8-Week AWS Roadmap Overview

The aim of this roadmap is to take me from zero to a junior-level Cloud/DevOps engineer. Each week builds on the last, with a mix of theory, hands-on builds, and reflection/documentation.
By the end, I have:

- A production-style VPC with public and private subnets.
- Bastion host, NAT, ALB, Auto Scaling Group.
- RDS database in private subnets.
- Monitoring with CloudWatch and SNS.
- Infrastructure-as-Code using CloudFormation.
- A GitHub portfolio with code, screenshots, and documentation.

Week 1 – Foundations: IAM and S3

Day 1: Set up AWS Free Tier account, enable MFA, create IAM user with least privilege.
Day 2: Create S3 bucket, upload/download objects.
Day 3: Configure static website hosting on S3.
Day 4: Apply bucket policies and block public access correctly.
Day 5: Add versioning and lifecycle policies.
Day 6: Reflection day – write Chapter 1 of the book.

Week 2 – Networking Basics: VPC and Subnets

Day 1: Create a custom VPC with one public and one private subnet.
Day 2: Attach Internet Gateway, create route table for public subnet.
Day 3: Add NAT Gateway for private subnet outbound access.
Day 4: Create Security Groups (web, ssh, db).
Day 5: Launch EC2 in public subnet, test connectivity.
Day 6: Reflection day – write Chapter 2.

Week 3 – Access and Bastion

Day 1: Launch Bastion host in public subnet, connect via SSH.
Day 2: Add EC2 in private subnet, connect through Bastion.
Day 3: Secure Bastion SG with your IP only.
Day 4: Review routing and flow of traffic.
Day 5: Test resilience of Bastion-private pattern.
Day 6: Reflection day – write Chapter 3.

Week 4 – Web Tier and Load Balancing

Day 1: Add a second private subnet in another AZ, deploy two web servers.
Day 2: Create ALB in public subnets, target group with web servers.
Day 3: Create Auto Scaling Group across private subnets.
Day 4: Test scaling and ALB health checks.
Day 5: Explore launch templates and scaling policies.
Day 6: Reflection day – write Chapter 4.

Week 5 – Database Layer

Day 1: Design DB subnets in two AZs.
Day 2: Launch RDS instance in private subnets (single-AZ for Free Tier).
Day 3: Connect web tier to RDS (security groups only allow from web).
Day 4: Test fail scenarios, secure DB endpoint.
Day 5: Conceptual Multi-AZ and production RDS features.
Day 6: Reflection day – write Chapter 5.

Week 6 – Monitoring and Logging

Day 1: Review CloudWatch default metrics.
Day 2: Install CloudWatch Agent, stream logs.
Day 3: Create alarms for CPU, memory, nginx logs.
Day 4: Build CloudWatch dashboard.
Day 5: Test alarms with stress, stop nginx, DB issues.
Day 6: Reflection day – write Chapter 6.

Week 7 – Infrastructure as Code (CloudFormation)

Day 1: Create first S3 bucket via CloudFormation.
Day 2: Build VPC via CloudFormation.
Day 3: Add subnets, NAT, Bastion, EC2 via YAML.
Day 4: Add ALB and Target Groups via YAML.
Day 5: Add Auto Scaling Group with Launch Template.
Day 6: Reflection day – write Chapter 7.

Week 8 – Advanced IaC and Final Project

Day 1: Replace hardcoded values with Parameters.
Day 2: Use Mappings and Conditions for flexibility.
Day 3: Add Outputs for visibility.
Day 4: Full Final Production Stack: VPC, Bastion, ALB, ASG in private subnets, RDS, Monitoring.
Day 5: Add Tags for cost allocation.
Day 6: Reflection day – write Chapter 8.

Final Deliverables

- Complete CloudFormation template for full stack.
- Screenshots: ALB DNS in browser, Bastion SSH session, CloudWatch dashboard, SNS email alert, RDS endpoint.
- Book chapters (Weeks 1–8) showing reflection and explanation.
- GitHub repo containing all templates, screenshots, and documentation.