



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



Reg No : 710722104013
Name : Bharath Kumar R
Class : III Year CSE A
Start Date : 06.08.2024
End Date : 10.08.2024
Git Repository : <https://github.com/itisbk05/Profile.git>
Course Name : Microsoft azure Fundamentals
Company : Pinesphere Solution, Coimbatore

TABLE OF CONTENT

S NO	TABLE
1	Website creation
2	Microsoft azure account creation
3	GIT hub creation
4	Microsoft module completion
5	Creation of Virtual Machine
6	Connection Bash
7	Blob Creation
8	Static WEB app
9	Storage Lock

Website Creation:

This project is a personal profile website developed using **HTML**, **CSS**, **SCSS**, and **JavaScript**. It features a responsive design, ensuring optimal viewing on all devices, and includes interactive elements like smooth scrolling and form validation. The SCSS is structured with variables for maintainability, while JavaScript enhances user experience with dynamic content. The website is cross-browser compatible, modular, and ready for deployment on any web hosting platform

Home Page

Welcome to my personal profile! I'm Bharath, a Computer Science and Engineering student at Dr. NGP Institutions. This site is a glimpse into my journey in technology, featuring my skills, projects, and experiences. Explore to learn more about me and my work.

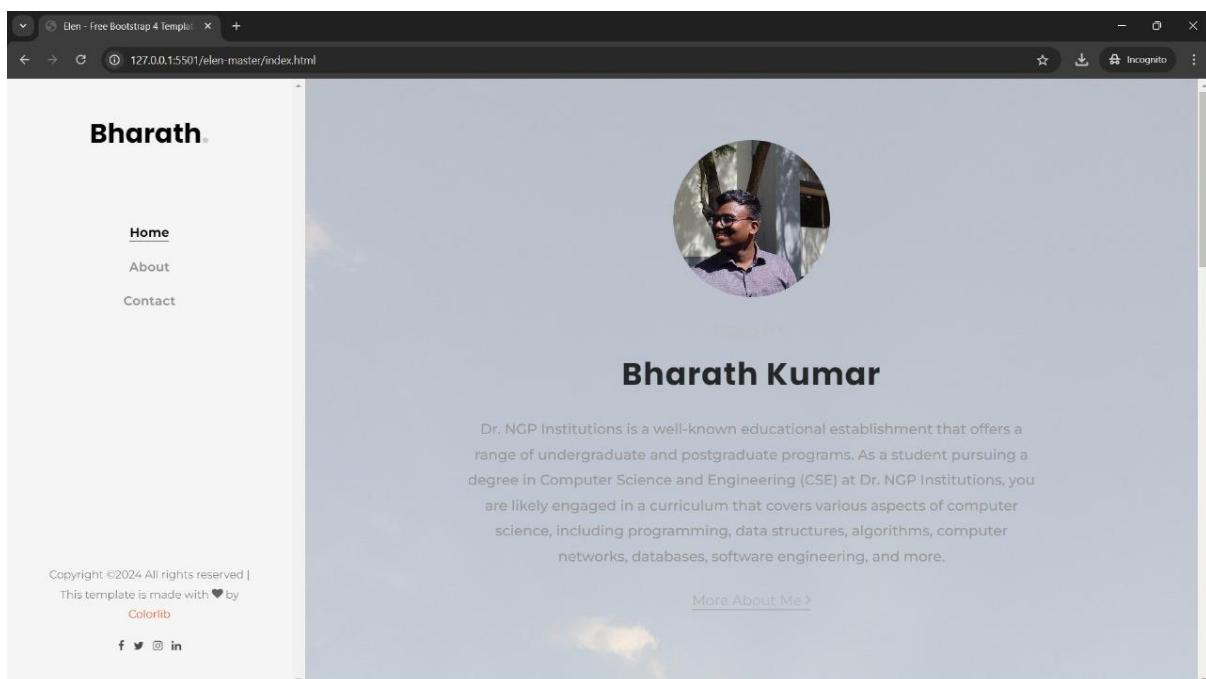
About Me

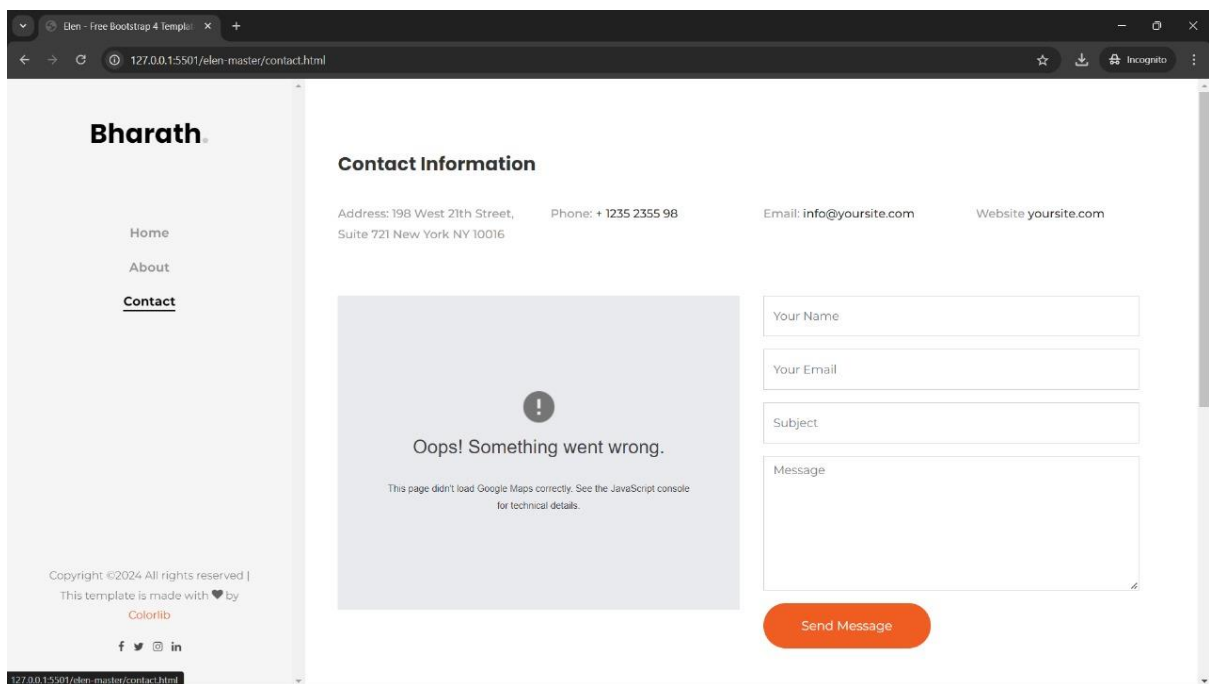
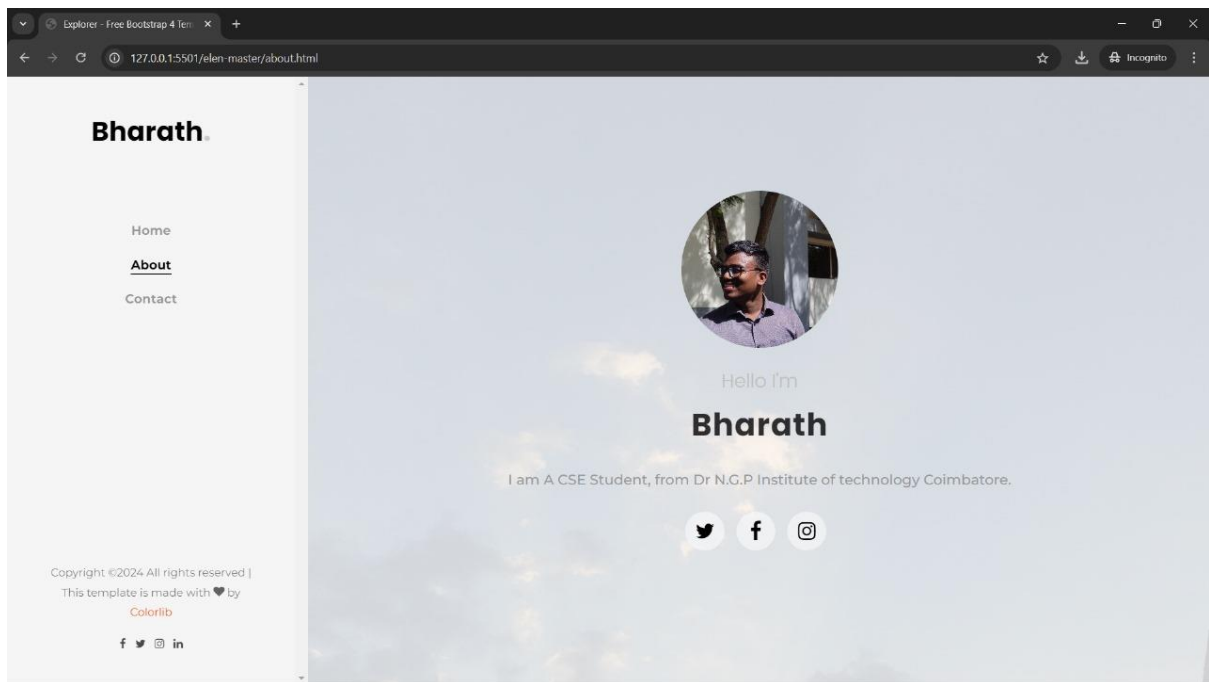
I'm a dedicated student with a strong passion for coding, web development, and problem-solving. Currently honing my skills at Dr. NGP Institutions, I've worked on various projects that showcase my abilities in HTML, CSS, JavaScript, and more. I'm always eager to learn and take on new challenges.

Contact

Let's connect! Whether you have a project in mind or just want to chat, feel free to reach out to me. You can contact me via email at [your email address] or connect with me on LinkedIn [your LinkedIn profile link].

And the Output as Follows





Microsoft account creation:

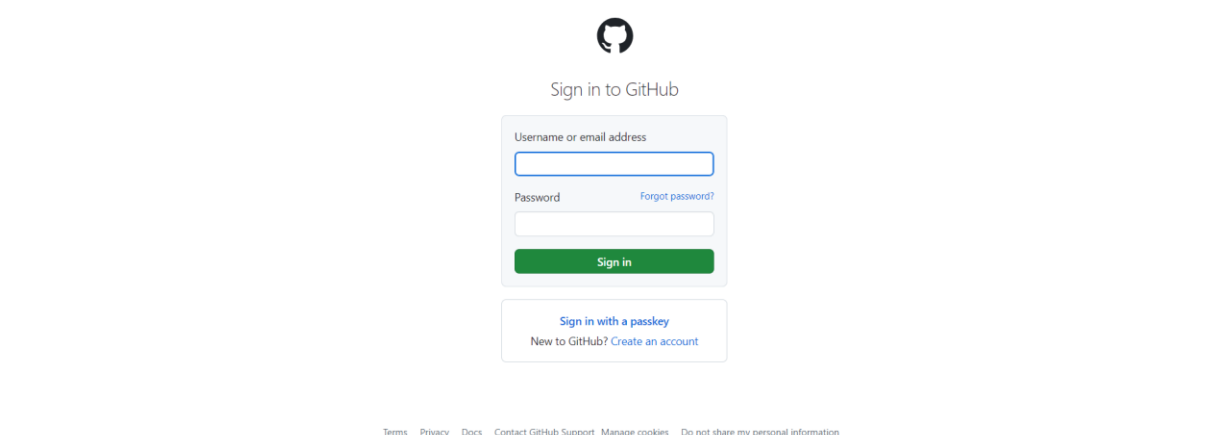
A Microsoft account is your gateway to accessing a variety of Microsoft services, including Outlook, OneDrive, Office Online, and more. By creating a Microsoft account, you gain a single sign-in that connects you to these services seamlessly, whether you're managing emails, storing files in the cloud, 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.

