

Behat

Behat as part of your CI process



Agenda

- Agile transformation.
- What is BDD and its contribution to agile process
- What is Behat?
- How can Behat help you in setting up a QA process
- Quick Fact: Research analysis on how test automation can improve your process
- Setting up Behat on your machine.
- Implementing test scenarios in Behat.
- Executing test scenarios using Behat.
- Drivers available to execute Behat tests.
- Reporting in Behat.
- How can Behat be a part of your CI process?

Introduction to 'Agile Transformation'

- Changing project requirements with a faster delivery rate.
- Extreme programming and featured driven development as a part of your process.
- With completion of each sprint '**regression**' testing becomes one of the crucial processes
- **Earlier regression = successful deployment = successful sprint completion**

BDD & it's contribution to agile process

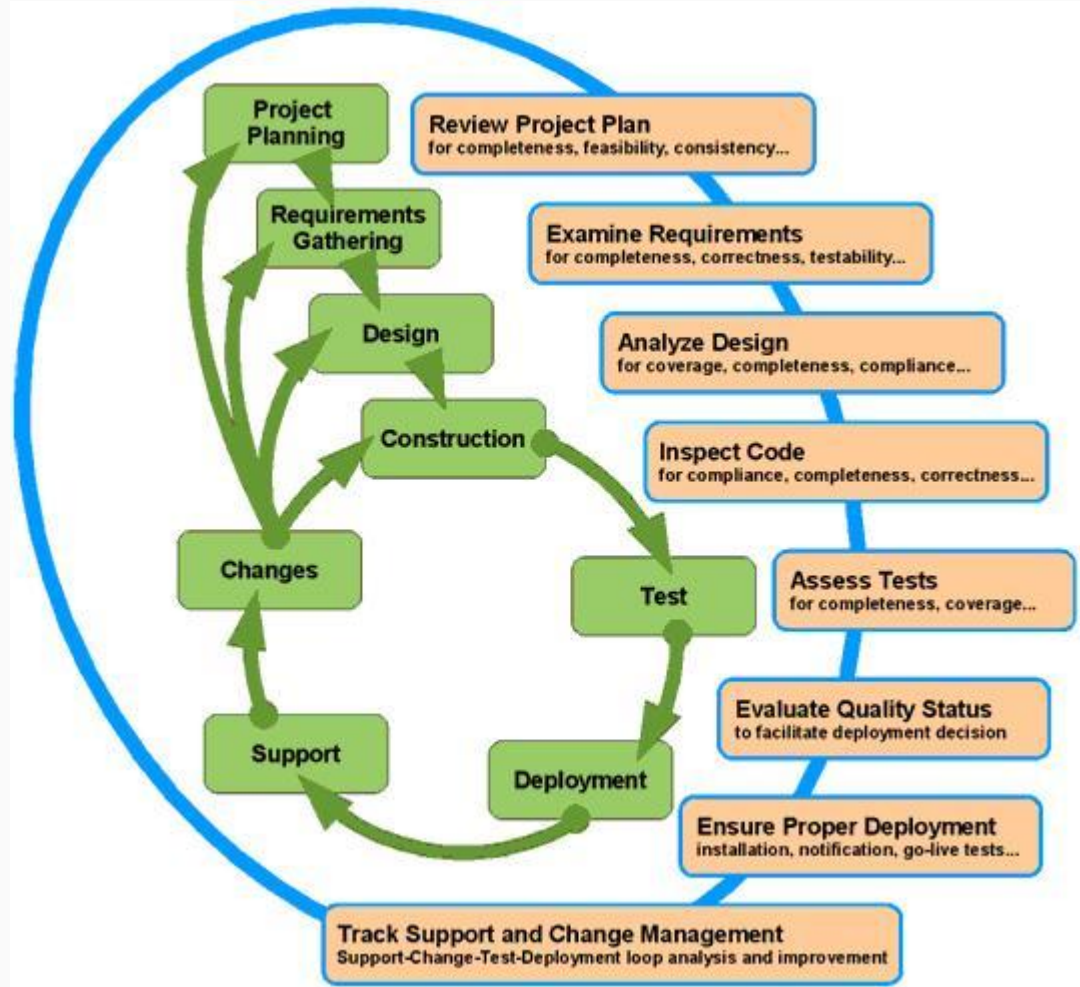
- BDD stands for '**Behavioural Driven Development**'.
- Implementation is easy.
- Developing software through constant communication with the stakeholders.
- Helps in keeping the technical and non-technical personnels on the same page.
- Can easily be integrated with continuous integration to get better results in terms of performance and scalability.

What is Behat?

- 'BDD' based framework for PHP based applications.
- Framework for auto testing your business expectations.
- Helps in setting up a continuous testing process very easily.
- Helpful in detecting early regression in the software development life cycle.
- Behat was inspired heavily from the Ruby's Cucumber project
- From v3.0 Behat has been considered as an official 'Cucumber' implementation in PHP.
- Behat is now a widely used BDD framework for automating use cases for PHP applications.
- Uses 'Gherkin' which is a simple description of a feature's story.

