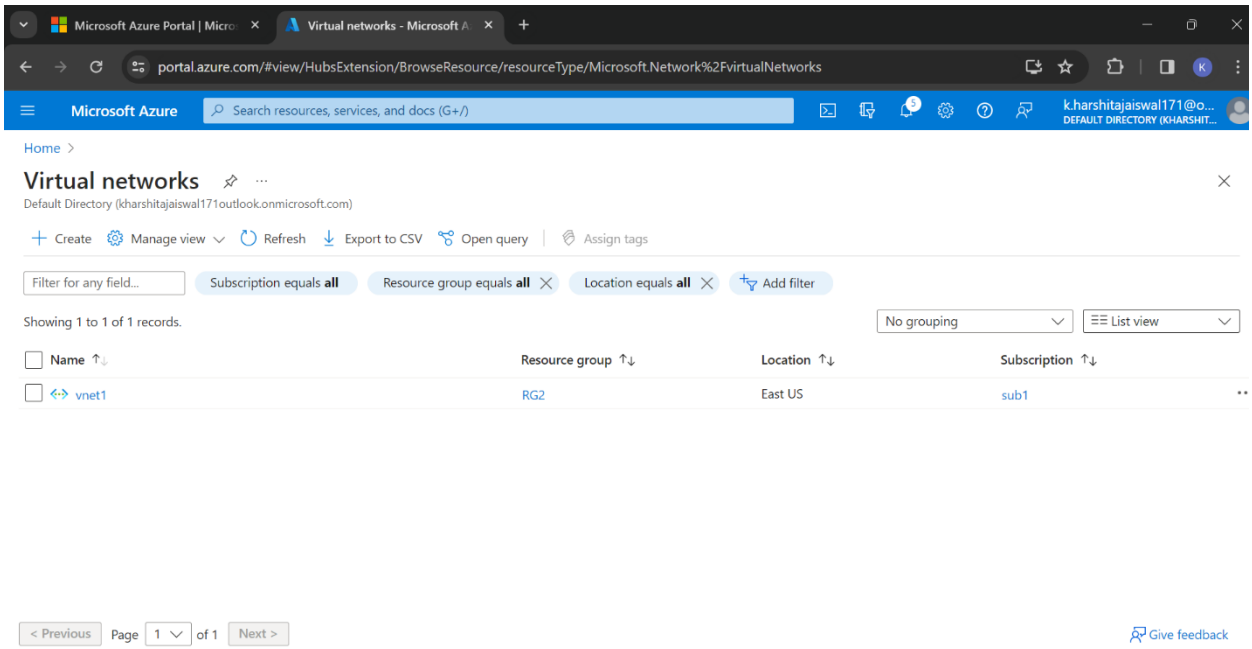
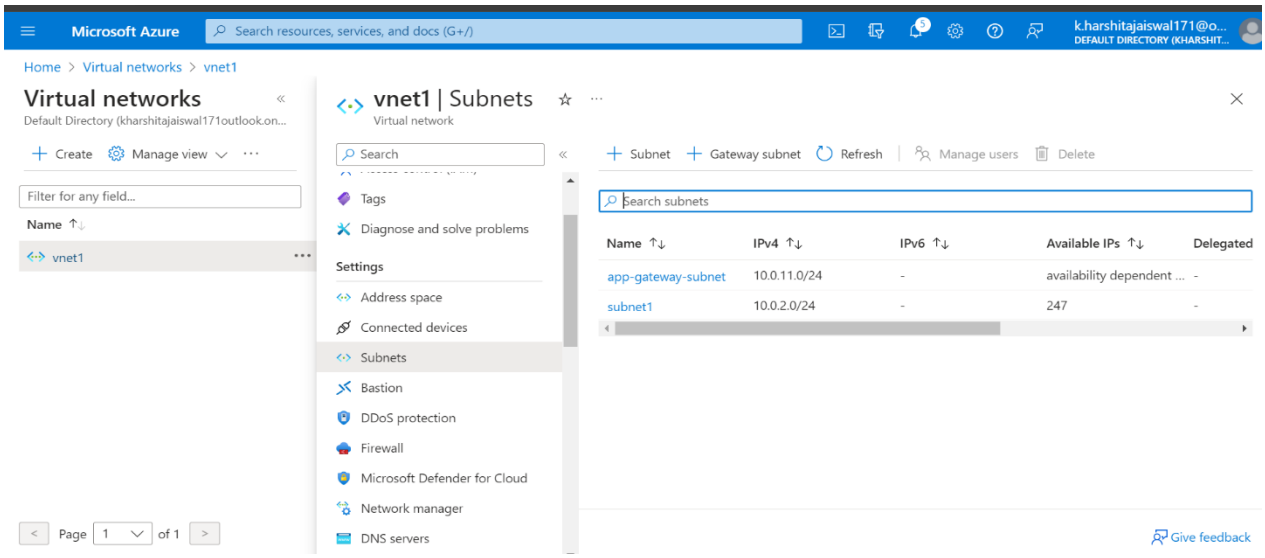
Steps to Create Azure Load Balancer using Application Gateway with Four Virtual Machines

