Elective II Cloud Computing
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31442

ASSIGNMENT NO.

TITLE: Microsoft azure or Amazon EC2

PROBLEM STATEMENT/DEFINITION:
Case study on Microsoft azure. Microsoft Azure is a cloud computing platform and infrastructure, created by Microsoft, for building, deploying and managing applications and services through a global network of Microsoft-managed data centers.
OR
Case study on Amazon EC2 and learn about Amazon EC2 web services.

OBJECTIVE:
1. To learn cloud computing environment.
2. To study how to use Microsoft Azure/Amazon EC2

OUTCOME:
Understand cloud computing environment

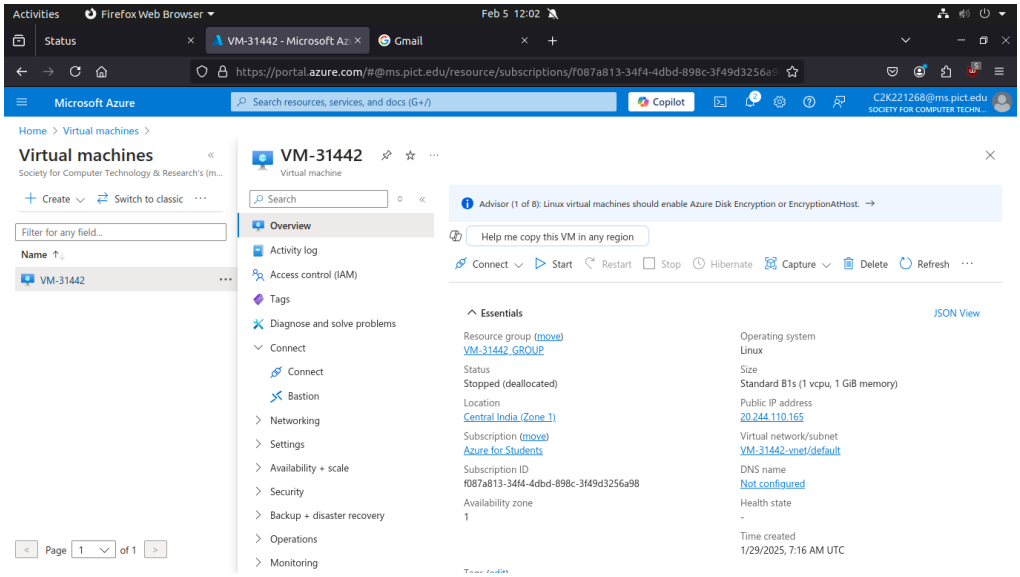
STEPS:

1. Sign up for Microsoft Azure Account

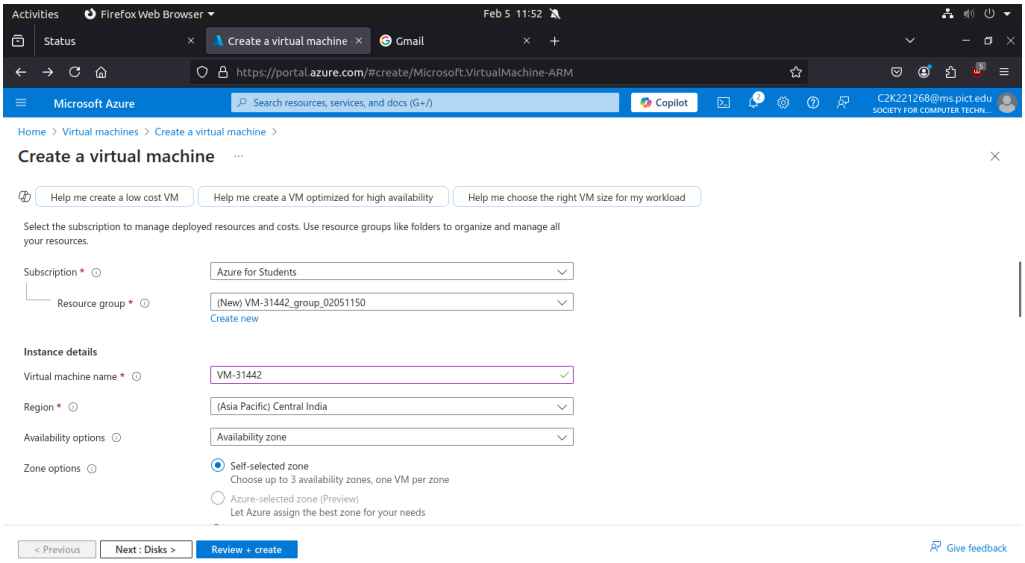
- Navigate to the Microsoft Azure portal. Create an account or log in if you already have one.