The screenshot displays the Microsoft Azure portal interface. At the top, there's a navigation bar with the 'Microsoft Azure' logo, a search bar, and a user profile. Below the navigation bar, the 'Azure services' section features a row of icons for various services: 'Create a resource', 'All resources', 'Static Web Apps', 'Resource groups', 'Virtual machines', 'Help + support', 'Users', 'Quickstart Center', 'App Services', and 'More services'. The 'Resources' section is active, showing a table of recent resources. The table has three columns: 'Name', 'Type', and 'Last Viewed'. It lists several resources including 'Pinesphere' (Virtual machine), 'Webpine' (Static Web App), 'owner' (Static Web App), 'RG01' (Resource group), 'vmpine' (Storage account), 'DefaultResourceGroup-EUS' (Resource group), 'pinesvishali' (Storage account), 'Vishali-VM' (Virtual machine), 'Vishali-VM-ip' (Public IP address), 'RG2024' (Resource group), and 'vishali-vm687_z1' (Network interface). A 'See all' link is at the bottom of the table.

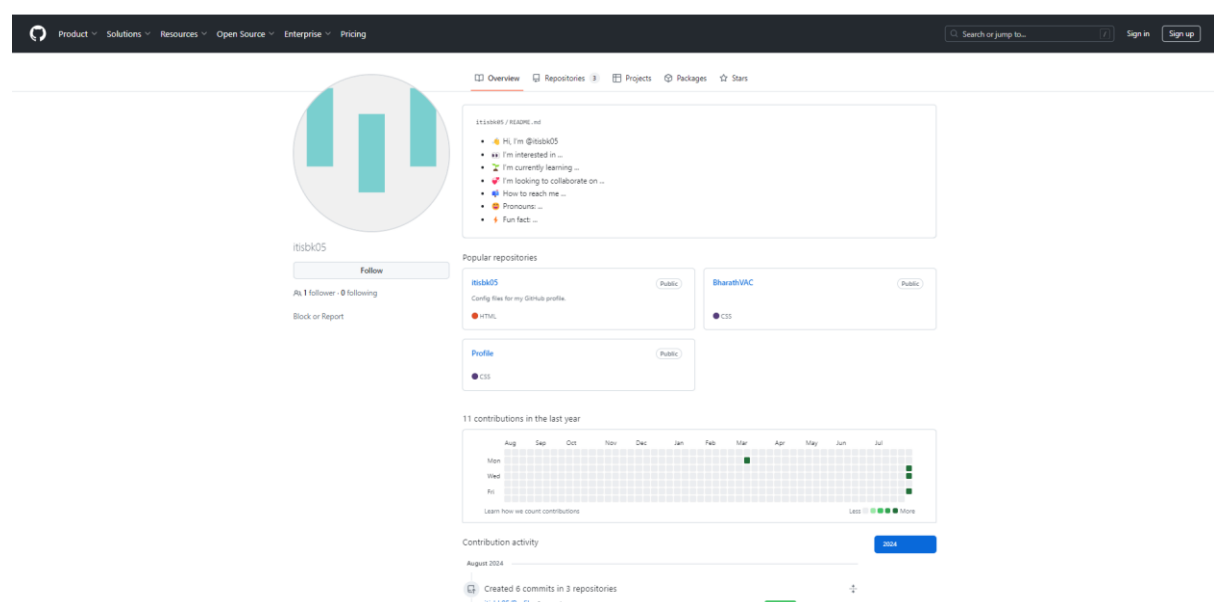
Name	Type	Last Viewed
Pinesphere	Virtual machine	4 hours ago
Webpine	Static Web App	4 hours ago
owner	Static Web App	4 hours ago
RG01	Resource group	4 hours ago
vmpine	Storage account	6 hours ago
DefaultResourceGroup-EUS	Resource group	6 hours ago
pinesvishali	Storage account	22 hours ago
Vishali-VM	Virtual machine	a day ago
Vishali-VM-ip	Public IP address	a day ago
RG2024	Resource group	a day ago
vishali-vm687_z1	Network interface	3 days ago

GIT hub creation:

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/itisbk05/Profile.git>



The image shows the GitHub sign-in page. At the top is the GitHub logo. Below it is the text "Sign in to GitHub". The main form has two input fields: "Username or email address" and "Password". There is a "Forgot password?" link next to the password field. A green "Sign in" button is below the fields. Below the button is a link "Sign in with a passkey" and a link "New to GitHub? Create an account". At the bottom, there are links for "Terms", "Privacy", "Docs", "Contact GitHub Support", "Manage cookies", and "Do not share my personal information".