1. **Create a Virtual Network (VNet):**
    - In the Azure portal, create a Virtual Network named vnet1.
    - This VNet will include necessary subnets for the application gateway and virtual machines.



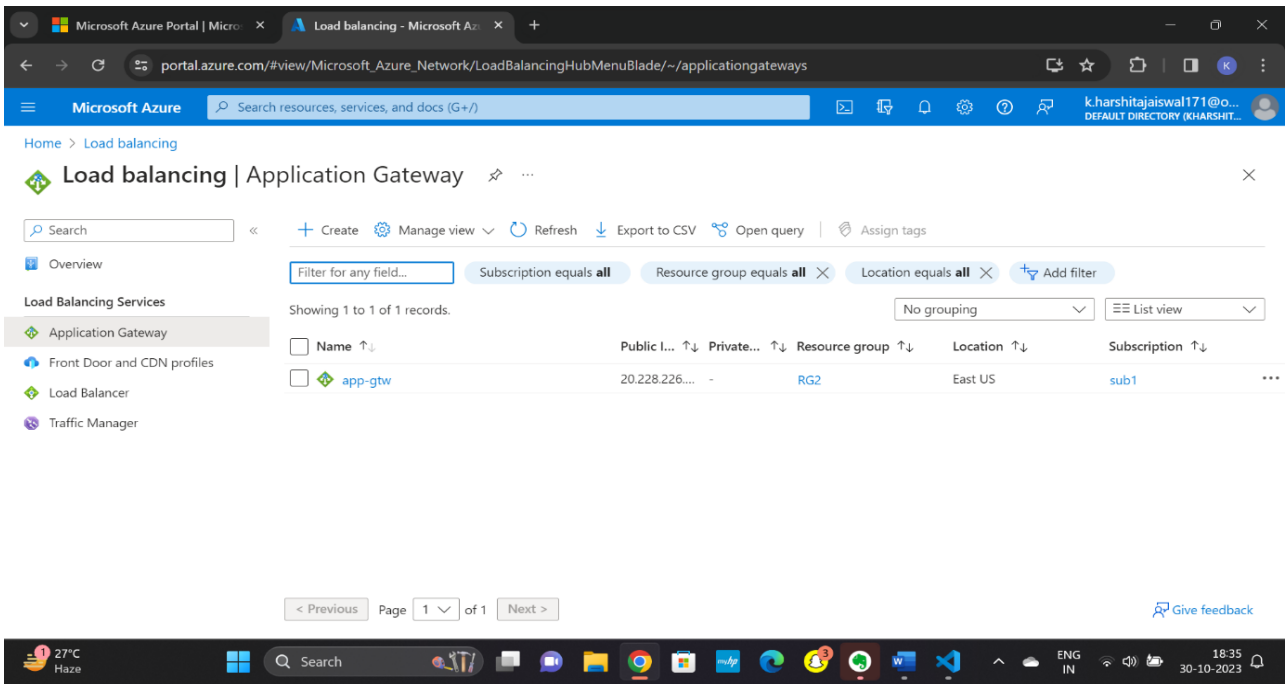
2. **Add Subnets:**

- Inside vnet1, create two subnets:
    - **app-gateway-subnet** for the application gateway.
    - **subnet1** for the virtual machines.



