Continuous Development with Yulup

Introduction

Everybody talks about test-driven software development and testing in general, but in reality most software projects still lack sufficient testing. There are various reasons for insufficient testing, such as lack of time and financial resources, unclarity about responsibilities within project teams, and, finally, the fact that only few people consider testing a challenging task.

Insufficient testing can have negative consequences, such as delays and downtimes, which carry additional costs or losses.

Just as office cleaning or accounting is usually outsourced, it makes sense to outsource software testing.

We at Wyona consider testing as one of the greatest challenges in software development. Therefore we have developed a system and related processes, which allow the systematic association of code and/or functionality changes with test cases, which are performed incrementally and punctually. This way it is clear at every point in time what is working and what needs to be improved.

Agile Software Development

Today many software projects are being developed with agile software development methods. Functional enhancements or changes are split into as small tasks as possible and developed and deployed incrementally. The goal should be to deliver new code versions daily or even every hour and to put enhancements or changes immediately into production. Through this procedure the product owner or customer can rapidly use the improvements and any misunderstandings are recognised very early and negative effects are strongly reduced.

In practise this concretely means that the software developer is assigned a task concerning the development of functionality, creates a branch in the Code Repository, and adapts or enhances the associated files. These files contain the new software code, and at the end provide a new code version with modified functionality.

Behaviour-Driven Development

In this process a lot of elements can go wrong; that is the crux of the matter. To avoid misunderstandings during the software developer's contractual work, Wyona recommends and uses the principle of Behaviour-Driven Development (BDD). We support or take over the specification of the new or modified functionality through so-called BDD scenarios. A simple BDD scenario would be, for example, checking a postal code during a registration process. Supplementary to technical specification, the functionality from the point of view of the user can be described as follows:

- *Given* - I am on the online form to input my residential address
- *When* - I enter a postal code that does not exist in my country
- *Then* - I receive a message next to the input field for the postal code that such a postal code does not exist in my country

BDD scenarios have the big advantage that they do not have to be specified by technically trained people and can be used for manual testing. In addition tests that are difficult to automate can be documented in clear and simple language.

Yulup

Yulup allows the connection of code files with BDD scenarios and automatic tests. As soon as the

developer has made the appropriate code changes and deposited them in the central code repository, Yulup performs automatic tests on the basis of the links and sends notifications, so that the functionalities, for which there are no automatic tests, can be tested by people with the help of BDD scenarios. The test results are administered in Yulup and processed as necessary. In this way a developer will immediately notice that a test has failed, and why, and which concrete code changes have led to it. At the same time it is always clear what is being tested and who is responsible for it.

When for example test links for new codes do not yet exist, this fact will be noted and the developer and tester will be notified. Yulup assures that no more misunderstandings can arise about what, when, and how can be tested, and who is responsible for it.

What We Offer

- Infrastructure out of the box to administration of manual and automatic tests
- Development of automatic tests
- Description of manual tests based on the scheme of BDD scenarios
- Performance of manual tests
- Training for the development of automatic tests and description of manual tests

Conclusion

The outsourcing of software testing at Wyona offers the following advantages:

- Lower infrastructure and personal costs
- Freeing of resources that can be used for actual software development
- Motivated colleagues through removing the burden of unpopular testing assignments
- Minimising risks concerning delays and downtimes
- Reduced "Time to Market"
- Predictability of software quality
- Building of trust thanks to current/real-time overview of the state

For more information

More information about Yulup and related processes are available at:

http://www.yulup.com

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