

Automated Testing in Microsoft Dynamics 365 Business Central: Streamline Your Processes for Efficiency and Accuracy

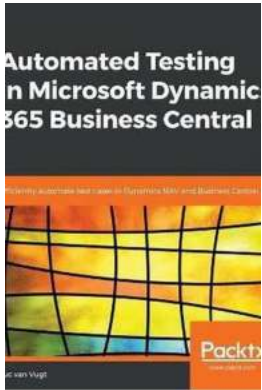
In today's fast-paced business environment, organizations need reliable and efficient software solutions to manage their operations. One such solution is Microsoft Dynamics 365 Business Central, a comprehensive enterprise resource planning (ERP) system that enables businesses to streamline their processes, automate tasks, and gain valuable insights into their operations.

As businesses increasingly rely on software to drive their operations, the need for reliable and accurate testing becomes paramount. Software bugs and glitches can cost businesses millions in lost revenue, customer dissatisfaction, and reputation damage. To mitigate these risks, more and more organizations are turning to automated testing in Microsoft Dynamics 365 Business Central.

The Importance of Automated Testing in Microsoft Dynamics 365 Business Central

Automated testing refers to the use of software tools to execute test cases and verify the accuracy and reliability of software systems. In the case of Microsoft Dynamics 365 Business Central, automated testing allows organizations to validate the functionality, performance, and security of their ERP system efficiently and effectively.

Automated Testing in Microsoft Dynamics 365 Business Central: Efficiently automate test cases for faster development cycles with less time



needed for manual testing, 2nd Edition

by Luc van Vugt (2nd Edition, Kindle Edition)

★★★★★ 5 out of 5

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Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 406 pages



One of the primary advantages of automated testing is its ability to accelerate the testing process. Traditional manual testing methods can be time-consuming, requiring human testers to perform repetitive tasks that are prone to errors and inconsistencies. In contrast, automated testing can execute test scripts quickly and repeatedly, ensuring a thorough and consistent evaluation of the system.

Moreover, automated testing provides businesses with greater flexibility and scalability. As organizations grow and evolve, so do their software systems. Through automated testing, organizations can easily adapt their test cases to accommodate changes in their ERP system, ensuring continuous validation and improved system performance.

Key Features and Benefits of Automated Testing in Microsoft Dynamics 365 Business Central

Automated testing in Microsoft Dynamics 365 Business Central comes with a range of features and benefits that can significantly enhance a company's software testing capabilities. Let's explore some of the key features and benefits below:

1. Test Automation Framework

Microsoft Dynamics 365 Business Central provides a powerful test automation framework that allows organizations to create, modify, and execute test scripts. This framework allows for the creation of reusable test cases, reducing the time and effort required for testing new modules or customizations. With the test automation framework, businesses can execute tests efficiently while ensuring comprehensive coverage.

2. Integration with Visual Studio

Automated testing in Microsoft Dynamics 365 Business Central integrates seamlessly with Visual Studio, Microsoft's popular integrated development environment (IDE). This integration enables developers and testers to leverage Visual Studio's powerful debugging and test execution features, enabling them to identify and resolve issues more quickly and efficiently.

3. Continuous Integration and Deployment

Automated testing in Microsoft Dynamics 365 Business Central supports continuous integration and deployment practices, which are essential components of modern software development. By integrating automated tests into their development and deployment pipelines, organizations can detect and fix issues early in the development cycle, ensuring a more stable and reliable ERP system.

4. Regression Testing

One of the significant advantages of automated testing in Microsoft Dynamics 365 Business Central is its ability to perform regression testing effortlessly. Regression testing ensures that software changes or enhancements do not negatively impact existing functionalities. With automated regression testing,

businesses can quickly identify and resolve any issues that arise from system upgrades or customization deployments.

5. Improved Accuracy and Reliability

Human errors are inevitable in manual testing. However, with automated testing in Microsoft Dynamics 365 Business Central, organizations can significantly reduce the chances of human errors and improve the accuracy and reliability of their ERP system. Test scripts execute commands consistently and precisely, eliminating the risk of human oversight or inconsistency in the testing process.

Implementing Automated Testing in Microsoft Dynamics 365 Business Central

To implement automated testing effectively in Microsoft Dynamics 365 Business Central, organizations need to follow a structured approach. Here are some key steps to consider:

1. Identify and prioritize test cases:

Determine the critical areas of functionality and business processes in Microsoft Dynamics 365 Business Central that require automated testing. Create a prioritized list of test cases based on their importance and potential impact on the organization's operations.

2. Select an automated testing tool:

Choose an automated testing tool that is compatible with Microsoft Dynamics 365 Business Central and offers the necessary features and functionalities required for your testing requirements. Popular tools such as Selenium, Visual Studio Test Professional, and TestComplete are commonly used for automated testing.

3. Design and develop test scripts:

Develop test scripts that cover the identified test cases. These test scripts should mimic real-world scenarios and incorporate both positive and negative test scenarios. Test scripts should be designed in a modular and reusable manner to ensure scalability and easy maintenance.

4. Integrate test automation into your development and deployment processes:

Integrate automated tests into your existing development and deployment pipelines to ensure continuous testing and validation. Establish clear guidelines and practices for developers and testers to follow when utilizing automated testing tools.

5. Monitor and analyze test results:

Regularly monitor and analyze the results of your automated tests. Use the insights gained from these results to improve your test scripts and identify areas for further optimization or refinement.