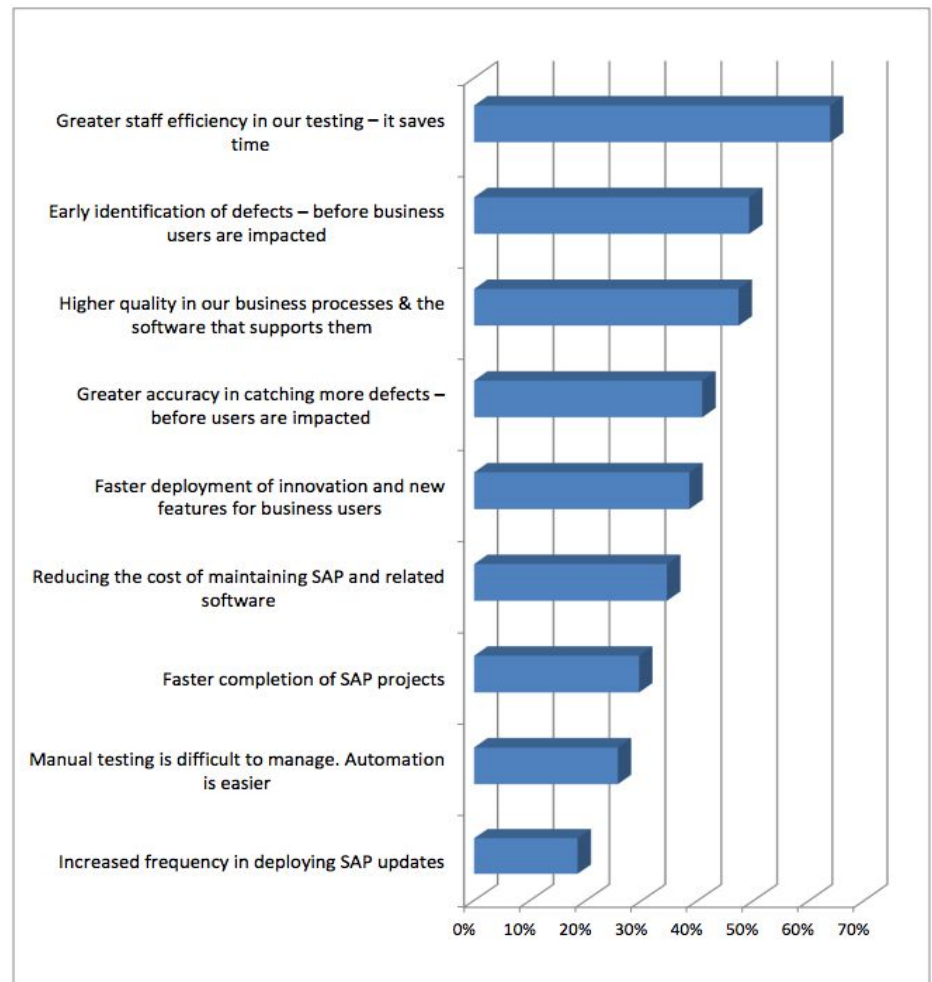
Behat as a part of the QA process.

- Converting the use cases, scenarios into automated tests.
- Involving stakeholders within the process.
- A descriptive process of quality control.
- A brief report for test cases passed and failed.
- Can easily be integrated to any CI tool or DevOps process.
- Can easily be executed repetitively to filter out regressions at an early stage.
- Regular deployments.
- Successful sprint completion.



Statistics

- 63.8% suggested greater staff efficiency.
- 45-48% suggested it helps in early defect detection.
- 47% suggested it helps them in faster deployment



Requirements for installing Behat

- PHP 7.0 or higher must be present.
- If PHP < 7.0 update PHP version
- Composer must be installed.

Setting up Behat

- Creating '**composer.json**' with the required dependencies.
- Run command '**composer install**'.
- To verify the installation run command '**bin/behat --version**'.
- Run '**bin/behat --init**' in order to create the '**features**' directory.
- Set up your project configurations inside '**behat.yml**'

Implementing test scenarios

Feature: Test the required xyz feature

Scenario: Some determinable business situation

Given some precondition

And some other precondition

When some action by the actor

And some other action

And yet another action

Then some testable outcome is achieved

And something else we can check happens too

Executing test scenarios in Behat

- `bin/behat features/`
- `bin/behat features/file1.feature`
- `bin/behat features/ --tags smoke`
- `bin/behat features/file1.feature --tags smoke`
- `bin/behat features/ --profile staging`

Drivers available to execute Behat tests

- Selenium WebDriver
- Goutte Driver
- PhantomJS - selenium server
 - To run tests on phantomjs you need to start the phantom-selenium driver on port 8643
 - Phantomjs --webdriver = 8643

Reporting in Behat

- **'Behat-html-formatter'** is the plugin for reports in Behat.
- Add the dependency to the **'composer.json'** for installation.
- Configure the plugin within the **'behat.yml'**.
- Detailed overview of scenarios passing / failing.
- Detailed overview of steps passing / failing.
- Easy to configure.

Behat as a part of CI process

- Can easily be integrated with CI tools like '**Jenkins**', '**Travis**' and '**CircleCI**'.
- Configure CI to run Behat tests on every pull requests.
- Configure CI to run Behat tests on periodic intervals.
- It gives you the confidence about the stability of the code.
- Also, adds to the confidence of detecting early regressions within the codebase.

Key Takeaway

Test automation as a part of the DevOps process assures the stability of code.



“If you’re relentlessly focused on lowering cost, you’ll quickly become oblivious to opportunities to increase value.”

- Alan Turing

Thanks!

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