



**Dr. N.G.P INSTITUTE OF TECHNOLOGY, COIMBATORE - 641048**  
**AN AUTONOMOUS INSTITUTION**



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**Class** : III Year CSE A

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**Git URL** : <https://github.com/AngelinNivyaG/first1.git>

**Course Name** : Microsoft azure Fundamentals

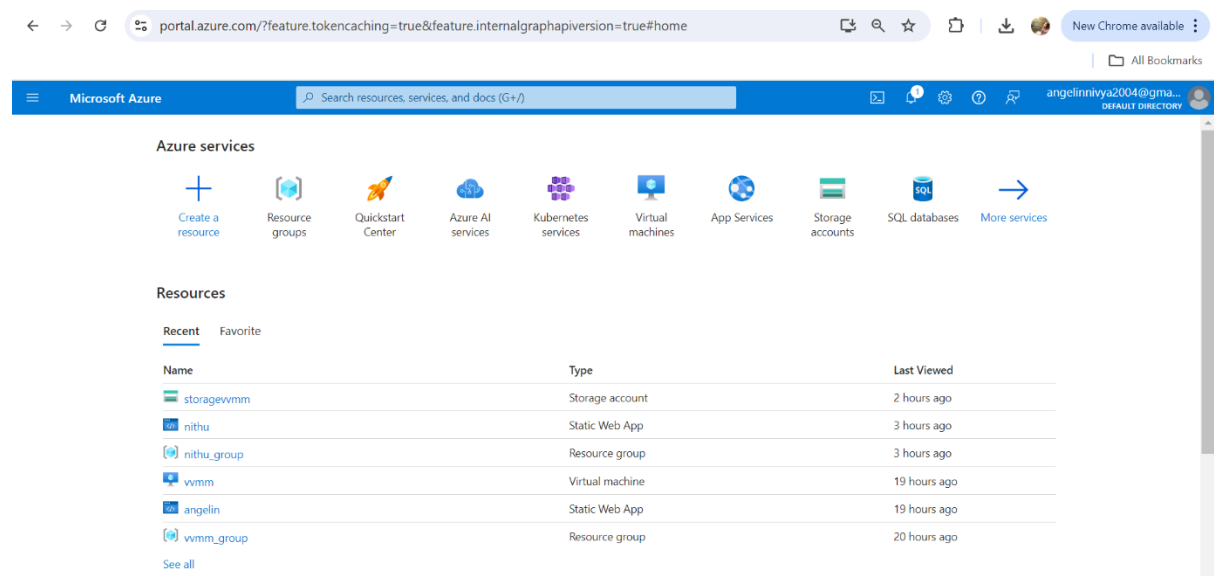
**Company** : Pinesphere Solution, Coimbatore

## TABLE OF CONTENT

S.NO	TOPICS	PAGE NO
1.	Virtual machine	4
2.	Hosting a Website	6
3.	Creating storage using blob	9
4.	Deploying directly with github using Static web page	12
5.	Storage Account lock creation	15

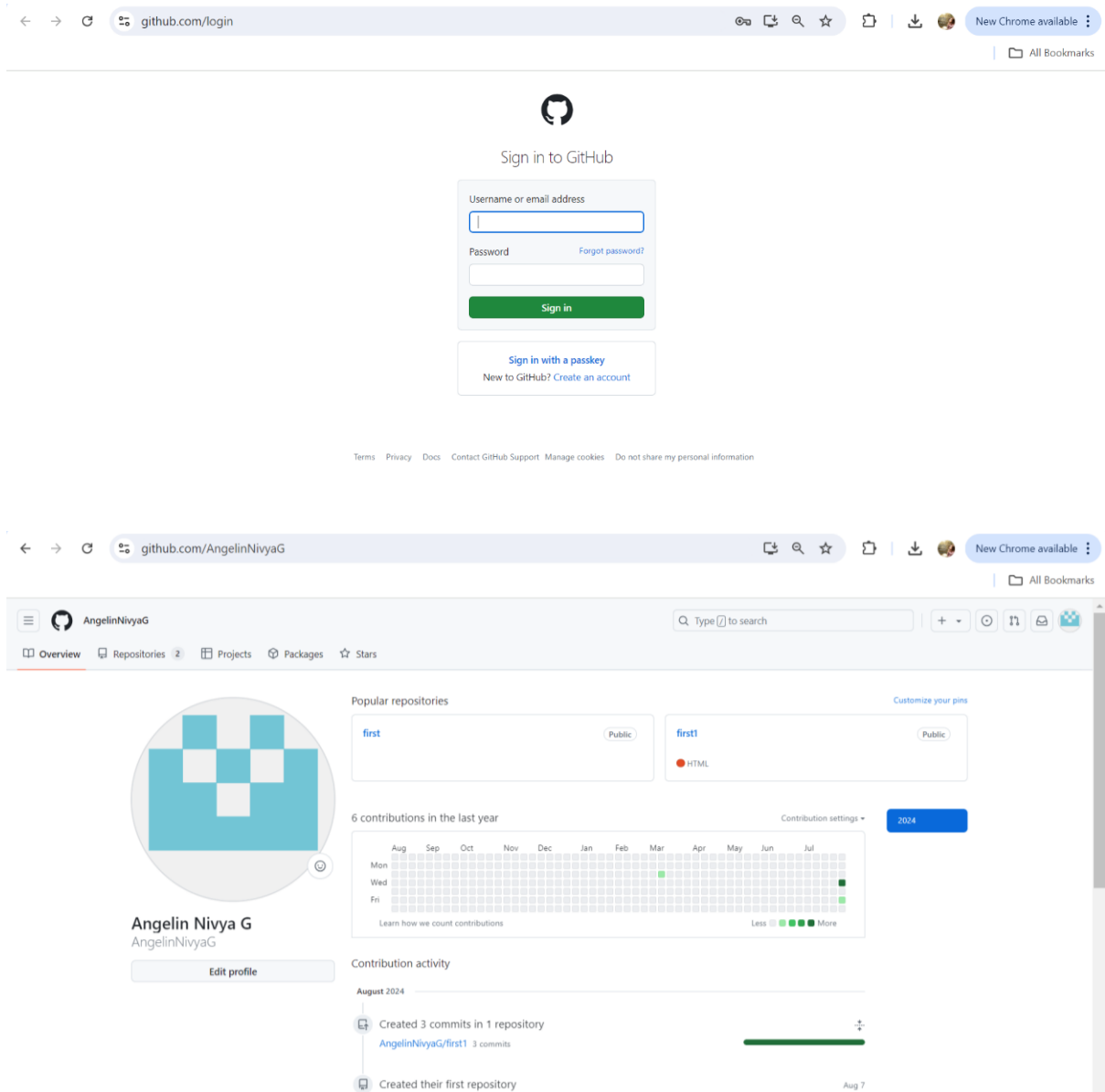
## MICROSOFT ACCOUNT:

