



# Automate Your Workflow with GitHub Actions (GH-200T00)

## COURSE OVERVIEW

Learn how GitHub Actions enables you to automate your software development cycle. You'll learn how to plan automation of your software development life cycle with GitHub Actions workflows, use GitHub Actions to automatically build an application, and use GitHub Script to interact with the GitHub API.

## WHO WILL BENEFIT FROM THIS COURSE?

This course is intended for students who want to use GitHub to help developers and DevOps engineers build and deploy applications quickly. Additionally, students will discover which GitHub Actions features are available for their enterprise instance and learn how to use them.

## PREREQUISITES

- GitHub Account
- A GitHub Account with an active subscription for GitHub Copilot is required for either your personal GitHub account or a GitHub account managed by an organization or enterprise. For learning purposes, the Copilot Free option with usage limits should be sufficient.
- Basic understanding of GitHub fundamentals

## COURSE OBJECTIVES

- Build continuous integration workflows by using GitHub Actions
- Build and deploy applications to Azure by using GitHub Actions
- Automate GitHub by using GitHub Script
- Leverage GitHub Actions to publish to GitHub Packages
- Create and publish custom GitHub actions
- Manage GitHub Actions in the enterprise

## COURSE OUTLINE

### Automate your workflow with GitHub Actions Part 1 of 2

Automate development tasks by using GitHub Actions

- How does GitHub Actions automate development tasks?
- Identify the components of GitHub Actions
- Configure a GitHub Actions workflow
- Exercise - Create and run a basic GitHub Actions workflow



Build continuous integration workflows by using GitHub Actions

- How do I use GitHub Actions to create workflows for CI?
- Manage and debug workflows in GitHub Actions
- Customize your workflow with environment variables
- Cache, share and debug workflows
- Exercise - Create the CI workflow on GitHub

Build and deploy applications to Azure by using GitHub Actions

- How do I use GitHub Actions to deploy to Azure?
- Remove artifacts, create status badges, and configure environment protections
- Exercise - Create a workflow that deploys a web app to Azure

Automate GitHub by using GitHub Script

- What is GitHub Script?
- Exercise - Using GitHub Script in GitHub Actions

## Automate your workflow with GitHub Actions Part 2 of 2

Leverage GitHub Actions to publish to GitHub Packages

- What are GitHub Packages?
- Publish to GitHub Packages and GitHub Container Registry
- Knowledge check
- Exercise - Publish to a GitHub Packages registry
- GitHub Packages for code packages

Create and publish custom GitHub actions

- Create a custom GitHub action
- Publish a custom GitHub action
- Exercise - Create a custom JavaScript GitHub action

Manage GitHub Actions in the enterprise

- Understanding GitHub enterprise models
- Manage actions and workflows
- Control access and usage of actions in your enterprise
- Managing and leveraging reusable components in GitHub Actions
- Manage runners
- Configure self-hosted runners for enterprise use
- Manage encrypted secrets
- Exercise - Use a repository secret in a GitHub Actions workflow

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