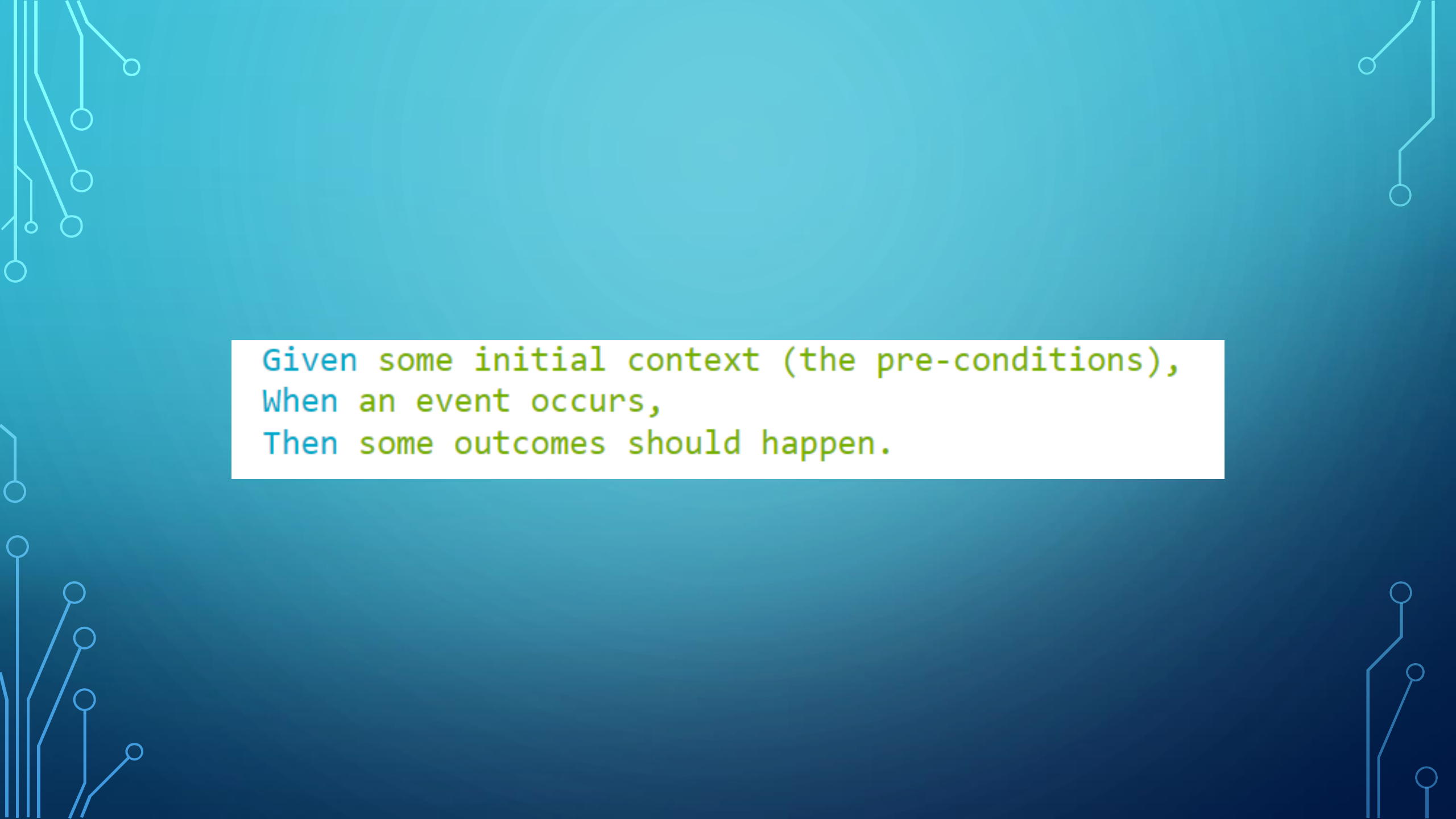
- Wat moet ik testen?
 - Het eerstvolgende, interessante gedrag.
 - Afspraak geannuleerd: Afspraak uit de agenda +
Bevestiging gestuurd?
- Naam van mijn test?
 - Een zin die het gewenste gedrag beschrijft
 - `shouldClearCalendarAfterCancellation()`
 - `shouldSendConfirmationAfterCancellation()`
- Falende test?
 - Je hebt een bug geïntroduceerd
 - Het gewenste gedrag is veranderd
 - Je 'test' is niet langer relevant

BDD

Hoe het verder ging...

BDD



The background is a dark teal gradient. In the corners, there are decorative white line-art patterns resembling circuit traces or neural network connections, with small circles at the end of the lines.