A Microsoft account is your gateway to accessing a variety of Microsoft services, including Outlook, OneDrive, Office Online, more. By creating a Microsoft account, you gain a single sign-in that connects you to these services seamlessly, whether you're managing emails, storing files in the cloud, or collaborating on documents. Your account also allows you to personalize your Windows experience, sync settings across devices, and access your favorite apps and games through the Microsoft Store. Security is a priority, with features like multi-factor authentication and account recovery options to keep your information safe. With a Microsoft account, you can easily manage your digital life across all your devices, ensuring that everything you need is just a click away



## GitHub ACCOUNT:

A GitHub account lets you host and manage code repositories, collaborate with developers, and contribute to open-source projects. It offers version control, project management tools, and the ability to showcase your work to the global developer community. GitHub also allows you to explore and contribute to millions of projects, enhancing your skills and visibility. With features like private repositories and GitHub Pages, it's an essential tool for any developer. This is my Repository named Profile and my GIT-URL is <https://github.com/AngelinNivyaG>



## **CREATING A VIRTUAL MACHINE (VM) IN MICROSOFT AZURE:**

Creating A Virtual Machine (Vm) In Microsoft Azure Involves The Following Steps:

1. Sign in to the Azure portal.
2. Navigate to "Create a resource" and select "Virtual Machine."
3. Choose a subscription, resource group, and region.
4. Configure VM settings, including size, OS, and storage.
5. Set up networking, security, and management options.

## 6. Review and create the VM, then monitor its deployment.

The VM will be ready to use after deployment.

The screenshot shows the Microsoft Azure Education Overview page. The page is titled "Education | Overview" and includes a sidebar with "Overview", "Learning resources", and "Need help?". The main content area is divided into several sections:

- Student offer details:** Shows available credits of \$96 out of \$100, with 363 days until credit expires (08/07/2025).
- Popular solutions:** Includes links for "Deploy a Docker container", "Create your first Node.js app", "Create and train a Machine Learning model", and "Build and deploy your first website".
- Free Services:** Lists "Azure Virtual Machines - Windows", "Azure Blob Storage", "Computer Vision", and "Azure App Service".
- Free software:** Mentions "SQL Server 2019 Developer".
- Free learning paths:** Includes "Data Scientist" and "Nineteen learning paths with 75+ hours of content".
- Resources:** Provides a "Get started guide for Azure developers".

The screenshot shows the Microsoft Azure VM Overview page for a virtual machine named "vmm". The page includes a sidebar with "Overview", "Activity log", "Access control (IAM)", "Tags", "Diagnose and solve problems", "Connect", "Networking", "Settings", "Availability + scale", "Security", "Backup + disaster recovery", "Operations", "Monitoring", "Automation", and "Help". The main content area is divided into several sections:

- Essentials:** Shows resource group (vmm\_group), status (Running), location (Central India (Zone 1)), subscription (Azure for Students), subscription ID (2b0fd0e1-4cc3-487d-bc12-6f92e4f0edb0), and availability zone (1).
- Properties:** Shows computer name (vmm), operating system (Linux (ubuntu 24.04)), VM generation (V2), and VM architecture (x64).
- Networking:** Shows public IP address (4.240.73.221), private IP address (10.0.0.4), and network interface (vmm489\_x1).

# HOST A WEBSITE :

## COMMANDS

```
portal.azure.com/?feature.token caching=true&feature.internalgraphapiversion=true#@angelinnivya2004gmail.on...
Microsoft Azure
Search resources, services, and docs (G+)
angelinnivya2004@gmail...
Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help
Requesting a Cloud Shell. Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

Your Cloud Shell session will be ephemeral so no files or system changes will persist beyond your current session.
angelin [ ~ ]$ ssh angelin@4.240.73.221
The authenticity of host '4.240.73.221 (4.240.73.221)' can't be established.
ED25519 key fingerprint is SHA256:nvcgZx1kswrR3HcMpv2BCZvW06Qqhd+v05ky61Bh8M.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? YES
Warning: Permanently added '4.240.73.221' (ED25519) to the list of known hosts.
angelin@4.240.73.221's password:
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1010-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Aug 9 10:45:54 UTC 2024

System load:  0.0      Processes:      133
Usage of /:   5.8% of 28.0GB  Users logged in: 0
Memory usage: 4%      IPV4 address for eth0: 10.0.0.4
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.
```

```
portal.azure.com/?feature.token caching=true&feature.internalgraphapiversion=true#@angelinnivya2004gmail.on...
Microsoft Azure
Search resources, services, and docs (G+)
angelinnivya2004@gmail...
Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help
Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Fri Aug 9 05:31:28 2024 from 4.186.14.14
angelin@vmm:~$ sudo apt update
Hit:1 http://azure.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://azure.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:3 http://azure.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://azure.archive.ubuntu.com/ubuntu noble-security InRelease
Get:5 http://azure.archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [5716 B]
Get:6 http://azure.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [12.7 kB]
Fetched 145 kB in 0s (323 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
9 packages can be upgraded. Run 'apt list --upgradable' to see them.
angelin@vmm:~$ sudo apt install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.43.0-1ubuntu7.1).
0 upgraded, 0 newly installed, 0 to remove and 9 not upgraded.
angelin@vmm:~$ sudo apt install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nginx is already the newest version (1.24.0-2ubuntu7).
```

```
portal.azure.com/?feature.token caching=true&feature.internalgraphapiversion=true#@angelinnivya2004gmail.on...
Microsoft Azure
Search resources, services, and docs (G+/)
angelinnivya2004@gmail...
Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nginx is already the newest version (1.24.0-2ubuntu7).
0 upgraded, 0 newly installed, 0 to remove and 9 not upgraded.
angelinnivya@vmm:~$ sudo systemctl start nginx
angelinnivya@vmm:~$ sudo systemctl enable nginx
Synchronizing state of nginx.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nginx
angelinnivya@vmm:~$ cd /var/www/html
angelinnivya@vmm:/var/www/html$ sudo rm -rf *
angelinnivya@vmm:/var/www/html$ sudo git clone https://github.com/AngelinNivyaG/first1.git /var/www/html/first1
Cloning into '/var/www/html/first1'...
remote: Enumerating objects: 39, done.
remote: Counting objects: 100% (39/39), done.
remote: Compressing objects: 100% (36/36), done.
remote: Total 39 (delta 1), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (39/39), 1.49 MiB | 1.36 MiB/s, done.
Resolving deltas: 100% (1/1), done.
angelinnivya@vmm:/var/www/html$ cd /var/www/html/first1
angelinnivya@vmm:/var/www/html/first1$ ls
README.md templatemo_530_mini_profile
angelinnivya@vmm:/var/www/html/first1$ sudo nano index.html
angelinnivya@vmm:/var/www/html/first1$ sudo mv /var/www/html/first1/templatemo_530_mini_profile/* /var/www/html/
angelinnivya@vmm:/var/www/html/first1$ sudo systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
   Active: active (running) since Fri 2024-08-09 04:49:10 UTC; 6h ago
     Docs: man:nginx(8)
  Main PID: 866 (nginx)
    Tasks: 3 (limit: 9458)
   Memory: 4.1M (peak: 4.6M)
```

