AZ-400 Weekly Study Plan (6 Weeks)

This 6-week plan prepares you for AZ-400: Designing and Implementing Microsoft DevOps Solutions. It covers GitHub Actions, Azure Pipelines, IaC, testing, monitoring, and release strategies.

Week 1: DevOps Fundamentals & Source Control

- Understand DevOps culture and practices.
- Review branching strategies (GitFlow, trunk-based).
- Hands-on: Configure branch policies and PR validation in GitHub.

Week 2: CI/CD with GitHub Actions & Azure Pipelines

- Learn workflows, runners, and environments in GitHub Actions.
- Hands-on: Build a CI pipeline for a .NET Aspire project.
- Explore Azure Pipelines (YAML pipelines, classic).

Week 3: Infrastructure as Code

- Learn Bicep and Terraform basics for IaC.
- Hands-on: Deploy infrastructure with Bicep in GitHub Actions.
- Implement environment-based parameters for dev/test/prod.

Week 4: Testing & Quality

- Study automated testing (unit, integration, load).
- Hands-on: Add Testcontainers integration tests to CI pipeline.
- Configure quality gates with GitHub and SonarCloud/CodeQL.

Week 5: Security, Monitoring & Feedback

- Learn GitHub OIDC with Azure for secretless deployments.
- Implement monitoring (App Insights, Log Analytics).
- Hands-on: Add smoke tests + availability checks to CD pipeline.

Week 6: Release Management & Exam Prep

- Study blue/green, canary, and feature flag strategies.
- Capstone: Build a multi-stage pipeline (dev $\rightarrow$ staging $\rightarrow$ prod with approvals).
- Take 2 practice exams, review weak areas, and finalize prep.