3. **Create an Application Gateway:**

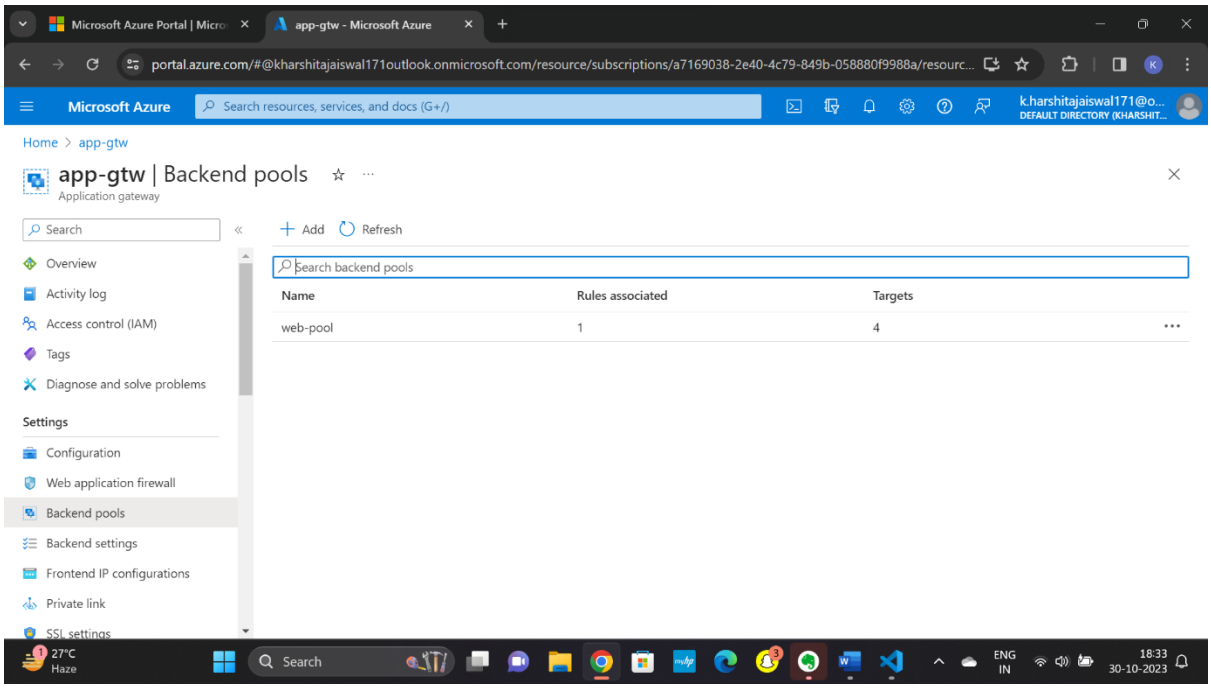
- Set up an application gateway, which operates at layer 7 of the OSI model.
- Application gateways handle HTTP and HTTPS traffic, and route incoming traffic to backend targets (virtual machines).



4. **Configure the Backend Pool:**

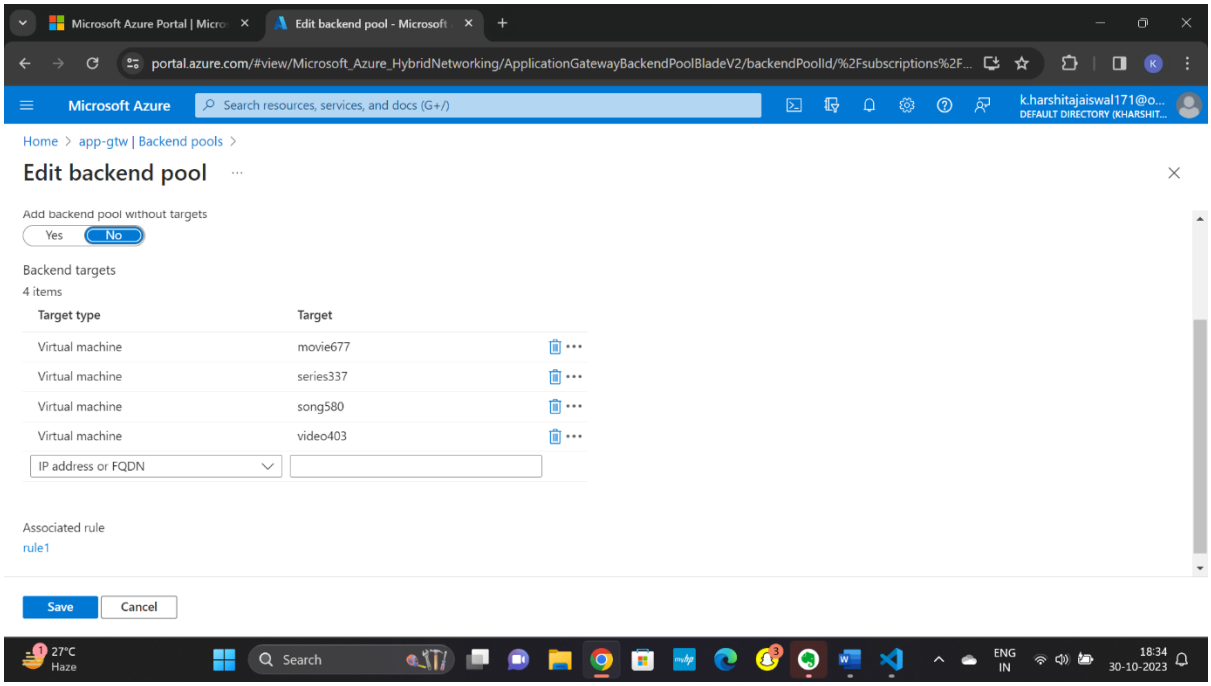
- A backend pool is where virtual machines are added to process traffic.
- Assign 4 virtual machines to the backend pool.