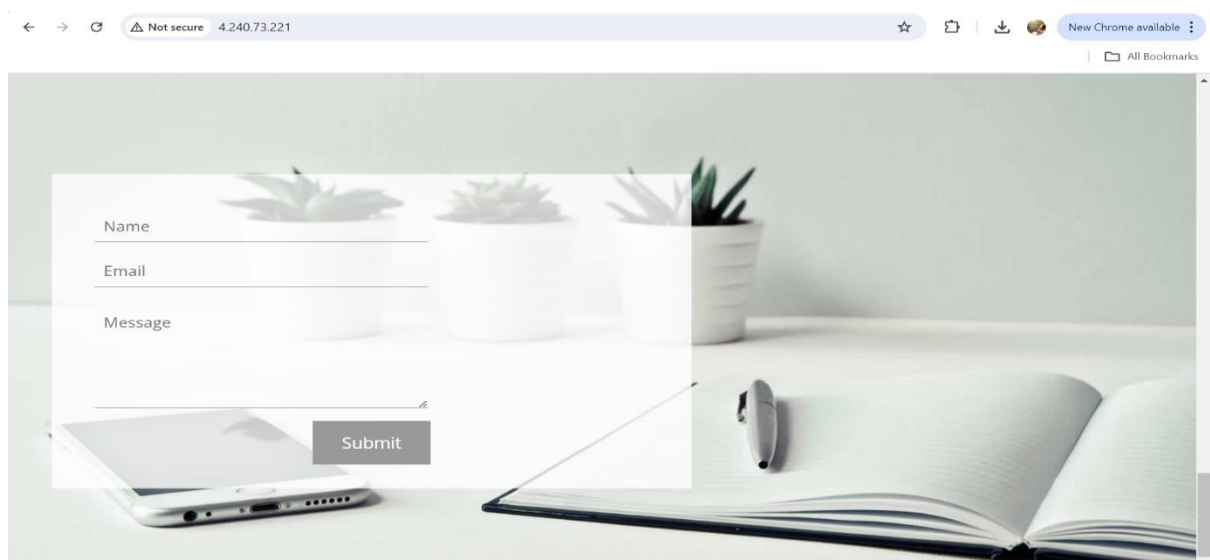
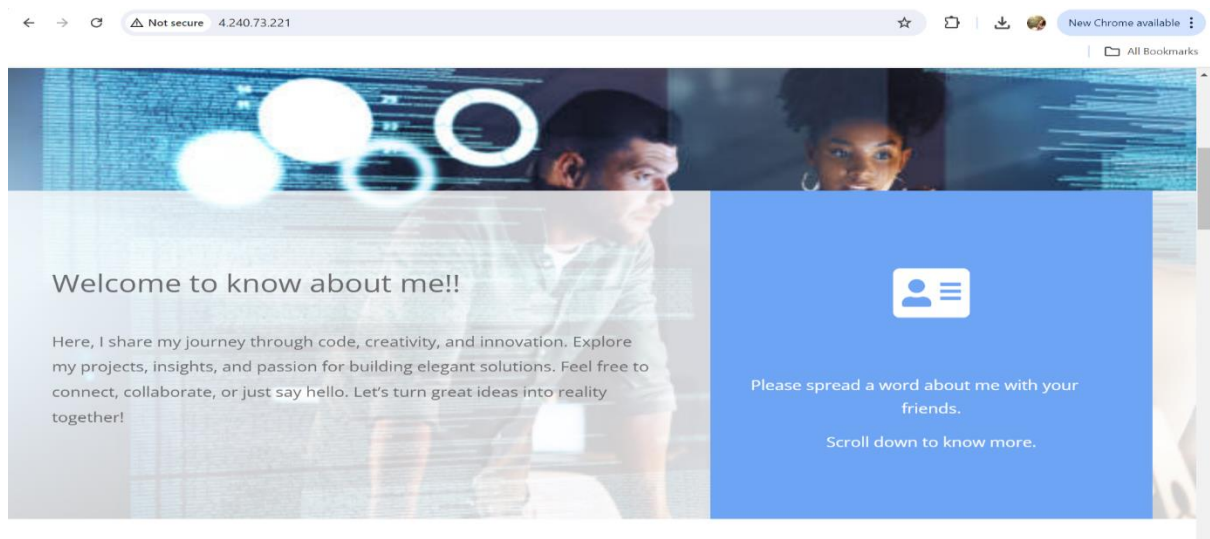
```
portal.azure.com/?feature.token caching=true&feature.internalgraphapiversion=true#@angelinnivya2004gmail.on...
Microsoft Azure
Search resources, services, and docs (G+/)
angelinnivya2004@gmail...
Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help
angelinnivya@vmm:/var/www/html/first1$ sudo mv /var/www/html/first1/templatemo_530_mini_profile/* /var/www/html/
angelinnivya@vmm:/var/www/html/first1$ sudo systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
   Active: active (running) since Fri 2024-08-09 04:49:10 UTC; 6h ago
     Docs: man:nginx(8)
  Main PID: 866 (nginx)
    Tasks: 3 (limit: 9458)
   Memory: 4.1M (peak: 4.6M)
      CPU: 87ms
   CGroup: /system.slice/nginx.service
           └─866 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             └─867 "nginx: worker process"
               └─868 "nginx: worker process"

lines 1-12...skipping...
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
   Active: active (running) since Fri 2024-08-09 04:49:10 UTC; 6h ago
     Docs: man:nginx(8)
  Main PID: 866 (nginx)
    Tasks: 3 (limit: 9458)
   Memory: 4.1M (peak: 4.6M)
      CPU: 87ms
   CGroup: /system.slice/nginx.service
           └─866 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             └─867 "nginx: worker process"
               └─868 "nginx: worker process"

Aug 09 04:49:10 vmm systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server...
Aug 09 04:49:10 vmm systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.
```



