

Azure Lab Assignments

Assignment 1: Azure Fundamentals and Resource Management

Duration: 30 to 45 minutes

Learning Objectives:

1. Understand core Azure services and resource hierarchy
2. Create and manage resource groups with proper naming conventions
3. Explore Azure Portal interface and service catalog

Task:

1. Create three resource groups following naming convention: `jecrc-[yourname]-rgX` (X=1,2,3)
 2. In each resource group:
 - Create Storage Account with globally unique name
 - Configure virtual network with 2 subnets
 - Deploy a Linux VM (Basic B1s tier)
 3. Document creation process with screenshots showing:
 - Resource group creation
 - Service configuration details
 - Successful deployment status
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Assignment 2: Static Web Application Deployment

Duration: 30 to 45 minutes

Learning Objectives:

1. Deploy static content using Azure App Service
2. Compare deployment methods (Portal vs CLI)
3. Configure basic monitoring and scaling

Task:

1. Create App Service Plan (Free tier)
2. Deploy sample HTML/CSS website using:
 - Azure Portal Drag-and-Drop
 - Azure CLI commands
3. For CLI deployment:
 - Create deployment script that includes:
 - Resource group creation
 - App Service Plan configuration
 - Deployment from local folder
4. Submit:
 - Screenshots of both deployed sites
 - CLI command history
 - App Service metrics dashboard

Assignment 3: API Deployment with App Services

Duration: 30 to 45 minutes

Learning Objectives:

1. Deploy REST API to Azure App Service
2. Configure continuous deployment
3. Implement basic monitoring and logging

Task:

1. Create .NET Core Web API project in Visual Studio
2. Configure Azure DevOps pipeline for CI/CD:
 - Automatic builds on code commit
 - Deployment to staging slot
3. Implement Application Insights for:
 - Request tracking
 - Error logging
 - Performance monitoring
4. Document:
 - Pipeline configuration
 - Successful API deployment
 - Sample API responses
 - Monitoring dashboard views

Submission Requirements:

- Microsoft Word document containing:
 - Assignment cover page with student details
 - Screenshots with visible Azure portal URL bar
 - Code/command snippets with proper formatting
 - Reflection on challenges faced
- Submit to Google Classroom by due date
- File naming: **AzureLab-[YourName]-[Assignment#].docx**

Grading Criteria:

- Adherence to naming conventions (20%)
- Functional completeness (40%)
- Documentation quality (30%)
- Timely submission (10%)