Case study Description

1. Explain the problem statement
   - Create a CRUD application for a book store using AWS Lambda and/or ECS, with PostGreSQL RDS.
   - The database credentials to be stored in AWS Secrets Manager or SSM Parameter store. Password is to be stored encrypted
   - The APIs are to be exposed from AWS API Gateway
   - The application is to be developed as java micro-services
   - jUnit test cases to be there
   - Code is to be kept in AWS Code-commit or git as convenient during the project considering app security
   - The build process is to be automated using AWS Codebuild
   - In AWS Codebuild to ensure the code-quality, sonar-cube integration to be demonstrated
   - The React code should integrate the APIs exposed
   - The react application is to be deployed in S3
   - Keep an API Authentication layer by integrating AWS cognito with API Gateway, using id token validation

2. Ask the team to think a solution and present after an hour
3. Discuss the solution and explain the most appropriate deployment architecture
4. Explain the table structure and the API definations
5. Show how to create Swagger documentation for these APIs
6. It is expected that 50% of the team use AWS Lambda and the remaining use AWS ECS

Devops related assignments in the same case-study

1. Explain the team how the CFT to be created for the RDS(one person should execute this)
2. Explain the configuration of SSM Parameter store and Secrets Manager
3. Explain the team how to create the CFTs for Lambda, ECS, API Gateway, Cognito Authorizers
4. Create appropriate Roles and explai to the team
5. Demonstrate a sample CFT with only one sample API and ask the trainees to create their own CFTs. It is suggested that the employee id to be prefixed
6. with application component names
7. Create VPC, subnet, security groups and necessary configurations and explain to the trainees. Give some assessment to validate their understanding