Given some initial context (the pre-conditions),
When an event occurs,
Then some outcomes should happen.

Scenario: A professional successfully signs up for a training course

Given a training course 'BDD for beginners' has been planned for '12 June 2023'

And the training course 'BDD for beginners' is not yet fully booked

When professional 'Jane' registers for the 'BDD for beginners' training course on '10 May 2023'

Then 'Jane' is registered as participant for the training course 'BDD for beginners'

And 'Jane' has received the option to save the date '12 June 2023' in her calendar

“One can only define the unknown
by its supposed and supposable
relations with the known.”

Éliphas Lévi

Definition



Behaviour Driven Development (BDD) is a synthesis and refinement of practices stemming from **Test Driven Development (TDD)** and **Acceptance Test Driven Development (ATDD)**.



Daniel Terhorst-North @tastapod@mastodon.social



@tastapod

If I had a time capsule I would go back and call it “Example-Guided Design”. TDD is a terrible name for a powerful design technique. BDD is a less terrible name. They both describe the same process, at both the code and feature level.

5:34 PM · Dec 26, 2018

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- Aantrekkelijk voor testers

~~BDD: de definitie~~



Daniel Terhorst-North • 3rd+
Principal Consultant at Dan North & Associates

2mo (edited) ...

There is no "official body" for BDD that has the authority to "publish a definition" other than perhaps me, and there is a reason that I haven't done that in the last 20 years.

Any descriptions that I and others have published over the years have very much not been "rigid" by design. BDD is a centred community, not a bounded one. Anything that encourages collaboration between all the stakeholders involved in delivering customer value through software is welcome here! There is no "outside BDD" and "inside BDD", just nearer and further from the best possible collaboration you can imagine to learn and get work done.

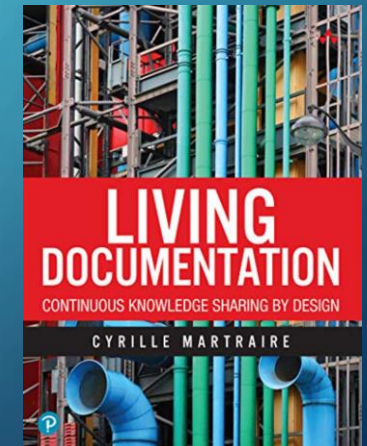
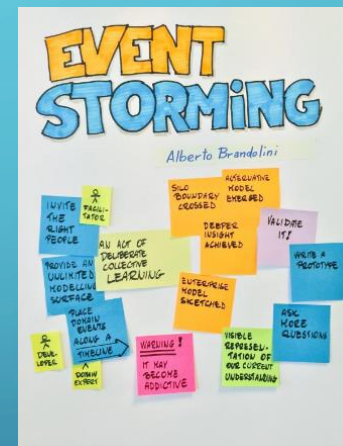
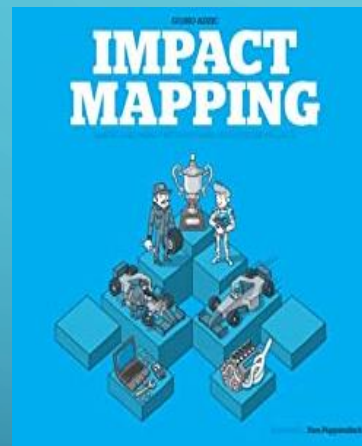
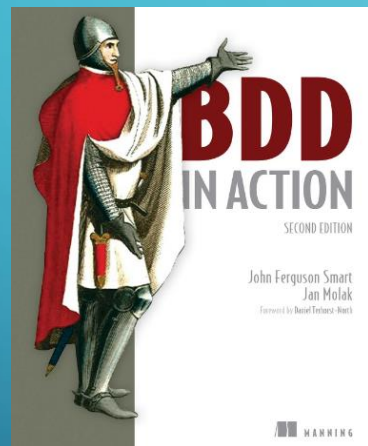
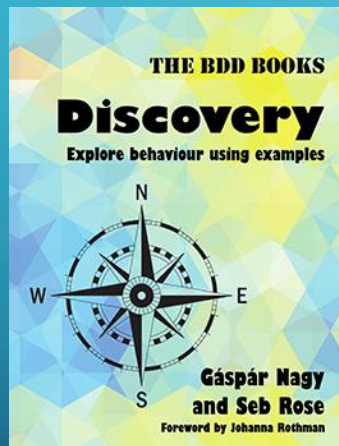
BDD: de definitie?

BDD is a second-generation, outside-in, pull-based, multiple-stakeholder, multiple-scale, high-automation, agile methodology. It describes a cycle of interactions with well-defined outputs, resulting in the delivery of working, tested software that matters.