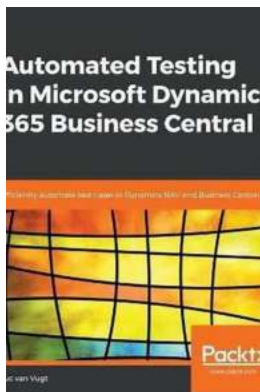
6. Maintain and update test scripts:

As your Microsoft Dynamics 365 Business Central system evolves, regularly update and maintain your test scripts to reflect these changes. This ensures that your automated tests remain relevant and effective in detecting potential issues with your ERP system.

Automated testing in Microsoft Dynamics 365 Business Central offers organizations a powerful tool to enhance the accuracy, reliability, and efficiency of their ERP system. By streamlining the testing process, organizations can identify and resolve issues more quickly, ultimately improving customer satisfaction and driving business success.

Implementing automated testing requires careful planning, selection of the right tools, and a structured approach. However, the investment is worthwhile, as it enables businesses to stay ahead of the competition by continuously delivering high-quality software solutions that meet customer expectations.

With automated testing in Microsoft Dynamics 365 Business Central, businesses can unlock the full potential of their ERP system, gain a competitive edge, and drive overall operational excellence.



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Learn how to write automated tests for Dynamics 365 Business Central and discover how you can implement them in your daily work

Key Features

- Leverage automated testing to advance over traditional manual testing methods

- Write, design, and implement automated tests
- Explore various testing frameworks and tools compatible with Microsoft Dynamics 365 Business Central

Book Description

Dynamics 365 Business Central is a cloud-based SaaS ERP proposition from Microsoft. With development practices becoming more formal, implementing changes or new features is not as simple as it used to be back when Dynamics 365 Business Central was called Navigator, Navision Financials, or Microsoft Business Solutions-Navision, and the call for test automation is increasing.

This book will show you how to leverage the testing tools available in Dynamics 365 Business Central to perform automated testing. Starting with a quick to automated testing and test-driven development (TDD), you'll get an overview of test automation in Dynamics 365 Business Central. You'll then learn how to design and build automated tests and explore methods to progress from requirements to application and testing code. Next, you'll find out how you can incorporate your own as well as Microsoft tests into your development practice. With the addition of three new chapters, this second edition covers in detail how to construct complex scenarios, write testable code, and test processes with incoming and outgoing calls.

By the end of this book, you'll be able to write your own automated tests for Microsoft Business Central.

What you will learn

- Understand the why and when of automated testing
- Discover how test-driven development can help to improve automated testing

- Explore the six pillars of the Testability Framework of Business Central
- Design and write automated tests for Business Central
- Make use of standard automated tests and their helper libraries
- Understand the challenges in testing features that interact with the external world
- Integrate automated tests into your development practice

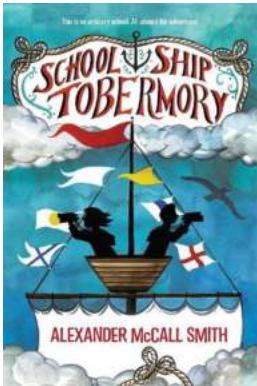
Who this book is for

This book is for consultants, testers, developers, and development managers working with Microsoft Dynamics 365 Business Central. Functional as well as technical development teams will find this book on automated testing techniques useful.

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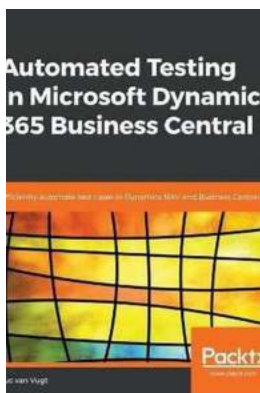
1. to Automated Testing
2. Test Automation and Test-Driven Development
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4. The Test Tool, Standard Tests, and Standard Test Libraries
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6. From Customer Wish to Test Automation – the Basics
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8. From Customer Wish to Test Automation – the TDD way
9. How to integrate Test Automation in Daily Development Practice
10. Getting Business Central Standard Tests Working on Your Code

11. How to Construct Complex Scenarios
12. Writing Testable Code
13. Testing Incoming and Outgoing Calls
14. Getting up and running with Business Central, VS Code, and the GitHub project



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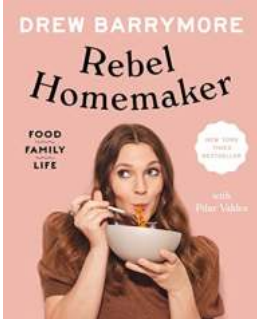
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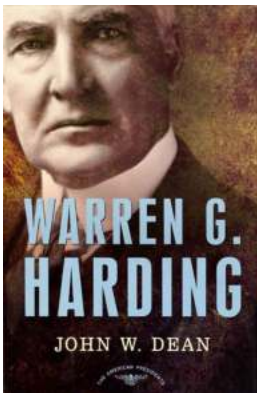
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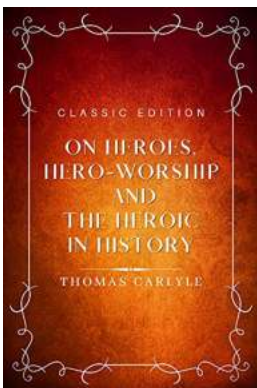
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