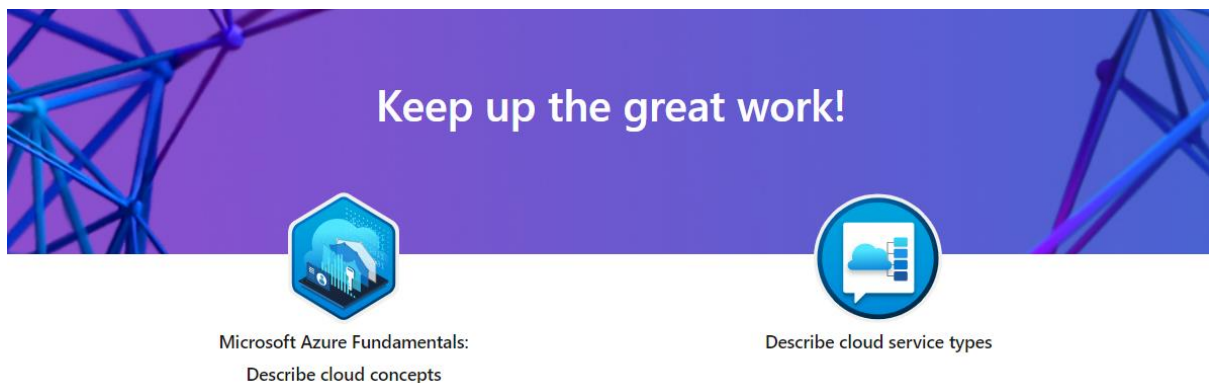
The image shows the GitHub profile page for the user "itisbk05". The page has a dark header with navigation links: "Product", "Solutions", "Resources", "Open Source", "Enterprise", and "Pricing". There is a search bar and "Sign in" and "Sign up" buttons. The profile section includes a circular profile picture, the username "itisbk05", a "Follow" button, and statistics: "As 1 follower · 0 following" and "Block or Report". The "Popular repositories" section shows two repositories: "itisbk05" (Public) and "BharathVAC" (Public). The "Profile" section shows a repository "Profile" (Public). The "11 contributions in the last year" section shows a calendar grid with green squares indicating contributions. The "Contribution activity" section shows a bar chart with the text "Created 6 commits in 3 repositories" and a link to "itisbk05/Profile · 2 commits".

Microsoft module completion:

Having completed the Microsoft Azure Fundamentals modules, you now understand core cloud concepts and service types, including IaaS, PaaS, and SaaS. You've explored cloud computing's benefits, such as flexibility and scalability. In Azure, you learned about compute services like virtual machines and serverless functions, and networking services such as Virtual Networks and Load Balancer. This knowledge provides a strong foundation for leveraging Azure's capabilities in cloud-based solutions.

Modules are :

- Microsoft Azure Fundamentals: Describe cloud concepts
- Describe cloud service types
- Describe cloud computing
- Describe Azure compute and networking services



You have earned 2 achievements!

Congratulations, but what should you do next?

Keep up the great work!



Describe Azure storage
services

You have earned an achievement!

Congratulations, but what should you do next?

First, let's share your achievement

You put in the time to learn something new, let your network share in your victory!



Creation of Virtual Machine:

I have successfully created a virtual machine in Microsoft Azure, named "Pinesphere." This VM can be utilized for various purposes, such as hosting applications, running development environments, or testing configurations. By naming it "Pinesphere," you've established a unique identifier for easy management and organization within your Azure environment. This virtual machine can be configured with specific resources like CPU, memory, and storage to meet your needs and can be managed through the Azure portal for tasks such as scaling, monitoring, and maintenance.

The screenshot displays the Azure portal interface for a virtual machine named "Pinesphere". The left sidebar shows the navigation menu with options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Connect, Network settings, Load balancing, Application security groups, Network manager, Settings, Availability + scale, Security, Backup + disaster recovery, Operations, Monitoring, Automation, and Help. The main content area is divided into several sections:

- Essentials:** Provides a quick overview of the VM's status and key details.
 - Resource group: [Resource Group](#)
 - Status: Stopped (deallocated)
 - Location: Central India (Zone 1)
 - Subscription: [Azure for Students](#)
 - Subscription ID: zeeb71cb-680f-4992-a638-44708b2ac63f
 - Availability zone: 1
 - Operating system: Linux
 - Size: Standard E2s v3 (2 vCPUs, 16 GB memory)
 - Public IP address: [20.40.52.165](#)
 - Virtual network/subnet: [Pinesphere/default](#)
 - DNS name: [Not configured](#)
 - Health state: -
 - Time created: 8/8/2024, 1:45 PM UTC
- Properties:** Lists the VM's configuration details.
 - Computer name: Pinesphere
 - Operating system: Linux
 - VM generation: V2
 - VM architecture: x64
 - Hibernation: Disabled
 - Host group: -
 - Host: -
 - Proximity placement group: -
 - Colocation status: N/A
 - Capacity reservation group: -
 - Disk controller type: SCSI
- Networking:** Shows network configuration.
 - Public IP address: [20.40.52.165](#) (Network interface: [pinesphere3993_x1](#))
 - Public IP address (IPv6): -
 - Private IP address: 10.1.0.4
 - Private IP address (IPv6): -
 - Virtual network/subnet: [Pinesphere/default](#)
 - DNS name: [Configure](#)
- Size:** Details the VM's size and resources.
 - Size: Standard E2s v3
 - vCPUs: 2
 - RAM: 16 GB
- Source image details:** Provides information about the source image.
 - Source image publisher: canonical
 - Source image offer: ubuntu-24_04-ifs
 - Source image plan: server
- Disk:** Shows the disk configuration.
 - OS disk: Pinesphere_OsDisk_1_8bbee7b5649744c3a481453806037b1

After creating the VM in Azure, connect to it using RDP for Windows or SSH for Linux. Open the command line interface—Command Prompt or PowerShell for Windows, and Terminal for Linux. Start executing commands to manage and configure your VM as needed. This allows you to install software, run scripts, and perform maintenance tasks.