2. Create a Virtual Machine on Azure

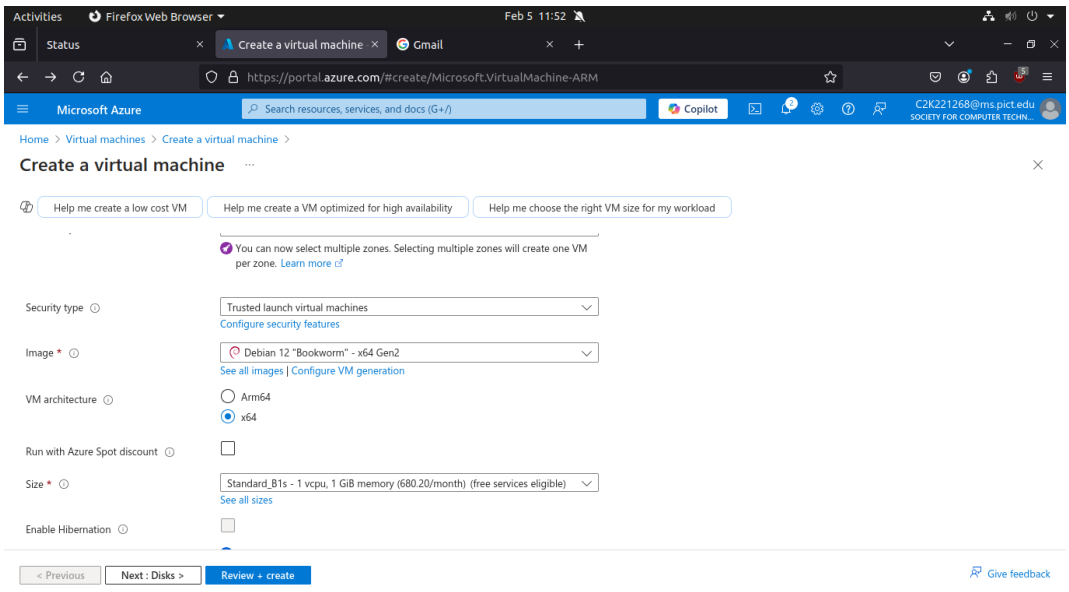
- After logging into Azure portal, click **"Create a resource"** > **"Virtual Machine"**.