## OUTPUT:





## CREATION OF STORAGE ACCOUNT IN MICROSOFT:

To Create A Storage Account In Microsoft Azure, Follow These Steps:

1. Sign in to Azure Portal.
2. Create a Resource
3. Configure the Basics
4. Set Advanced Options
5. Review and Create
6. Access the Storage Account
7. After deployment, access the storage account to manage containers, blobs, files, tables, or queues.

The screenshot displays the Azure portal interface for a storage account named 'storageevmm'. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The left sidebar shows the 'Overview' tab selected, with a list of navigation options including Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover, Data storage, Security + networking, Data management, Settings, Monitoring, Monitoring (classic), and Automation.

The main content area shows the 'Essentials' section for the storage account. It includes a table of properties:

Property	Value
Resource group (move)	vmm_group
Location	centralindia
Subscription (move)	Azure for Students
Subscription ID	2b0fd0e1-4cc3-487d-bc12-6f92e4f0edb0
Disk state	Available
Performance	Standard
Replication	Locally-redundant storage (LRS)
Account kind	StorageV2 (general purpose v2)
Provisioning state	Succeeded
Created	8/9/2024, 1:45:00 PM

Below the Essentials section, there are tabs for Properties, Monitoring, Capabilities (7), Recommendations (0), Tutorials, and Tools + SDKs. The 'Properties' tab is active, showing the 'Blob service' and 'Security' sections.

**Blob service**

Property	Value
Hierarchical namespace	Disabled
Default access tier	Hot
Blob anonymous access	Enabled
Blob soft delete	Enabled (7 days)
Container soft delete	Enabled (7 days)
Versioning	Disabled
Change feed	Disabled

**Security**

Property	Value
Require secure transfer for REST API operations	Enabled
Storage account key access	Enabled
Minimum TLS version	Version 1.2
Infrastructure encryption	Disabled

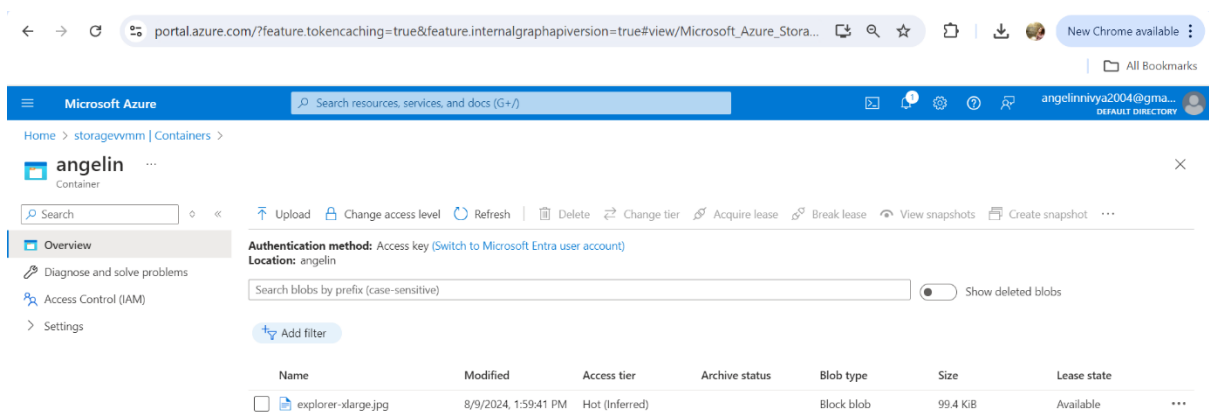
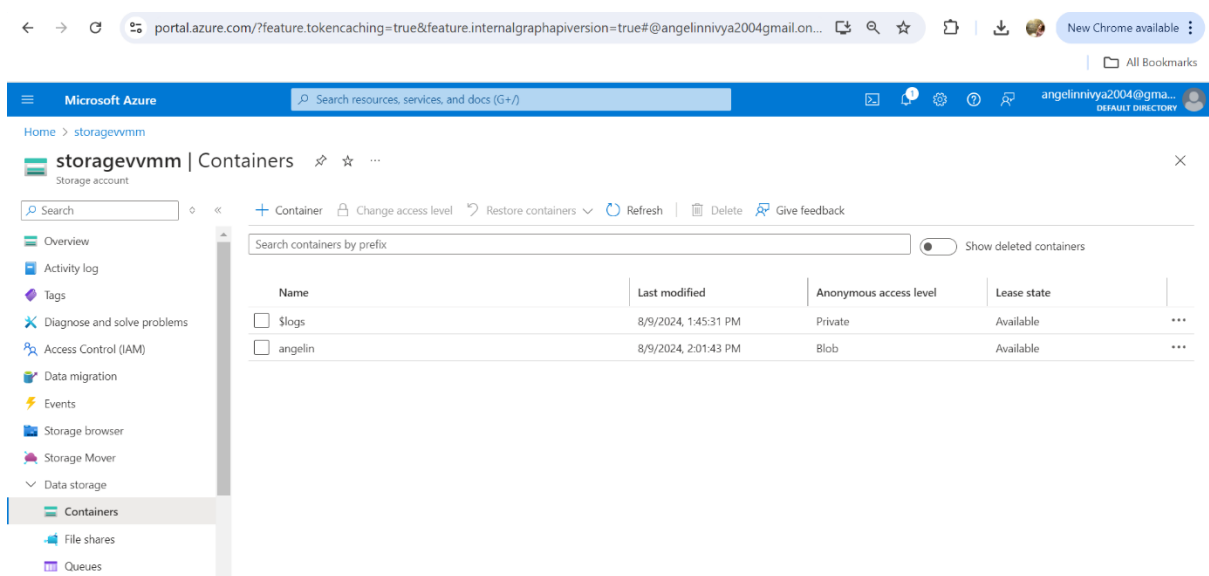
**Networking**