Connection Bash :

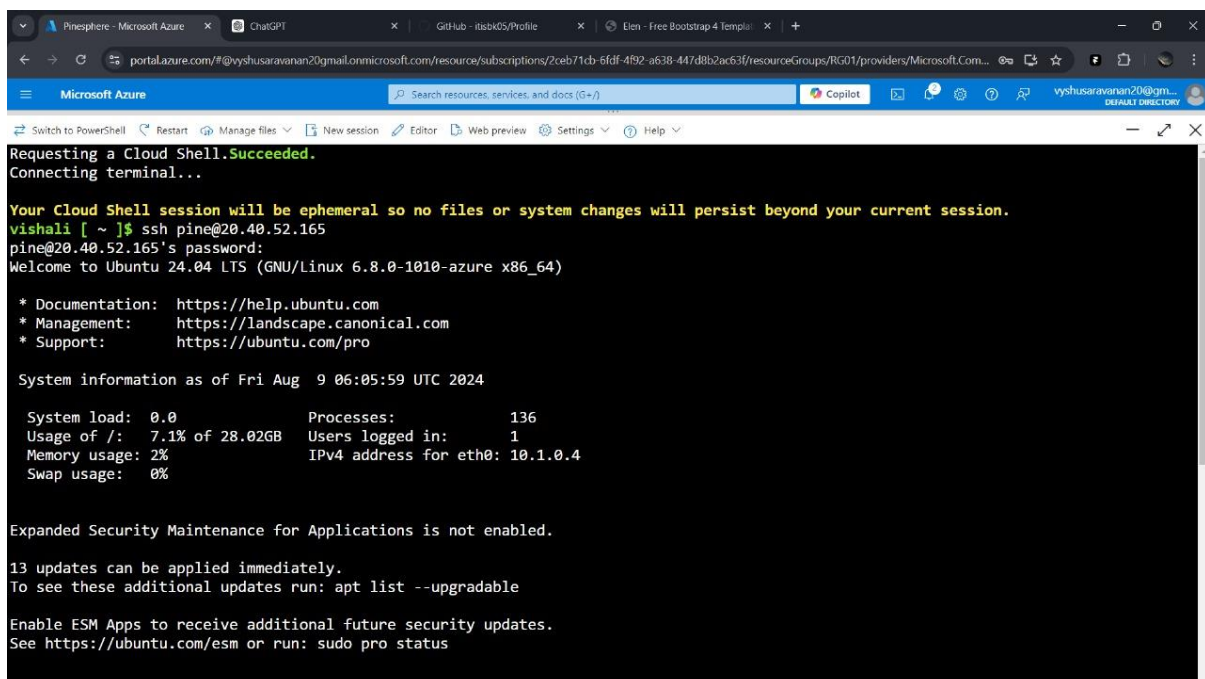
Open a terminal in the virtual machine in that terminal choose bash. To connect to your VM using Bash, start by obtaining the VM's public IP address or DNS name from the Azure portal.

Open a terminal on your local machine and use the SSH command:

bash

ssh [username]@[public-ip-address]