Dan North
"Agile specifications, BDD and Testing eXchange"
November 2009 in London

Is er geen definitieve of toegankelijke bron voor BDD?

Is BDD open voor interpretatie door iedereen?



The background is a dark teal gradient. In the corners, there are decorative white line-art elements resembling circuit traces or neural network connections, with small circles at the end of the lines.




Als BDD niet over testen gaat,
waar gaat het dan wel over?



Gedrag:

Wat ik wil dat het systeem doet om mij te helpen om problemen op te lossen.

Je definieert hoe zo'n systeem er uit zou moeten zien en hoe het systeem zich zou moeten gedragen.



The background is a dark teal gradient. In the corners, there are decorative white line-art elements resembling circuit traces or neural network connections, with small circles at the end of the lines.

BDD, een heruitvinding van business- en
requirement analyse?



Defining ‘a ubiquitous language for the analysis process itself’

A way to define ‘requirements using a consistent vocabulary
for analysts, testers, developers, and the businesspeople’

to eliminate ‘some of the ambiguity and
miscommunication that can occur when
technical people talk to businesspeople’

Dan North “Introducing BDD”



Behaviour Driven Development is:

Wat: Een collaboratieve methode om een gedeeld begrip te bewerkstelligen tussen verschillende belanghebbenden (business & IT) over het verwachte gedrag van de gebruiker en het gewenste gedrag van de oplossing.

Hoe: Door gebruik te maken samenwerkingsvormen zoals impact mapping, event storming, example mapping en specification by example.

Waarom: Om mensen in staat te stellen om de juiste oplossing te documenteren, te testen en te ontwikkelen.

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3 Phases of BDD Development



1

DISCOVER

Specify collaboratively with examples

2

FORMULATE

Write Gherkin test cases in natural language

3

AUTOMATE

Avoid regression by automating test cases

Is deze uitleg een probleem?

Ja, er is een probleem met het gebruiken van testterminologie om Behaviour Driven Development te beschrijven:

- Het toont aan dat je een zeer oppervlakkig idee hebt van testen.
- Het beperkt testen tot confirmatie: bevestigen dat het systeem doet wat je hebt gezegd dat het moet doen.
- Je controleer alleen of de gebruikersinteractie en het beschreven gedrag van het systeem nog steeds klopt.
- Maar wat weet je nog niet? Welke ongewenste/onverwachte interacties en welk ongewenst/onverwacht gedrag ken jij nog niet?

Ja, er is een probleem met het gebruiken van testterminologie om Behaviour Driven Development te beschrijven:

- Het toont aan dat je een zeer oppervlakkig idee hebt van testen.
- Het beperkt testen tot confirmatie: bevestigen dat het systeem doet wat je hebt gezegd dat het moet doen.
- Je controleer alleen of de gebruikersinteractie en het beschreven gedrag van het systeem nog steeds klopt.
- Maar wat weet je nog niet?
 - Of heb je liever dat je gebruikers dat ontdekken?



Daniel Terhorst-North @tastapod@mastodon.social



@tastapod

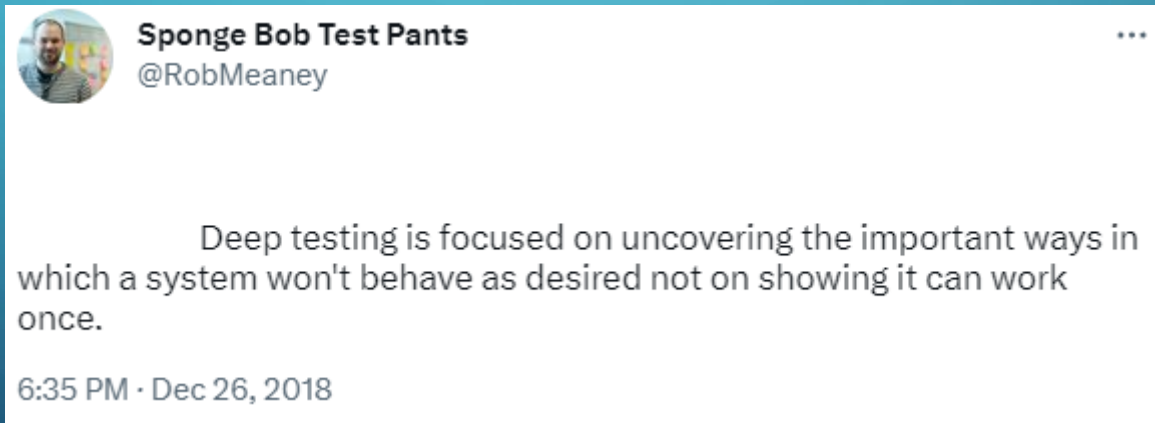
Replying to [@tastapod](#) [@grahamcox82](#) and 15 others

The fact you got an example working says nothing about whether it is secure, compliant, resilient, observable, compatible with anything else, unless your design journey included examples or these. Which it probably didn't. It probably had examples of behaviour for the most part.

