AZURE ASSIGNMENT

NAME:ADLIN TEENU

Exercise 1: Create and Configure a Virtual Machine Objective: Create and configure Ubuntu and Windows Virtual Machines on Azure Portal.

1. Create an Ubuntu VM: o Log in to the Azure Portal. o Navigate to Virtual Machines > Create. o Choose Ubuntu Server 20.04 LTS. o Configure: ▪ Size: Standard_B1s (or similar) ▪ Authentication Type: SSH (generate a key pair if not available). ▪ Inbound Port: Allow SSH (port 22). o Deploy and connect using SSH.

2. Create a Windows VM: o Follow similar steps, selecting Windows Server 2022. o Configure: ▪ Size: Standard_B1s (or similar) ▪ Authentication Type: Username and Password. ▪ Inbound Port: Allow RDP (port 3389). o Deploy and connect using RDP.

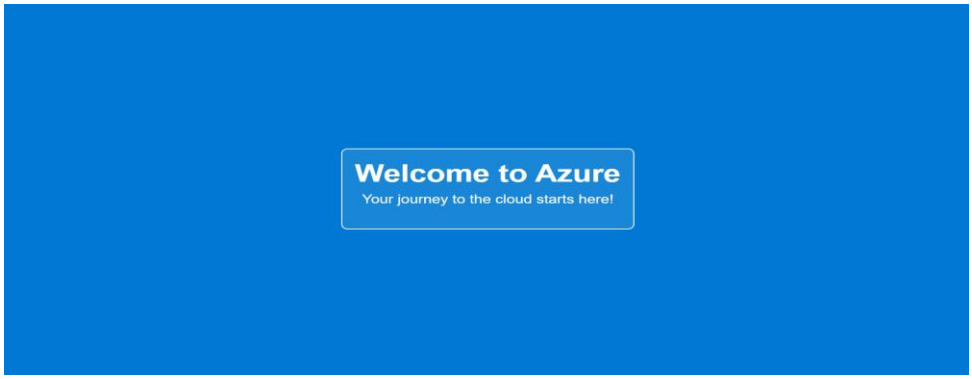
3. Task: o Install Apache or IIS on the respective VMs. o Verify by accessing the default web page from your local browser.

Exercise 2: Deploy a Static Web Application Objective: Host a static website using Azure App Service.
1. Navigate to App Services > Create.

2. Choose: o Runtime Stack: Python 3.10 (or latest). o Operating System: Linux. o Region: Closest to your location.

3. Deploy the application.

4. Upload a simple static website (e.g., index.html and CSS files) using FTP or the Kudu console. 5. Task: o Verify the deployment by accessing the site via its public URL. o Modify the HTML to include a message like: "Welcome to Azure Static Web Apps!"



Exercise 3: Deploy a Flask Application (Dynamic Web App) Objective: Deploy a Python Flask application using Azure App Service.

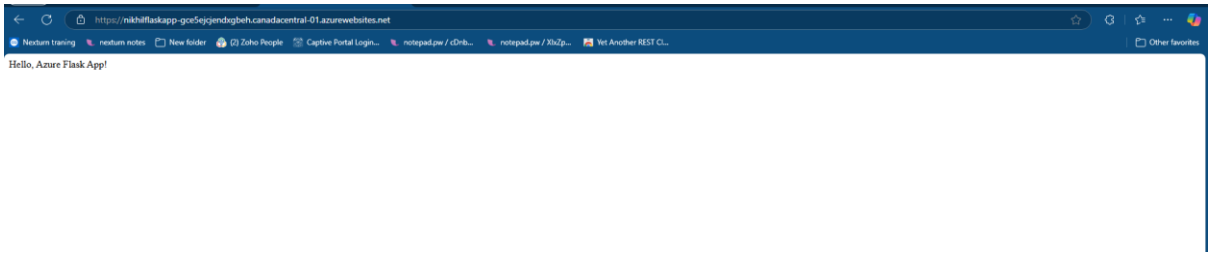
1. Create a Flask app: from flask import Flask app = Flask(__name__) @app.route('/') def home(): return "Hello, Azure Flask App!" if __name__ == '__main__': app.run(debug=True)

2. Push the code to a GitHub repository.

3. In the Azure Portal, navigate to App Services > Create.

4. Configure: o Runtime Stack: Python 3.10 (or latest). o Deployment Source: Connect your GitHub repository.

5. Deploy the Flask app and verify it by accessing the public URL.



Exercise 4: Set Up and Use an Azure SQL Database Objective: Create an Azure SQL Database and connect to it from your local machine.

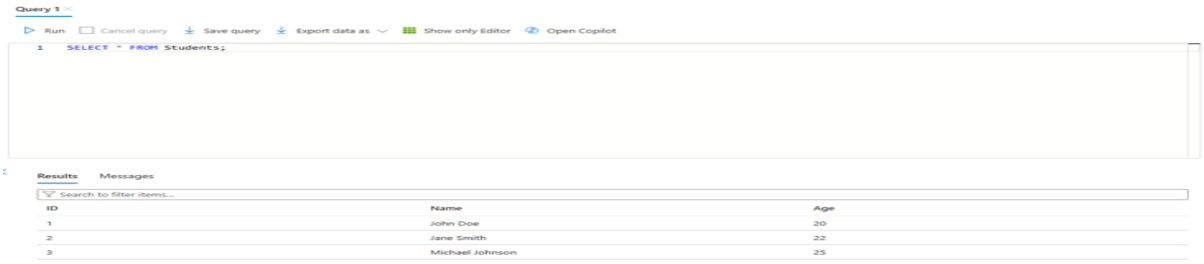
1. Navigate to SQL Databases > Create.

2. Configure: o Database Name: StudentDB. o Server: Create a new server with username and password. o Compute + Storage: Use the free tier.

3. Deploy the database.

4. Connect using Azure Data Studio or SQL Server Management Studio (SSMS).

5. Task: o Create a table Students with columns ID, Name, and Age. o Insert sample data and query it.



Exercise 5: Integrate Flask App with Azure SQL Database Objective: Connect a Flask app to Azure SQL Database and perform CRUD operations.

1. Use the Flask app from Exercise 3.

2. Install required libraries: pip install flask pyodbc

3. Modify the app to connect to the SQL Database: import pyodbc conn = pyodbc.connect('DRIVER={ODBC Driver 17 for SQL Server};' 'SERVER=.database.windows.net;' 'DATABASE=StudentDB;' 'UID=;' 'PWD=') cursor = conn.cursor()

4. Add a route to fetch and display data from the Students table.

5. Deploy the updated app to Azure App Service. 6. Task: o Verify CRUD functionality by interacting with the app via its public URL