Replace `[username]` with your VM's username and `[public-ip-address]` with the VM's IP address or DNS name. Authenticate using your password or private key. Once connected, you can execute commands to manage and configure your VM directly from the terminal.



```
Microsoft Azure
Search resources, services, and docs (G+/)
vishusaravanan20@gmail...
Switch to PowerShell Restart Manage Files New session Editor Web preview Settings Help
Requesting a Cloud Shell.Succeeded.
Connecting terminal...

Your Cloud Shell session will be ephemeral so no files or system changes will persist beyond your current session.
vishali [ ~ ]$ ssh pine@20.40.52.165
pine@20.40.52.165'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

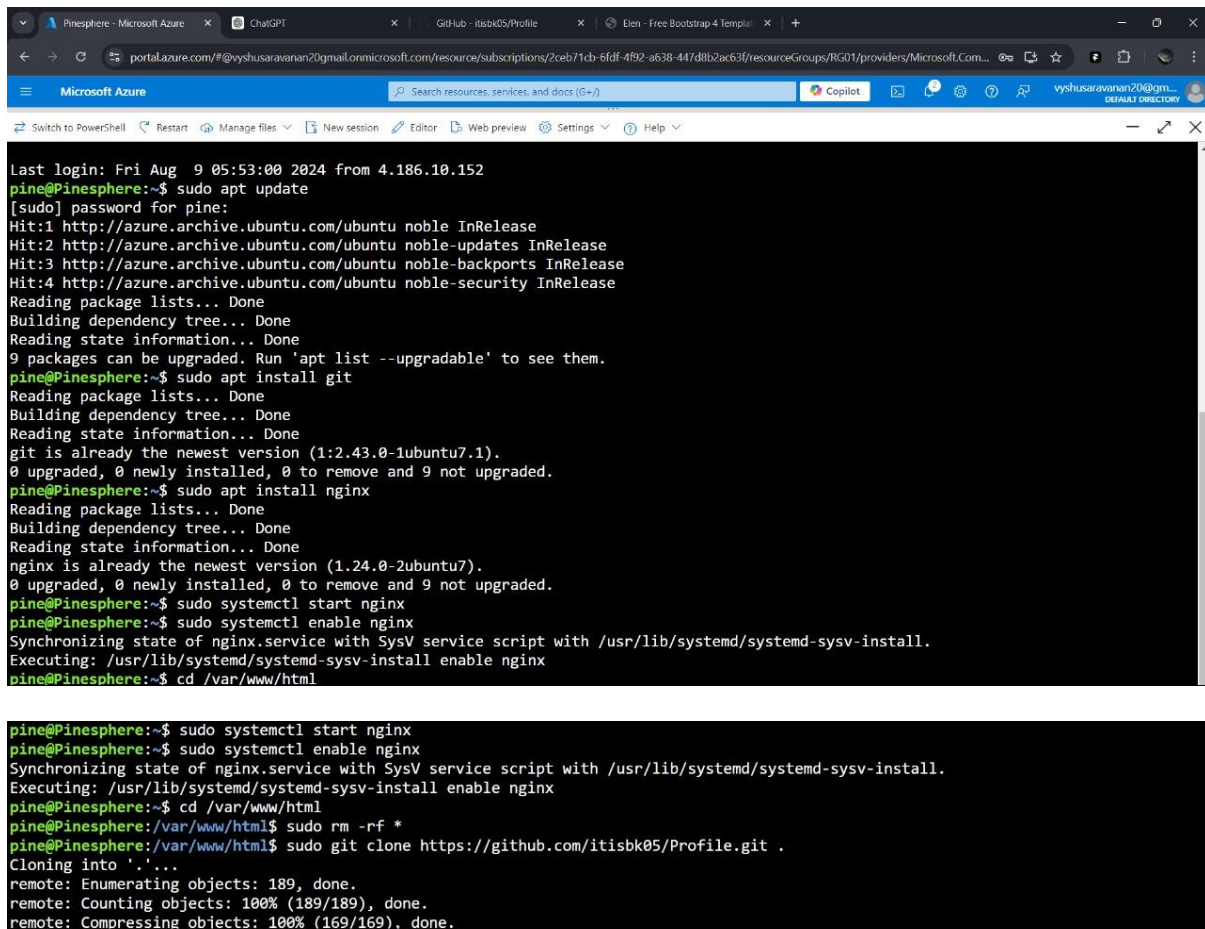
System information as of Fri Aug  9 06:05:59 UTC 2024

System load:  0.0      Processes:      136
Usage of /:   7.1% of 28.02GB   Users logged in:  1
Memory usage: 2%      IPv4 address for eth0: 10.1.0.4
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

13 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

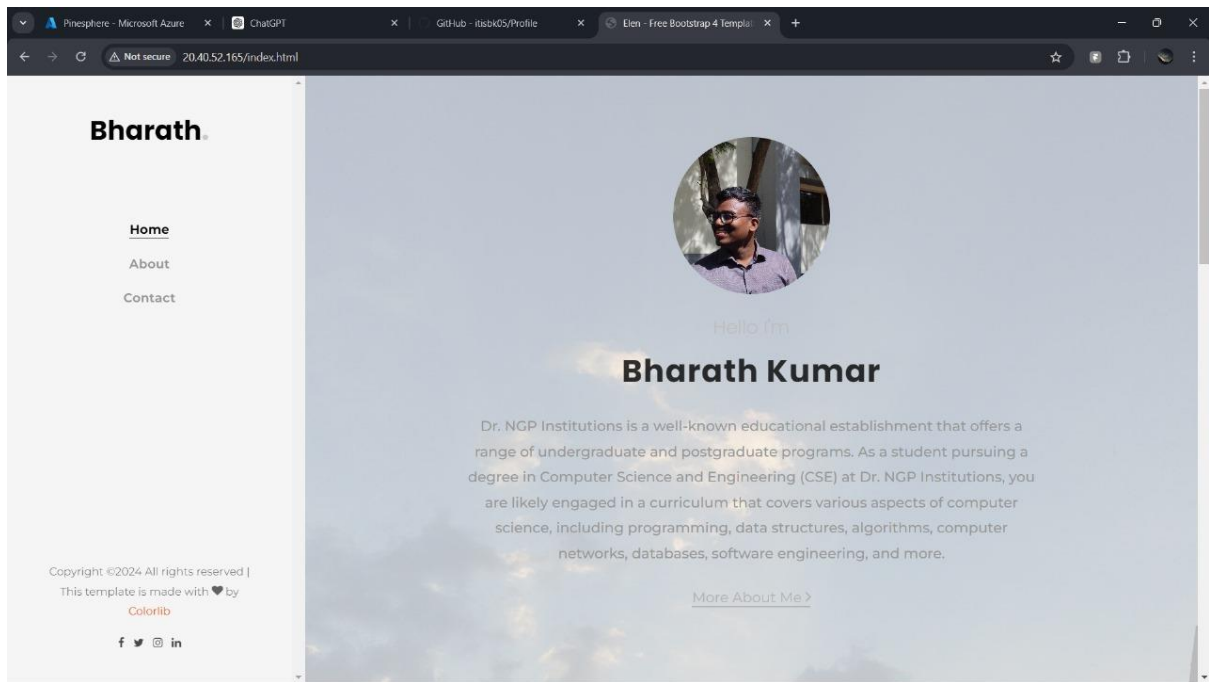
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
```



```
Last login: Fri Aug 9 05:53:00 2024 from 4.186.10.152
pine@Pinesphere:~$ sudo apt update
[sudo] password for pine:
Hit:1 http://azure.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://azure.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://azure.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://azure.archive.ubuntu.com/ubuntu noble-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
9 packages can be upgraded. Run 'apt list --upgradable' to see them.
pine@Pinesphere:~$ 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.
pine@Pinesphere:~$ 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).
0 upgraded, 0 newly installed, 0 to remove and 9 not upgraded.
pine@Pinesphere:~$ sudo systemctl start nginx
pine@Pinesphere:~$ 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
pine@Pinesphere:~$ cd /var/www/html

pine@Pinesphere:~$ sudo systemctl start nginx
pine@Pinesphere:~$ 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
pine@Pinesphere:~$ cd /var/www/html
pine@Pinesphere:/var/www/html$ sudo rm -rf *
pine@Pinesphere:/var/www/html$ sudo git clone https://github.com/itisbk05/Profile.git .
Cloning into '.'...
remote: Enumerating objects: 189, done.
remote: Counting objects: 100% (189/189), done.
remote: Compressing objects: 100% (169/169), done.
```