5:41 PM · Dec 26, 2018

Dus, er ligt daadwerkelijk een gevaar op de loer als je BDD gelijkstelt aan testen:

Je beperkt je testdekking tot louter functionele dekking en negeert alle andere risico's in je softwareoplossing die potentieel schade kunnen veroorzaken.





Als een tegenhanger van testen, richt BDD zich op het ontdekken van belangrijke manieren waarom een system zich zou moeten gedragen voordat we het gaan bouwen.

Dus de meest belangrijke stap in BDD is de eerste: **Discovery.**

Dan North noemt deze stap ‘Deliberate Discovery’ om te benadrukken dat ‘het grootste struikelblok voor je productiviteit is dat wat je niet wist.’



Er is een betere manier om de drie fases van BDD te beschrijven zonder het gebruik van testterminologie:

1. Discover – explore behaviour using examples
2. Formulate – express examples using Given/When/Then
3. Automate – create and maintain executable specifications

Gáspár Nagy and Seb Rose,
'The BDD books'

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Als je software aan het ontwikkelen bent,
dan ben je meestal gericht op het vinden van oplossingen voor
een probleem van de business.

Als je aan het testen bent,
dan ben je meestal gericht op het vinden van problemen
in de oplossingen van de ontwikkelaar.



Waarom is BDD aantrekkelijk voor testers?

- Gezamenlijk op gerichte wijze ontdekken wat de oplossing zou moeten doen verlaagt de kans op het bouwen van problemen (verkeerde oplossingen).
- Veel ogen op de bal verhoogd de kans op dat specificaties expliciet, eenduidig, consistent, correct en compleet zijn voordat we de oplossing gaan ontwikkelen.
- BDD begint met het eind in zicht: je praat over acceptatiecriteria vanuit het perspectief van alle belanghebbenden, zowel business als IT.

The background is a dark blue gradient. In the corners, there are decorative white line-art patterns resembling circuit boards or neural networks, with lines connecting to small circles.

BDD is voor iedereen; niet alleen voor de testers.

THANK YOU FOR LISTENING



**DO YOU HAVE ANY
QUESTIONS?**

BRONNEN

- All slides: <https://www.testnet.org/artikelen/why-is-bdd-confused-with-testing/>
- http://behrang.github.io/presentations/cucumber/2013-03-12/pictures/GOTO_Dan_North_BW.png
- <https://speakerdeck.com/tastapod/bdd-is-not-about-testing>
- <https://www.linkedin.com/jobs/search/>
- <https://www.bddtesting.com/>
- <https://scaledagileframework.com/behavior-driven-development/>
- <https://makeameme.org/meme/are-u-sure-guc5df>
- <https://imgflip.com/memegenerator/103123450/Spider-Man-Double>
- <https://www.google.com/search?q=bdd>
- <https://chat.openai.com/chat>
- <https://devrant.com/rants/1545210/do-you-follow-test-driven-development>
- <https://testdriven.io/test-driven-development/>
- <https://dannorth.net/introducing-bdd/>
- <https://twitter.com/bendhalpern/status/1193141566174613504>
- <https://twitter.com/kennybastani/status/853652867793735681>
- <https://imgflip.com/memegenerator/Tuxedo-Winnie-The-Pooh>

MEER BRONNEN

- <https://libquotes.com/eliphaz-levi/quote/lbc9v4f>
- <https://www.agilealliance.org/glossary/bdd/>
- <https://twitter.com/tastapod/status/1077965834297987072>
- <https://www.linkedin.com/feed/update/urn:li:activity:7025971987680251904/?commentUrn=urn%3Ali%3Acomment%3A%28activity%3A7025971987680251904%2C7026137448447373312%29>
- https://en.wikipedia.org/wiki/Behavior-driven_development
- [Interview with Dan North on Behavior-Driven Development, OOPSLA conference, 2007](#) + [“BDD provides a ‘ubiquitous language’ for analysis”](#) from [“Introducing BDD”](#), Dan North, 2006
- : <https://specflow.org/learn/bdd/>
- : https://twitter.com/tastapod/status/1077967702273216513?s=20&t=v8rveoj21qNbQoffvhr_1Q
- <https://bddbooks.com/>