**Week 2: Advanced AWS Services**

**Objective**: Dive deeper into AWS services relevant to DevOps.

**Day 6: Serverless (Lambda, API Gateway)**

* **Theory**:
  + AWS Lambda: Event-driven compute.
  + API Gateway: REST API creation.
* **Hands-On**:
  + Create a Lambda function triggered by S3 upload.
  + Expose the Lambda function via API Gateway.
* **Interview Prep**:
  + Lambda interview questions (e.g., cold start, concurrency).

**Day 7: Containers (ECS, ECR)**

* **Theory**:
  + ECS: Container orchestration.
  + ECR: Container registry.
* **Hands-On**:
  + Deploy a Docker container using ECS Fargate.
  + Push an image to ECR.
* **Interview Prep**:
  + ECS vs. Kubernetes (EKS).

**Day 8: Infrastructure as Code (CloudFormation)**

* **Theory**:
  + CloudFormation: Templates, Stacks, Resources.
* **Hands-On**:
  + Create a CloudFormation template to launch an EC2 instance.
* **Interview Prep**:
  + CloudFormation interview questions (e.g., stack updates, drift detection).

**Day 9: CI/CD (CodePipeline, CodeBuild)**

* **Theory**:
  + CI/CD pipeline concepts.
  + CodePipeline: Stages, Actions.
  + CodeBuild: Build specifications.
* **Hands-On**:
  + Create a CI/CD pipeline to deploy a static website to S3.
* **Interview Prep**:
  + CI/CD interview questions (e.g., stages in a pipeline).

**Day 10: Configuration Management (Systems Manager, OpsWorks)**

* **Theory**:
  + Systems Manager: Parameter Store, Patch Manager.
  + OpsWorks: Chef/Puppet integration.
* **Hands-On**:
  + Use Systems Manager to run commands on EC2 instances.
* **Interview Prep**:
  + Configuration management interview questions (e.g., Chef vs. Puppet).