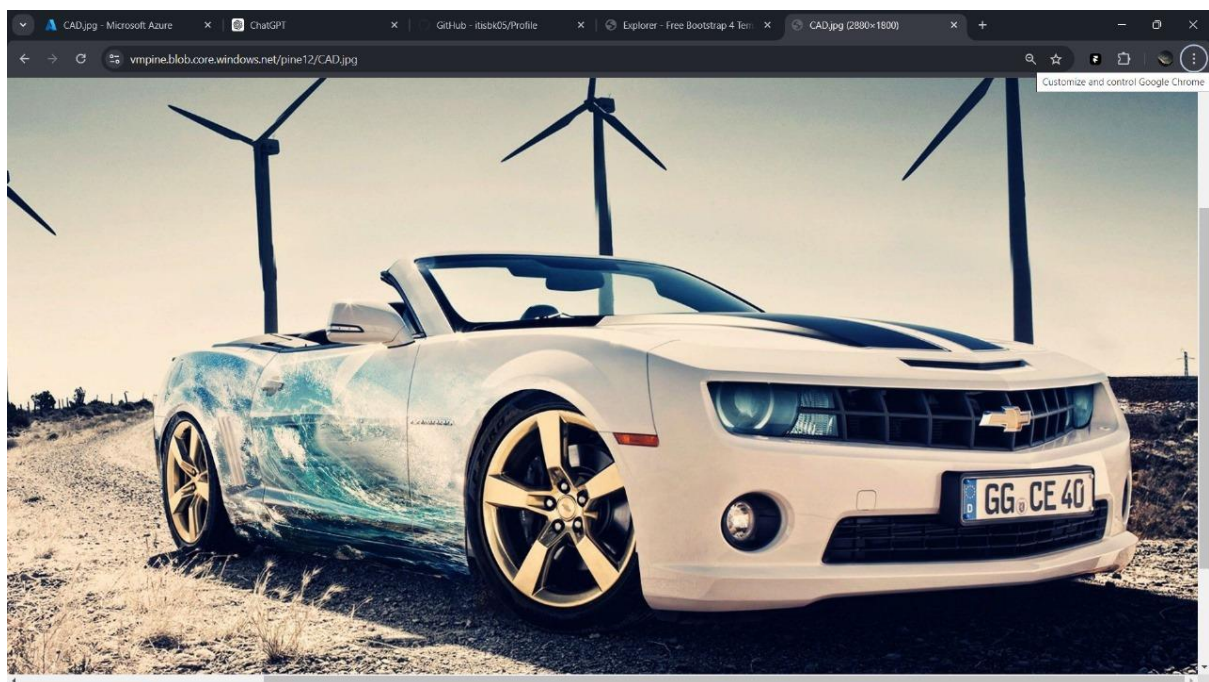
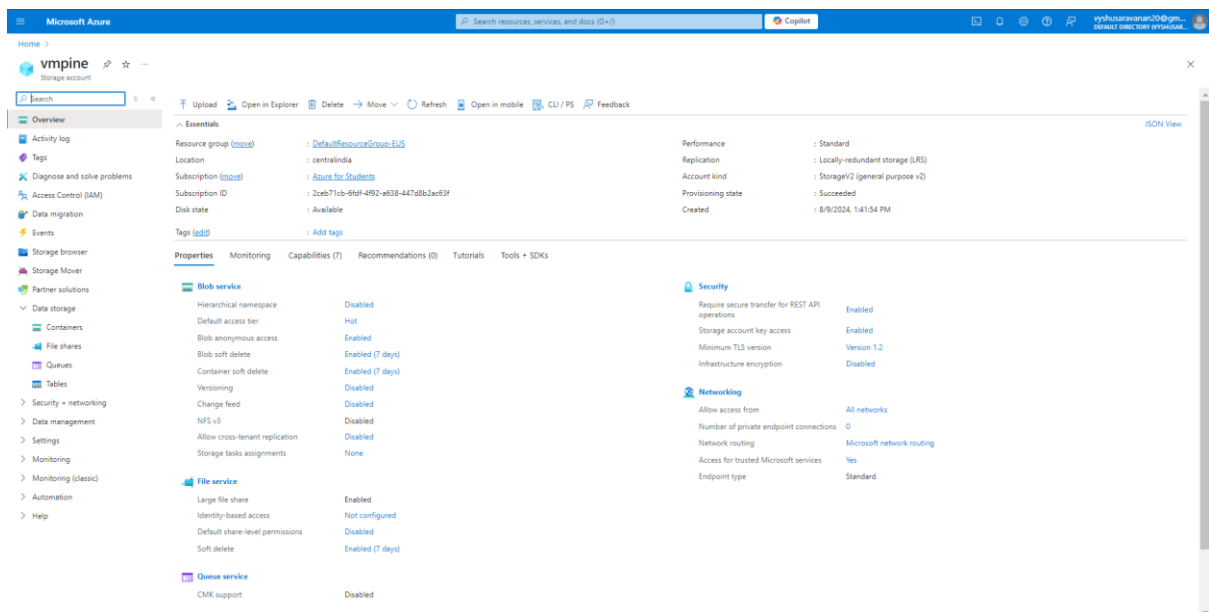
After setting up your Azure VM and creating a blob, you connected your Git repository to the VM. By cloning your repository to the VM, you were able to deploy your profile directly from your Git URL. You configured a web server on the VM to host and serve your profile, ensuring it's publicly accessible. This setup allows you to maintain and update your profile efficiently, with changes pushed to your Git repository reflected on the live site hosted on your Azure VM.