There are 4 targets which are 4 virtual machines in web-pool.



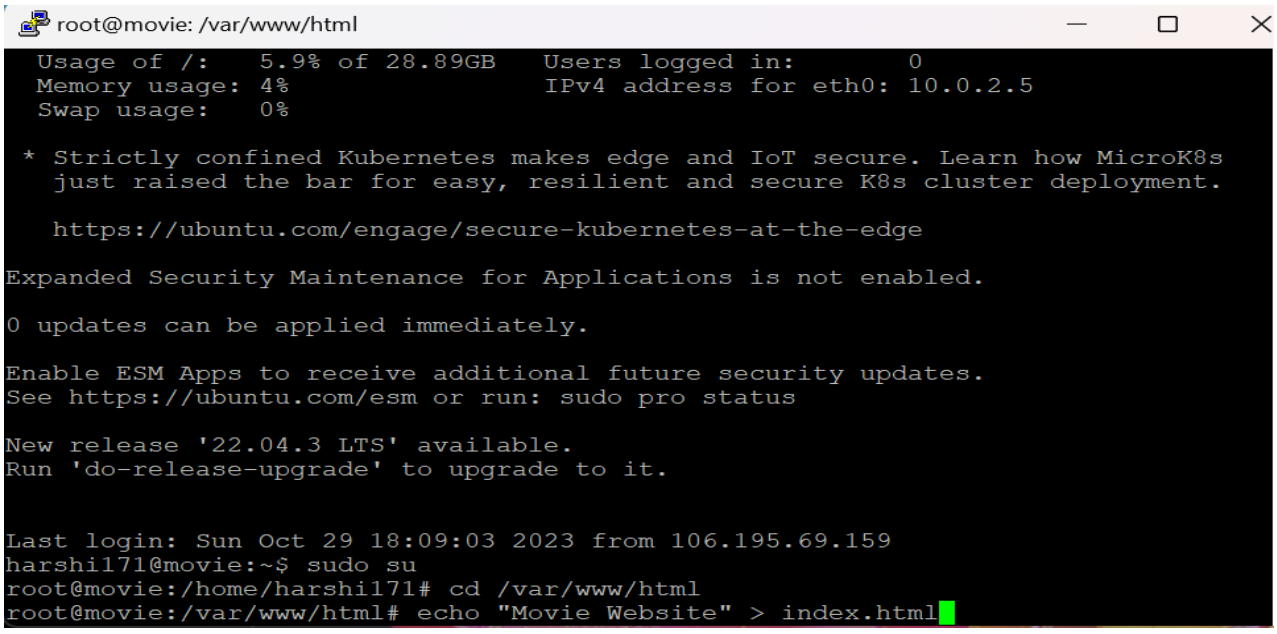
5. **Assign Virtual Machines to Backend Pool:**

- The 4 virtual machines assigned to the backend pool are named:
    1. **movie**
    2. **series**
    3. **song**
    4. **video**



6. **Set Up Virtual Machines:**

- Use **PuTTY** to connect to each virtual machine.
- Open the index.html file and add custom text for each VM to display, indicating which machine is handling the request.

