Azure Deployment Steps for Checking Alphabet Project

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## Create an Azure App Service using Azure Portal

1. Login to Azure Portal:  
- Go to Azure Portal and log in with your Azure account.  
2. Create a Resource Group:  
- Navigate to Resource groups.  
- Click Create.  
- Enter the Resource group name (e.g., `CheckingAlphabetResourceGroup`) and select a Region.  
- Click Review + create and then Create.  
3. Create an App Service Plan:  
- Navigate to App Services.  
- Click Create.  
- Select Create new under App Service plan.  
- Enter the App Service plan name (e.g., `CheckingAlphabetPlan`) and select the Pricing tier (e.g., B1).  
4. Create a Web App:  
- In the App Services creation form, enter the Web App name (e.g., `CheckingAlphabetApp`).  
- Select the Runtime stack as `.NET 8`.  
- Select the Region.  
- Click Review + create and then Create.

## Deploy the API using Visual Studio

1. Open the solution in Visual Studio.  
2. Right-click on the `CheckingAlphabet` project in Solution Explorer and select Publish.  
3. In the Publish dialog, select Azure and click Next.  
4. Select Azure App Service (Windows) and click Next.  
5. Select your existing App Service or create a new one:  
- If creating a new one, follow the prompts to set up the App Service.  
6. Click Finish to complete the setup.  
7. Click Publish to deploy the application to Azure.  
  
The API will be available at `https://<your-app-name>.azurewebsites.net`.

## Using Azure CLI

1. Login to Azure:  
```bash  
az login  
```  
2. Create a Resource Group:  
```bash  
az group create --name CheckingAlphabetResourceGroup --location <location>  
```  
3. Create an App Service Plan:  
```bash  
az appservice plan create --name CheckingAlphabetPlan --resource-group CheckingAlphabetResourceGroup --sku FREE  
```  
4. Create a Web App:  
```bash  
az webapp create --name CheckingAlphabetApp --resource-group CheckingAlphabetResourceGroup --plan CheckingAlphabetPlan  
```  
5. Deploy the App:  
```bash  
az webapp deploy --resource-group CheckingAlphabetResourceGroup --name CheckingAlphabetApp --src-path .  
```

## CI/CD with Azure DevOps

### Create a Build Pipeline

1. Login to Azure DevOps:  
- Go to [Azure DevOps](https://dev.azure.com) and log in with your account.  
2. Create a New Project:  
- Click on New Project.  
- Enter the project name (e.g., `CheckingAlphabetProject`) and click Create.  
3. Create a New Pipeline:  
- Navigate to Pipelines > Pipelines > New Pipeline.  
- Select Azure Repos Git if your code is in Azure Repos, or select the appropriate repository location.  
- Choose your repository.  
4. Configure the Pipeline:  
- Select Starter pipeline or Existing Azure Pipelines YAML file if you have an existing YAML file.  
5. Add Tasks to the Pipeline:  
- Use .NET Core SDK  
- Restore  
- Build  
- Publish  
- Publish Build Artifacts  
6. Save and Run the Pipeline:  
- Click Save and run.  
- Commit the changes and run the pipeline.

### Create a Release Pipeline

1. Create a New Release Pipeline:  
- Navigate to Pipelines > Releases > New pipeline.  
- Select Empty job.  
2. Add an Artifact:  
- Click Add an artifact.  
- Select the build pipeline created earlier and click Add.  
3. Add a Stage:  
- Click on Stage 1 and rename it to Deploy to Azure.  
- Click on Tasks.  
4. Add the Following Tasks:  
- Azure App Service Deploy  
5. Save and Create a Release:  
- Click Save.  
- Click Create release and select the artifact version.  
- Click Create to deploy the application.