Property	Value
Allow access from	All networks

## MANAGING OF STORAGE ACCOUNT:

To Upload An Image Into A Container In An Azure Storage Account, Follow These Steps:

1. Access the Storage Account: Sign in to the Azure portal and navigate to your Storage Account.
2. Create a Container: In the Storage Account, select "Containers" and click "Add Container." Name the container and set the access level (private, blob, or container).
3. Open the Container: Once created, click on the container to open it.
4. Upload the Image: Click the "Upload" button within the container. In the upload window, browse your local machine to select the image file.
5. Configure Upload Settings: Optional - You can set advanced upload options like overwriting existing files, setting metadata, or assigning blob tier.
6. Start the Upload: Click "Upload" to start the process. Once the upload is complete, your image will be stored in the container and accessible based on the access level you set.



## AFTER UPLOADED THE IMAGE :

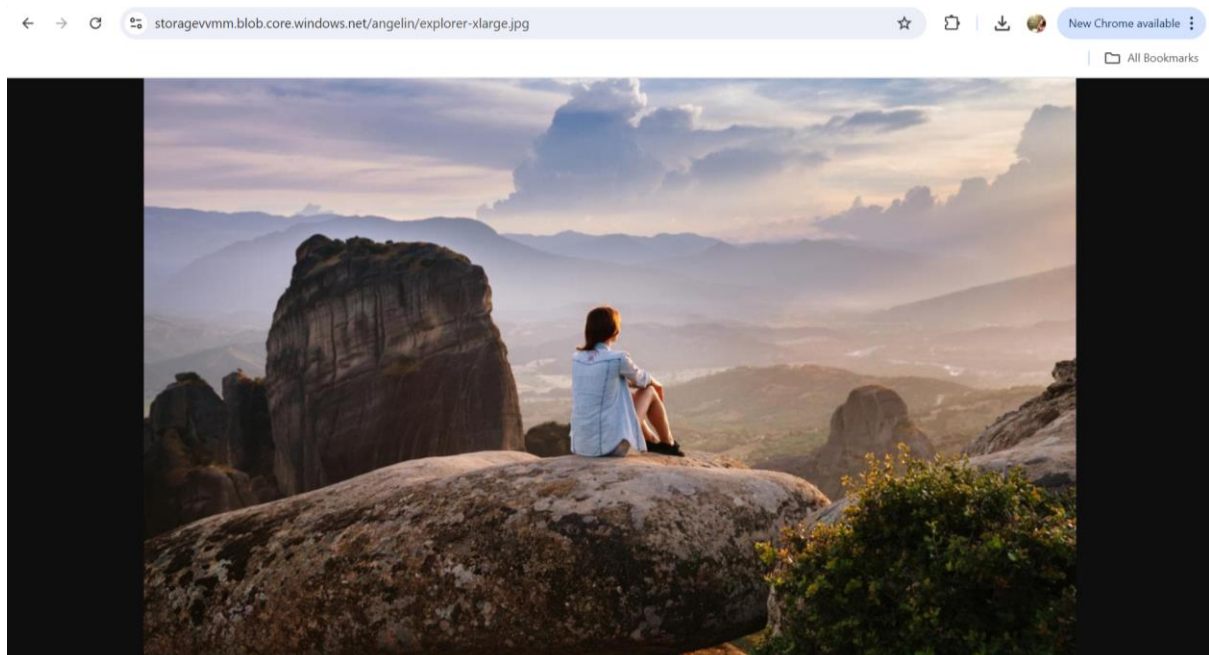
The screenshot shows the Microsoft Azure portal interface. The breadcrumb navigation indicates the path: Home > storagevmm | Containers > angelin > explorer-xlarge.jpg. The left sidebar shows the 'angelin' container with options for Overview, Diagnose and solve problems, Access Control (IAM), and Settings. The main area displays the 'explorer-xlarge.jpg' blob with its properties. The 'Properties' tab is active, showing details such as URL, Last Modified, Creation Time, Version ID, Type, Size, Access Tier, and Content-Type.

Properties	
URL	<a href="https://storagevmm.blob.core.windows.net/angelin/explorer-xlarge.jpg">https://storagevmm.blob...</a>
LAST MODIFIED	8/9/2024, 1:59:41 PM
CREATION TIME	8/9/2024, 1:59:41 PM
VERSION ID	-
TYPE	Block blob
SIZE	99.4 KiB
ACCESS TIER	Hot (Inferred)
ACCESS TIER LAST MODIFIED	N/A
ARCHIVE STATUS	-
REHYDRATE PRIORITY	-
SERVER ENCRYPTED	true
ETAG	0x8DCB84D6A718DB6
VERSION-LEVEL IMMUTABILITY POLICY	Disabled
CACHE-CONTROL	
CONTENT-TYPE	image/jpeg
CONTENT-MD5	okIMtki/anB1OG9aZuAlcg==
CONTENT-ENCODING	