Blob Creation:

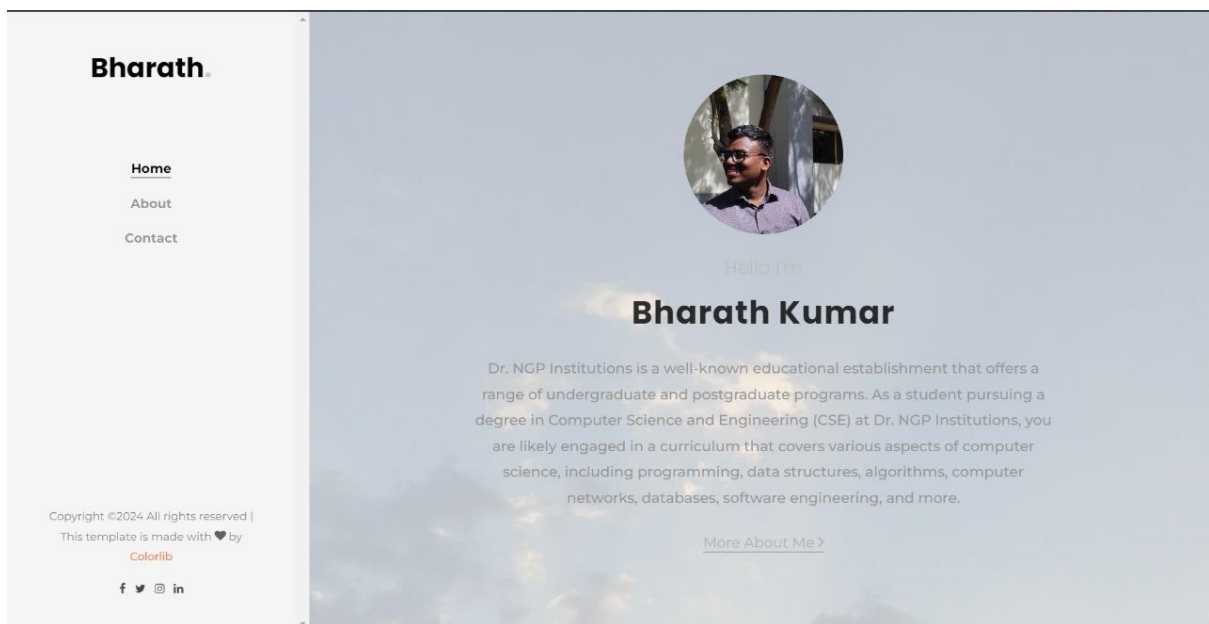
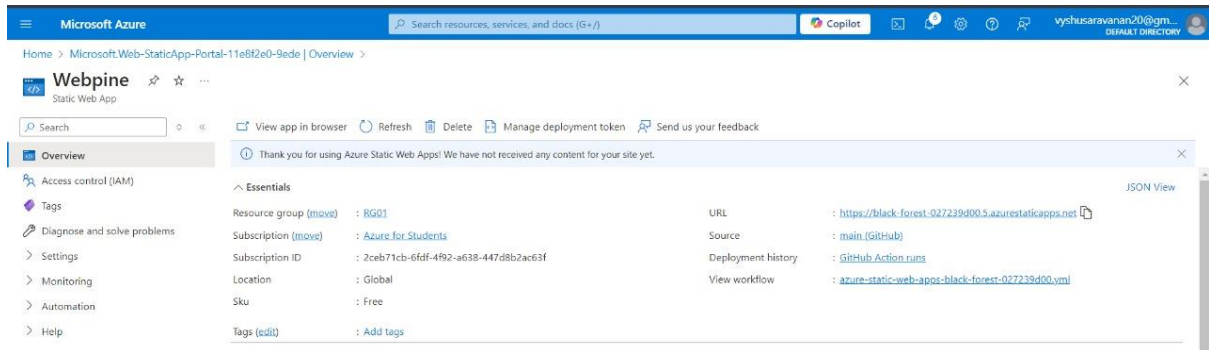
After setting up your Azure VM and creating a blob, you connected your Git repository to the VM. By cloning your repository to the VM, you were able to deploy your profile directly from your Git URL. You configured a web server on the VM to host and serve your profile, ensuring it's publicly accessible. This setup allows you to maintain and update your profile efficiently, with changes pushed to your Git repository reflected on the live site hosted on your Azure VM.

I have created a Container in my virtual Machine and the name pine12 and I uploaded a sample image as a input and I have my output in the local url.



Static WEB app:

I've set up a static web app on my Azure VM, hosting a profile page directly from the virtual machine. The static site is served using a web server like Nginx or Apache, which efficiently handles HTTP requests and delivers content. This setup ensures that my profile page is accessible through the VM's public IP or domain. It provides a cost-effective and scalable solution for showcasing static content without relying on external hosting services.



My web Profile without any virtual machine and my url is <https://black-forest-027239d00.5.azurestaticapps.net/>

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.