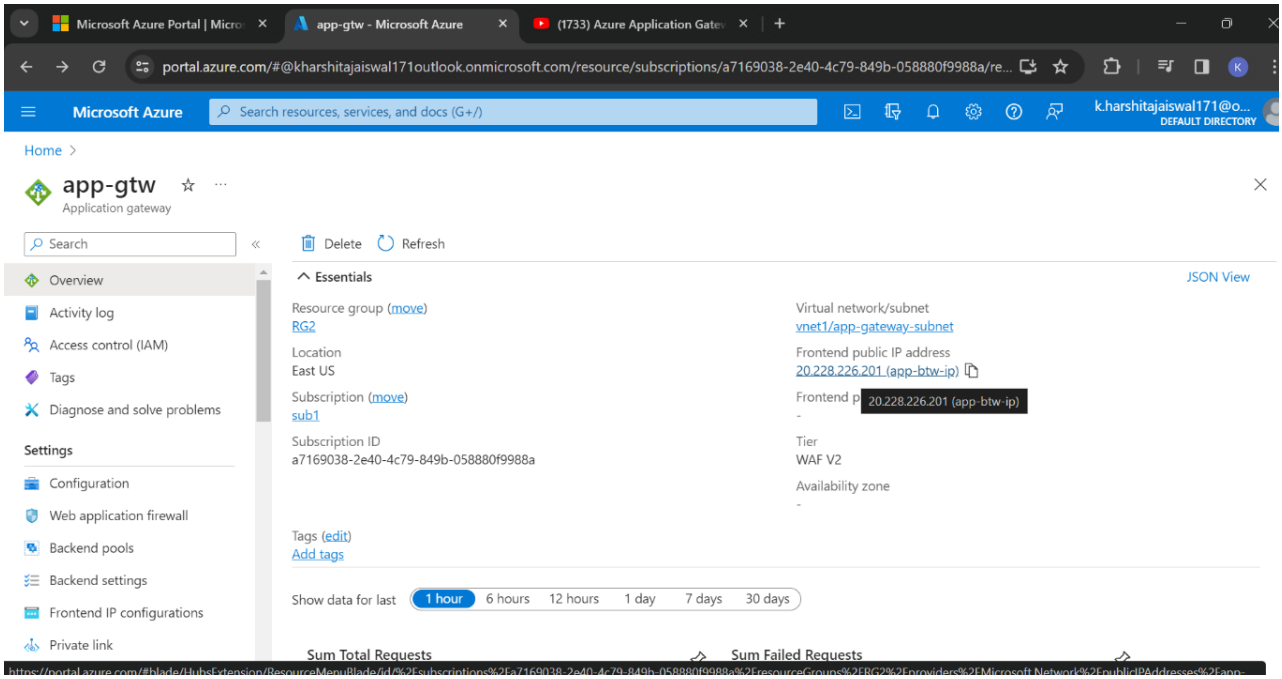


7. **Configure HTML Pages for Each Virtual Machine:**

- After connecting to each VM, use the following commands to edit the HTML file and display a custom message:
- Switch to the root user with**: sudo su**
- Navigate to the web directory**: cd /var/www/html**
- Replace the index.html content with a unique message for each VM:
    - **echo "Movie Website" > index.html**
    - **echo "Series Website" > index.html**
    - **echo "Song Website" > index.html**
    - **echo "Video Website" > index.html**
- This message will display when a specific virtual machine is serving traffic.