## URL PATH OF IMAGE :

<https://storagevmm.blob.core.windows.net/angelin/explorer-xlarge.jpg>

## OUTPUT:



## STATIC WEB PAGE:

### Deploying a Static Web Page on Azure

#### Using Azure Static Web App:

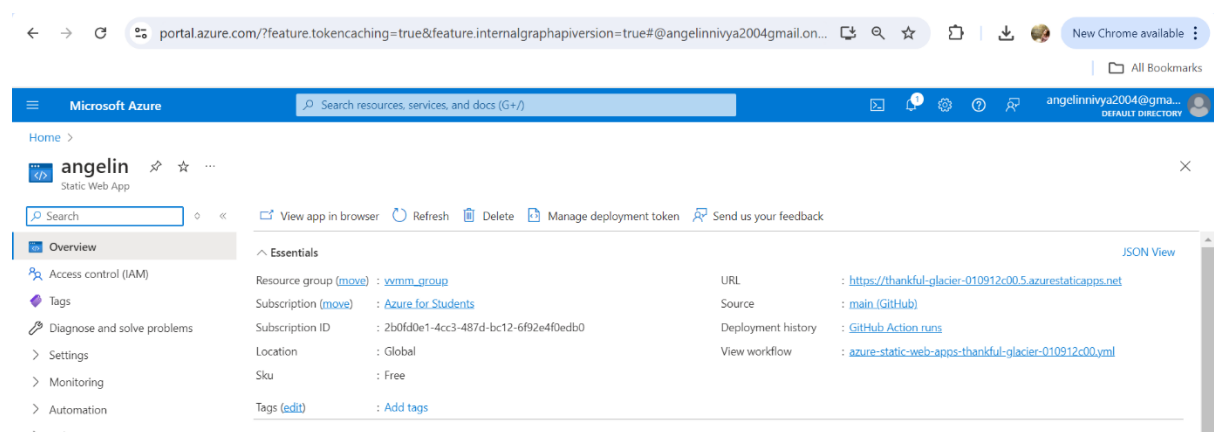
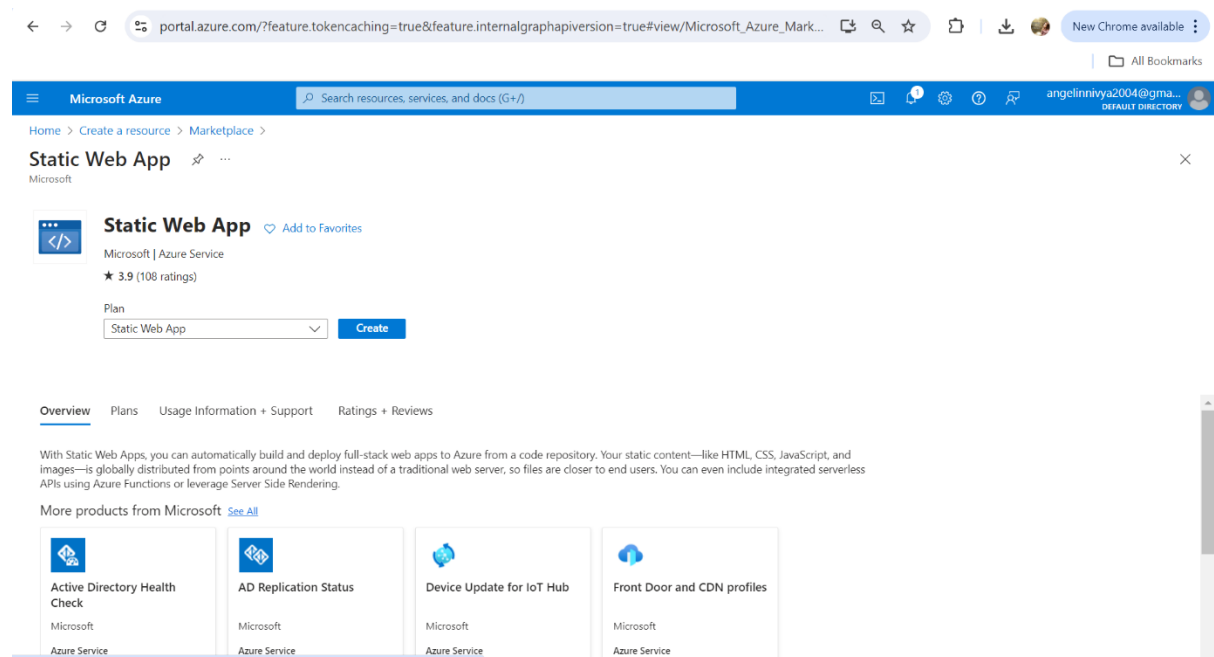
Prepare Your Site: Develop your static site and push it to a GitHub repository.

#### Set Up Azure Static Web Apps:

1. Sign in to [Azure Portal](#).
2. Click Create a resource > Static Web Apps.
3. Connect to your GitHub repo and branch.

#### Deploy and Access:

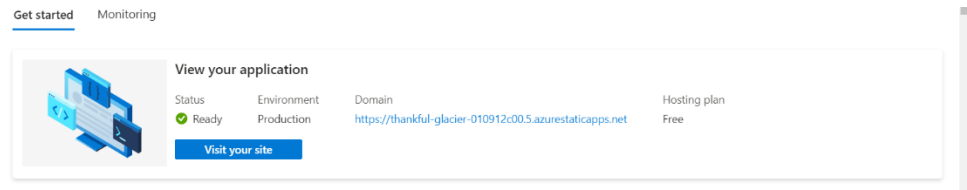
1. Azure deploys your site automatically.
2. Access it via the provided URL



Access Your GitHub Pages Site :

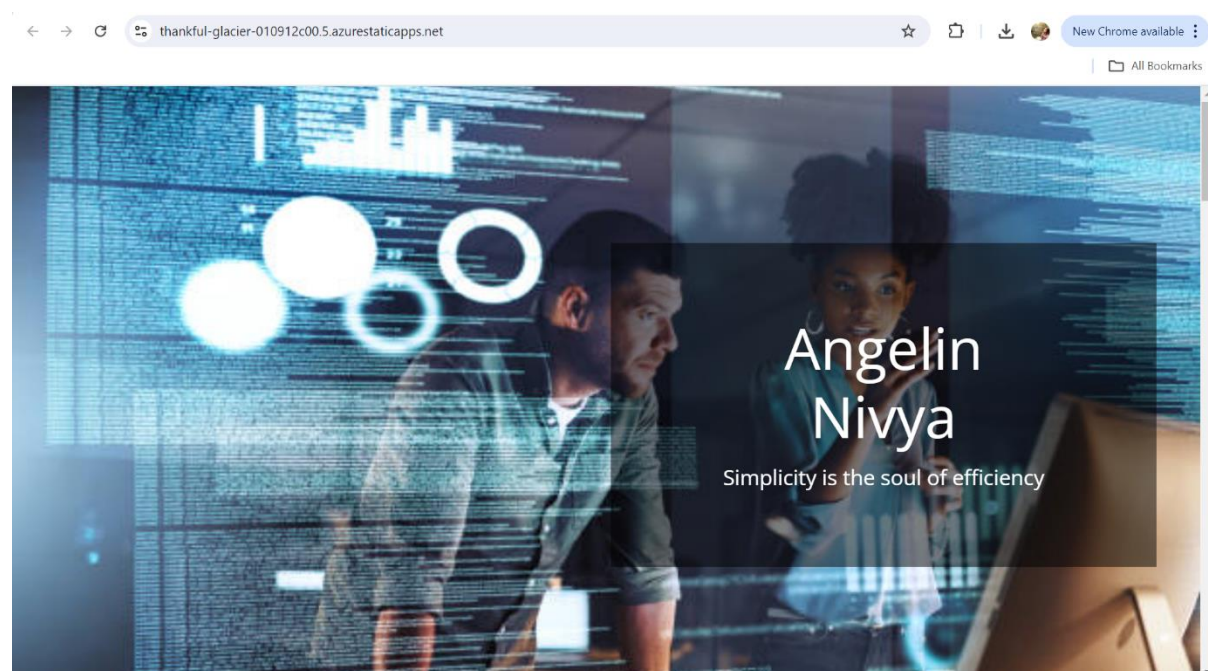
### Visit Your Site:

