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IT & Software › CI/CD › GitHub Actions

Introduction to GitHub Actions

Streamline your workflow with GitHub Actions automation!

DEFINITION

> GitHub Actions is a CI/CD tool that automates software workflows directly in GitHub. It allows developers to build, test, and deploy code seamlessly.

KEY CONCEPTS

Workflows

Workflows are automated processes defined in YAML files that run on specific events in your repository.

Actions

Actions are individual tasks that can be combined to create a workflow, such as building code or running tests.

Triggers

Triggers are events that initiate workflows, like pushing code or creating a pull request.

Runners

Runners are servers that execute your workflows; they can be GitHub-hosted or self-hosted.

Secrets

Secrets are sensitive data like API keys that can be securely stored and accessed in workflows.

EXAMPLES

→ Trigger a build on every push to the main branch.

→ Run tests automatically when a pull request is created.

→ Deploy code to production after successful tests.

MEMORY TIPS

★ Remember 'WARTS' for Workflows, Actions, Runners, Triggers, Secrets.

★ Think of workflows as 'recipes' that automate your coding tasks.

★ Visualize triggers as 'light switches' that turn on workflows.

COMMON MISTAKES

✗ Forgetting to define triggers, leading to workflows not running.

✗ Not using secrets for sensitive data, risking exposure.

✗ Neglecting to test workflows before relying on them in production.

QUICK RECAP

GitHub Actions automates your development workflow through customizable workflows and actions. Remember to define triggers and use secrets for security. Test your workflows to ensure they function as expected.