**TECHNICAL ASSIGNMENT FOR AZURE DEVOPS ENGINEER**

**Architecture design:**

Azure App Service

Azure Application   
Gateway

CLIENT (Browser)

Azure SQL Database

Azure API Management

**Deployment Plan (CI/CD Pipeline):**

**Terraform Infrastructure Deployment:**

* **Provision Azure resources** - SQL Server, App Service, API Management).
* **Secrets stored securely in Key Vault** - avoiding hardcoded credentials.
* **Terraform state maintained in Azure Storage** for persistence.

**Automated Code Deployment:**

* **CI/CD Pipeline (Azure DevOps)** ensures continuous integration.
* **App service deployment** runs on azurerm\_linux\_web\_app.
* **External API integration handled via APIM** automatically.

**Configuration Management:**

* **Monitoring enabled** to track app performance.
* **Autoscaling policies ensure smooth operation under load.**

**Release Strategy:**

**Blue-Green Deployment** for **zero downtime updates**:

* **Keep two environments (**web-blue **&** web-green**).**
* **Deploy updates to** web-green**, verify, then switch traffic.**
* **Rollback instantly if issues are detected.**

**Monitoring & Alerts:**

* **Azure Monitor tracks traffic & autoscaling events.**
* **Alerts configured for critical failures.**
* **Application Insights logs all API interactions for diagnostics**.