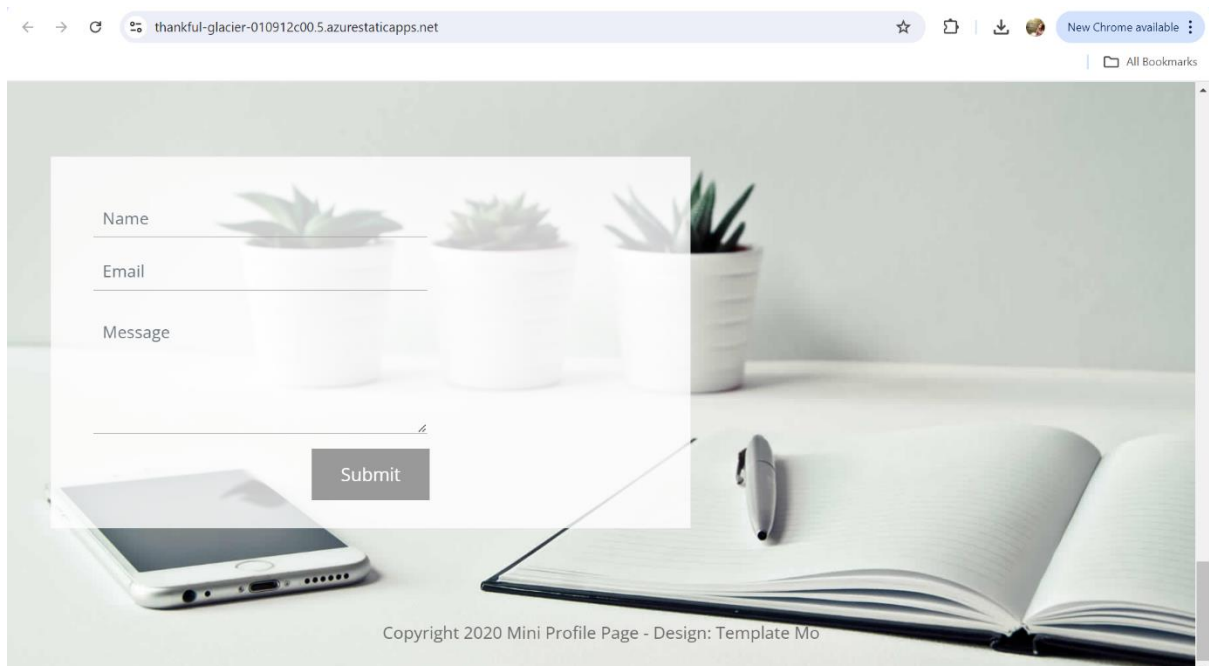
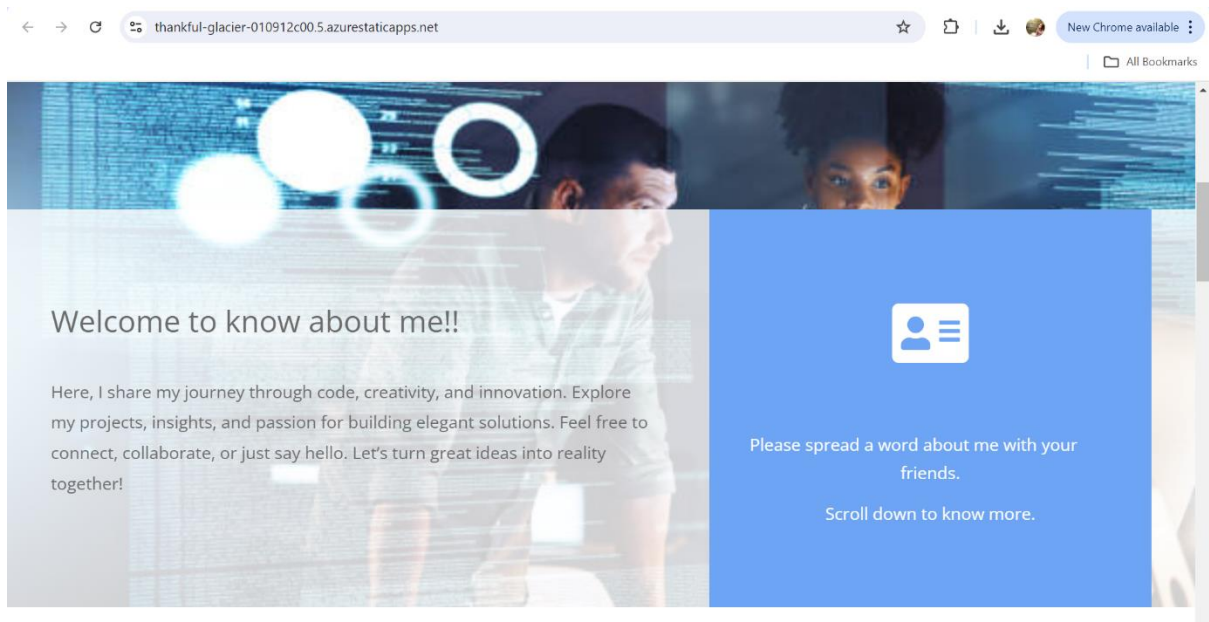
Open a web browser and navigate to <https://github.com/AngelinNivyaG/first1.git> You should see your static web page displayed.



