

# **Hands-on GitHub Actions**

**Implement CI/CD with GitHub  
Action Workflows for Your  
Applications**

**Chaminda Chandrasekara  
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**Apress®**

# ***Hands-on GitHub Actions: Implement CI/CD with GitHub Action Workflows for Your Applications***

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Printed on acid-free paper

*May this book help all the developers who are starting to  
use GitHub Actions.*

# Table of Contents

- About the Authors.....ix**
- About the Technical Reviewer .....xi**
- Acknowledgments .....xiii**
- Introduction .....xv**
  
- Chapter 1: Introduction to GitHub Actions ..... 1**
  - Continuous Integration and Continuous Delivery ..... 1
  - Importance of Software Delivery Automation ..... 3
  - Introduction to GitHub Actions ..... 5
    - Action ..... 6
    - Artifacts ..... 6
    - Event..... 6
    - GitHub-Hosted Runners ..... 7
    - Job..... 7
    - Self-Hosted Runner ..... 7
    - Step ..... 7
    - Workflow ..... 8
  - Summary..... 8
  
- Chapter 2: Getting Started with GitHub Actions Workflows ..... 9**
  - Using Preconfigured Workflow Templates..... 10
  - Using Marketplace Actions to Create Workflows ..... 12
  - Understanding the Structure of a Workflow ..... 14

TABLE OF CONTENTS

- Setting up Continuous Integration Using GitHub Actions .....21
- Building a .NET Core Web App with GitHub Actions .....24
- Summary.....28
- Chapter 3: Variables .....29**
  - Defining and Using Variables .....29
    - Variables in the Entire Workflow Scope.....29
    - Variables in Job Scope .....31
    - Variables in Step Scope.....31
    - Using the set-env Command .....32
  - Default Variables .....34
  - Naming Considerations for Variables .....37
    - GITHUB\_ Prefix .....37
    - Case Sensitivity .....38
    - \_PATH Suffix .....38
    - Special Characters .....38
  - Summary.....39
- Chapter 4: Secrets and Tokens .....41**
  - Defining and Using Secrets.....41
    - Repo-Level Secrets .....41
    - Organization-Level Secrets .....43
    - Naming Secrets .....43
    - Using Secrets in Workflows.....44
    - Limitations with Secrets.....45
  - GITHUB\_TOKEN .....45
  - Summary.....50

<b>Chapter 5: Artifacts and Caching Dependencies .....</b>	<b>51</b>
Storing Content in Artifacts .....	51
5.02: Caching Workflow Dependencies .....	57
Summary.....	61
<b>Chapter 6: Using Self-Hosted Runners .....</b>	<b>63</b>
Setting up a Windows Self-Hosted Runner .....	63
Setting up a Linux Self-Hosted Runner .....	72
Summary.....	79
<b>Chapter 7: Package Management.....</b>	<b>81</b>
Creating a NuGet Package with dotnet pack .....	81
Creating a NuGet Package Using a nuspec File .....	89
Using Packages in GitHub Packages.....	96
Summary.....	101
<b>Chapter 8: Service Containers .....</b>	<b>103</b>
Service Containers and Job Communication .....	103
Job Running as a Container .....	103
Jobs Running Directly on a Runner Machine.....	104
Using a Redis Service Container .....	104
Run a Workflow Job as a Container in the Runner .....	107
Run a Workflow Job Directly in the Runner .....	111
Summary.....	116
<b>Chapter 9: Creating Custom Actions.....</b>	<b>117</b>
Types of Actions .....	117
Creating Custom Actions.....	118

TABLE OF CONTENTS

JavaScript Custom Action.....	118
Composite Run Steps Action .....	129
Docker Container Action .....	132
Publishing Custom Actions.....	137
Summary.....	140
<b>Chapter 10: A Few Tips and a Mobile Build Example .....</b>	<b>141</b>
Variable Usage Differences .....	141
Default Variables with \$variablename Syntax .....	142
Using Variables in PowerShell Core in Action Steps.....	145
Workflow Job Status Check .....	149
Android Build and Push to MS App Center for Distribution .....	153
Summary.....	158
<b>Index.....</b>	<b>159</b>

# About the Authors



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# Introduction

GitHub is the most widely used source code repository provider. It is embraced by the open source community and by many software development companies. Today, source code is essentially required to have continuous integration and continuous delivery/deployments (CI/CD) to target environments because automation has become a norm in software development practices and includes the wide adoption of agility.

GitHub repositories can be integrated with third-party CI/CD integration tools, such as Jenkins or Azure DevOps. Since Microsoft's acquisition, GitHub repos are now closely integrated with Azure DevOps. However, bringing all GitHub customers to use Azure DevOps is a tough ask, considering the wide adoption of GitHub by open source and non-Microsoft software development technology users.

GitHub Actions facilitate a state-of-the-art CI/CD workflow platform inside GitHub. The actions provide options to implement build and deployment workflows within GitHub. GitHub Actions enable pull request validation to enhance repository branch stability to the next level by assuring the code compilation state with each merge.

This hands-on book was written as a day-to-day reference for developers and Ops teams to build quality CI/CD workflows. The book offers in-depth lessons on implementation patterns, solutions for different technology builds, guidelines for implementing custom components as actions, and descriptions of the features available with GitHub Actions workflows to set up CI/CD for your repositories.

The book consists of sample code in each lesson to guide you through getting started with GitHub Actions workflows in your web or mobile applications, targeting any platform and any language. In addition to using

## INTRODUCTION

GitHub-hosted machines (runners) to run the workflows, the book guides you through setting up your machines as runners for GitHub Actions. A detailed exploration of the available actions, syntax usage reference guides, and custom action implementation for your specific needs provide all the essentials you need to implement GitHub Actions workflows for your GitHub repositories.