ChatGPT

Experiment 11: Deploy Spring Boot App using GitHub and Azure

Step 1: Download Project - URL: https://drive.google.com/file/d/1Te3FJFm3oA3D8sbG3QYqkRWMxfpFxd3U/ view?usp=sharing - Extract ZIP file

Step 2: Open in IntelliJ - File > Open > Select extracted folder - Run `DemoApplication.java`

Step 3: Verify on Browser - Open `http://localhost:8080/api/data` - Check the output

Step 4: Stop Application - Click red stop button in IntelliJ

Step 5: Create GitHub Repo and Push Code

Terminal commands:

```
cd "C:\Users\Dell\Desktop\git\demo"
git init
git remote add origin https://github.com/yourusername/your-repo-name.git
git add .
git commit -m "Initial Commit"
git branch -M main
git push -u origin main
```

Step 6: Login to Azure - URL: https://portal.azure.com/#home

Step 7: Create App Service - Click "App Services" > "Create" - Name: `sjbit-demo-app-service` - Runtime: Java 17 - OS: Linux - Default plan

Step 8: Enable Deployment from GitHub - Go to Deployment > GitHub - Select org, repo, branch = main - Enable authentication if needed - Click "Review and Create" > "Create"

Step 9: Test Deployment - Copy app's domain link - Open in browser, verify output

Step 10: Configure GitHub Actions

Create file: `.github/workflows/main_sjbit-cse-test.yml` Paste the following:

```
name: Build and deploy JAR app to Azure Web App - sjbit-demo-app-service

on:
```

```yaml
  push:
    branches:
      - main
  workflow_dispatch:

jobs:
  build:
    runs-on: ubuntu-latest
    permissions:
      contents: read

    steps:
      - name: Checkout Repository
        uses: actions/checkout@v4

      - name: Set up Java version
        uses: actions/setup-java@v4
        with:
          java-version: '17'
          distribution: 'microsoft'

      - name: Build with Maven
        run: mvn clean package
        working-directory: demo

      - name: Upload artifact for deployment job
        uses: actions/upload-artifact@v4
        with:
          name: java-app
          path: demo/target/sjbit-demo-app.jar

  deploy:
    runs-on: ubuntu-latest
    needs: build
    environment:
      name: 'Production'
      url: ${{ steps.deploy-to-webapp.outputs.webapp-url }}
    permissions:
      id-token: write
      contents: read

    steps:
      - name: Download artifact from build job
        uses: actions/download-artifact@v4
        with:
          name: java-app
          path: .
```

```
    - name: Login to Azure
      uses: azure/login@v2
      with:
        client-id: ${{ secrets.AZUREAPPSERVICE_CLIENTID }}
        tenant-id: ${{ secrets.AZUREAPPSERVICE_TENANTID }}
        subscription-id: ${{ secrets.AZUREAPPSERVICE_SUBSCRIPTIONID }}

  - name: Deploy to Azure Web App
    id: deploy-to-webapp
    uses: azure/webapps-deploy@v3
    with:
      app-name: 'sjbit-demo-app-service'
      slot-name: 'Production'
      package: 'sjbit-demo-app.jar'
```

End of Experiment 11