URL: <https://thankful-glacier-010912c00.5.azurestaticapps.net/>

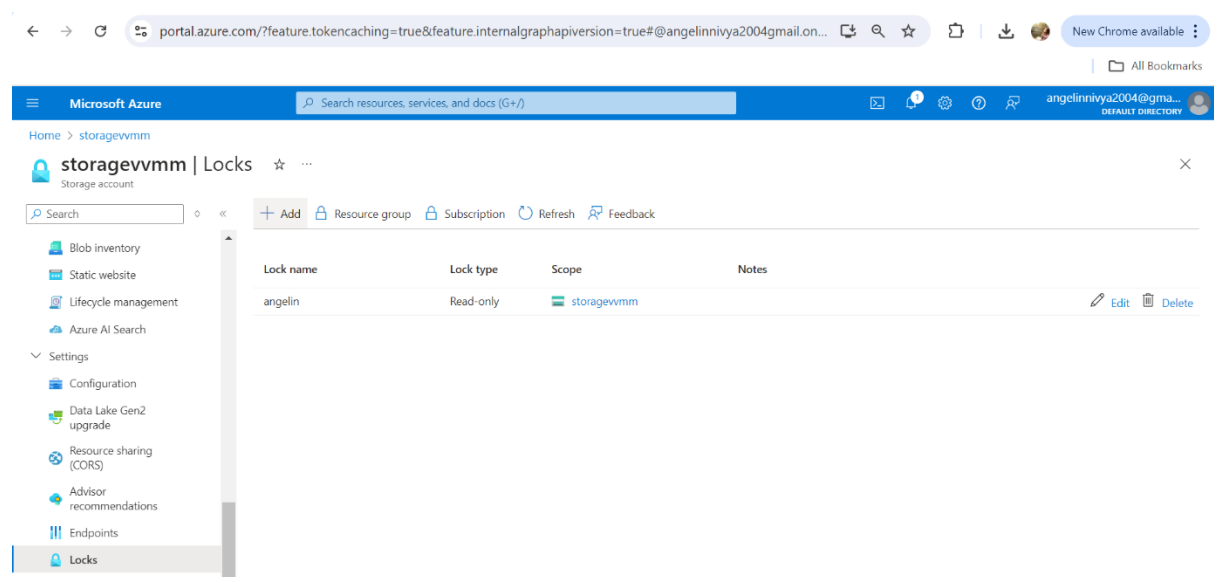
### OUTPUT:





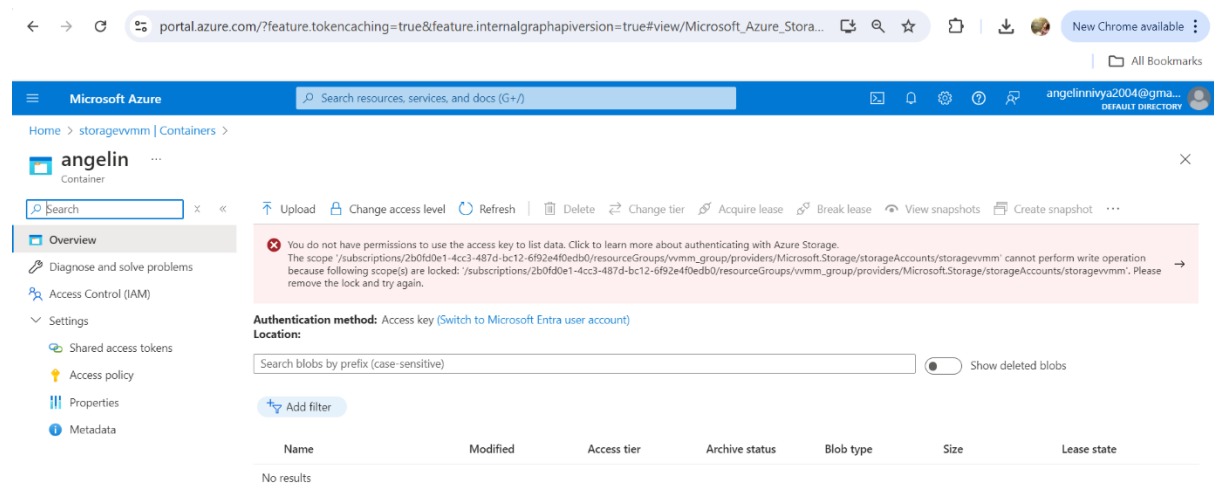
## STORAGE ACCOUNT LOCK :

A storage account lock for containers has been created to enhance data security and prevent accidental deletion or modifications. This lock ensures that all containers within the storage account are protected, providing an additional layer of control. With this feature, only authorized users can make changes, reducing the risk of data loss. It's a crucial step in maintaining the integrity and reliability of the storage account in Microsoft Azure.



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The left sidebar shows the navigation menu with options like Blob inventory, Static website, Lifecycle management, Azure AI Search, Settings, Configuration, Data Lake Gen2 upgrade, Resource sharing (CORS), Advisor recommendations, Endpoints, and Locks. The main content area is titled 'storagevmm | Locks' and shows a table with the following data:

Lock name	Lock type	Scope	Notes
angelin	Read-only	storagevmm	



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The left sidebar shows the navigation menu with options like Overview, Diagnose and solve problems, Access Control (IAM), Settings, Shared access tokens, Access policy, Properties, and Metadata. The main content area is titled 'angelin | Containers' and shows a message indicating that the user does not have permissions to use the access key to list data. The page also shows the 'Authentication method' as 'Access key' and the 'Location' as 'Search blobs by prefix (case-sensitive)'.

You do not have permissions to use the access key to list data. Click to learn more about authenticating with Azure Storage. The scope '/subscriptions/2b0fd0e1-4cc3-487d-bc12-6f92e4f0edb0/resourceGroups/vmm\_group/providers/Microsoft.Storage/storageAccounts/storagevmm' cannot perform write operation because following scope(s) are locked: '/subscriptions/2b0fd0e1-4cc3-487d-bc12-6f92e4f0edb0/resourceGroups/vmm\_group/providers/Microsoft.Storage/storageAccounts/storagevmm'. Please remove the lock and try again.

Authentication method: Access key (Switch to Microsoft Entra user account)  
Location: Search blobs by prefix (case-sensitive)

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
No results						