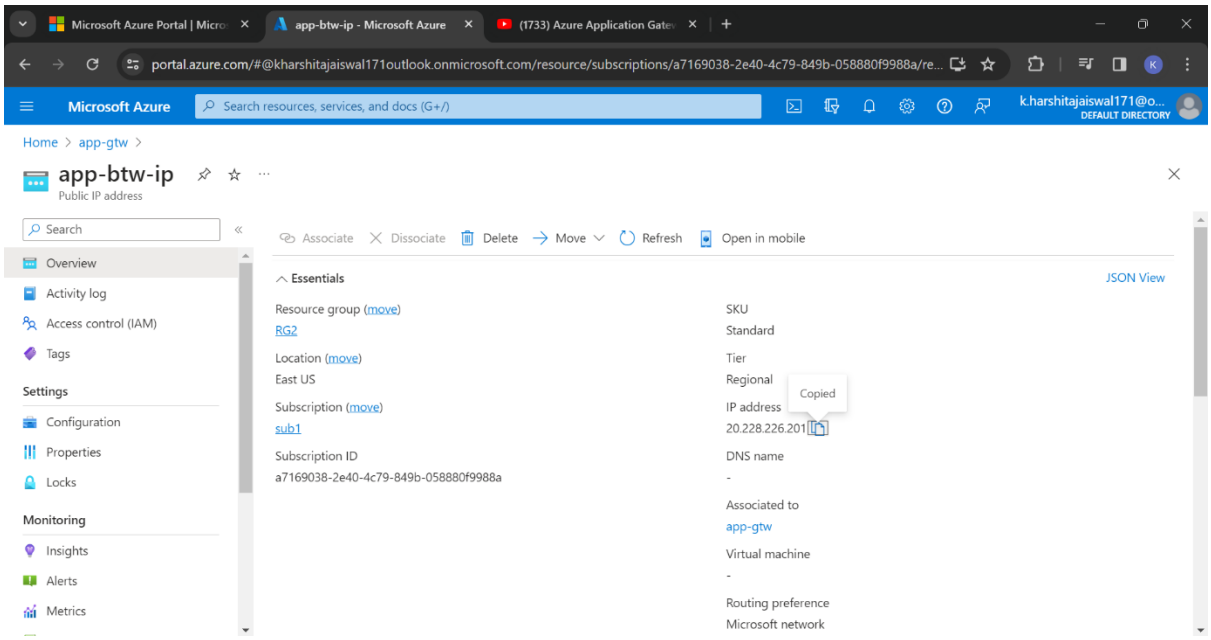
8. **Application Gateway Frontend IP:**

- The application gateway has a frontend IP address named **app-gtw**.
- This IP is the access point for your load-balanced web service.



9. **Copy the Frontend IP:**

- Find and copy the frontend IP address of the application gateway (app-gtw).



10. **Test Load Balancing:**

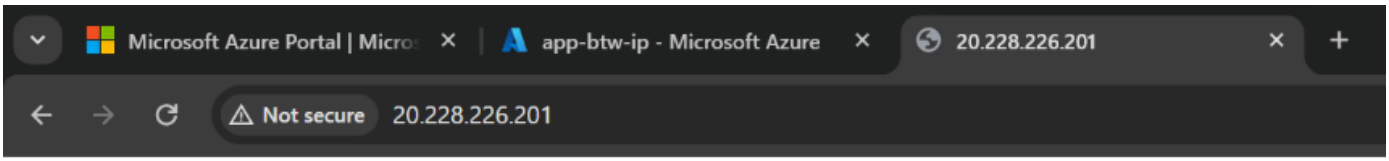
- Open the frontend IP address in a web browser.
- Refresh the page to see different virtual machines serve content, confirming that the load balancer is working.

Output is as follows:

Whenever I refresh the page it gives different website, in this way application gateway acts as load balancer and diverts the traffic to different virtual machines.

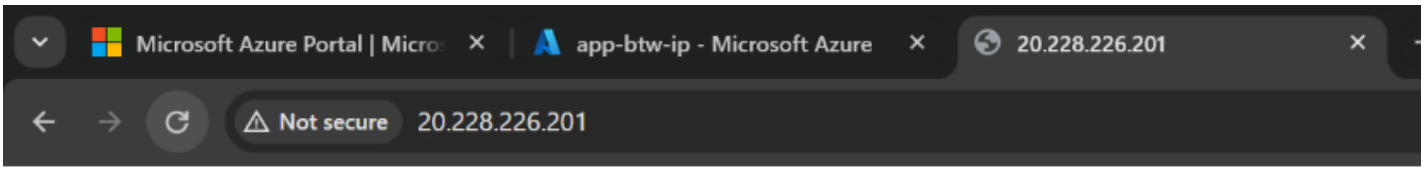
Output1:

Output2:



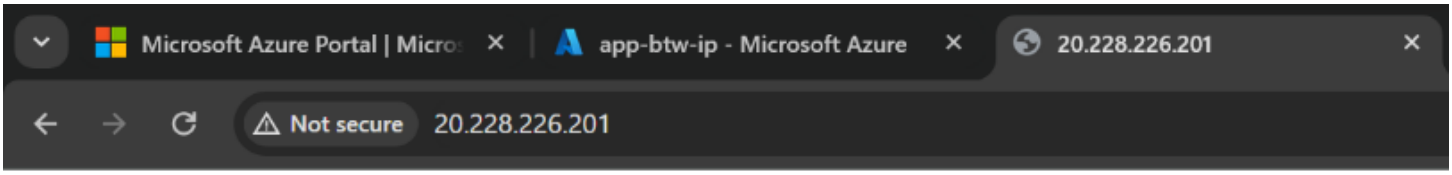
Video Website

Output3:



Movie Website

Output4:



Series Website