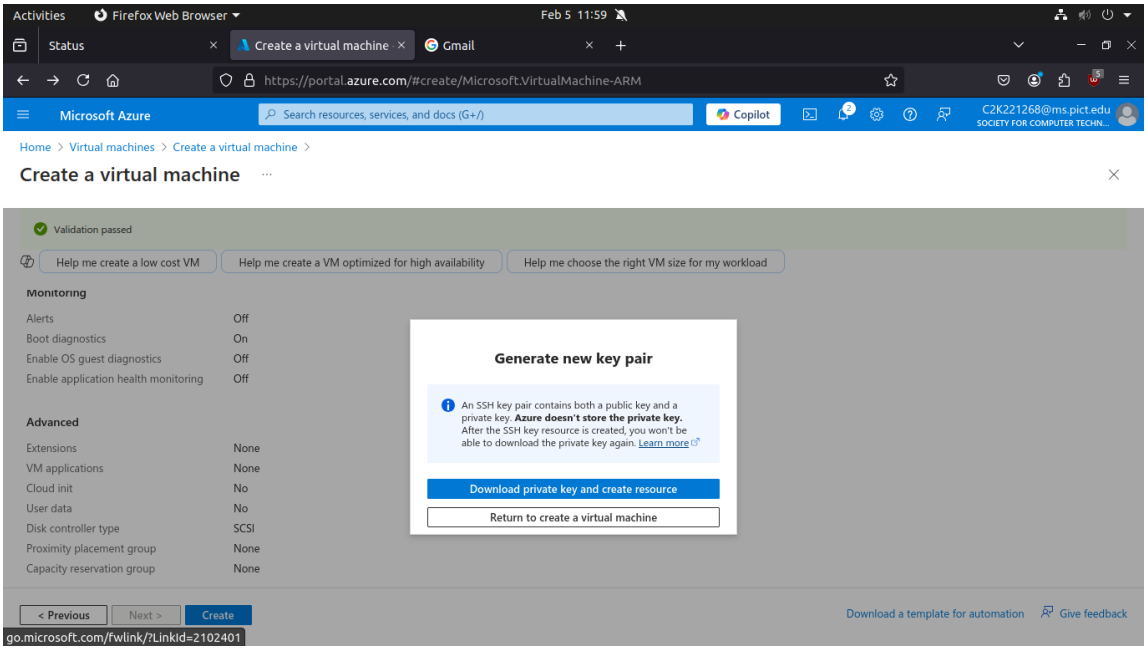
- **Give name** to Virtual Machine.
- Select **region** as Asia-Pacific Central India



- Under the **Management** tab, make sure to select the **Free** tier for the virtual machine (if eligible). Click **Create** to start provisioning the VM.
- Choose **Debian Image**



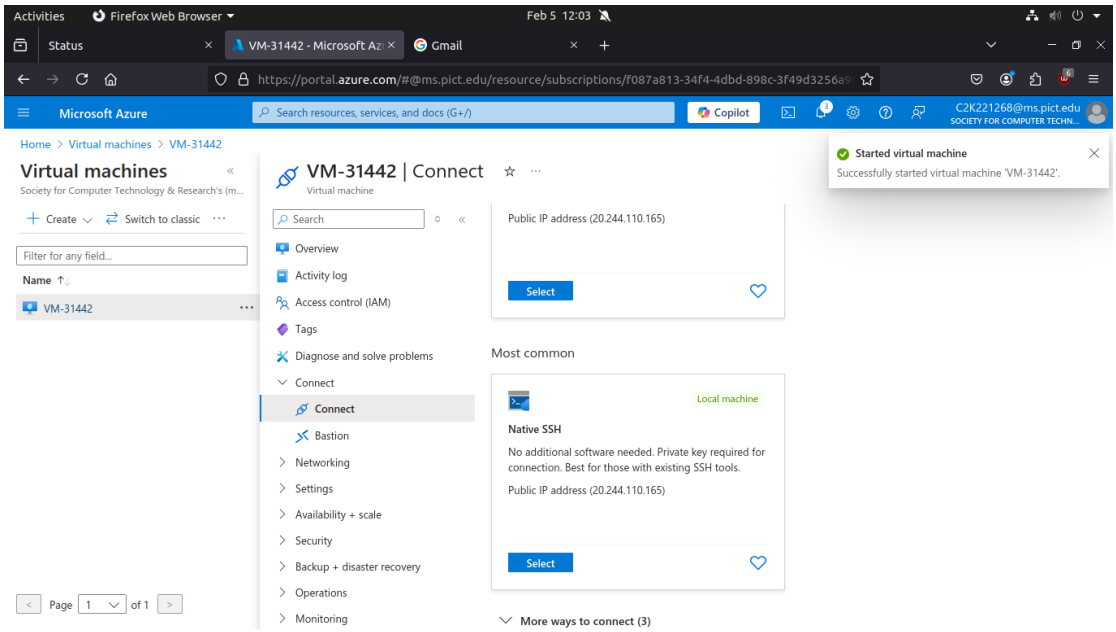
- Download the **private key** (or use an existing one) for accessing the VM.



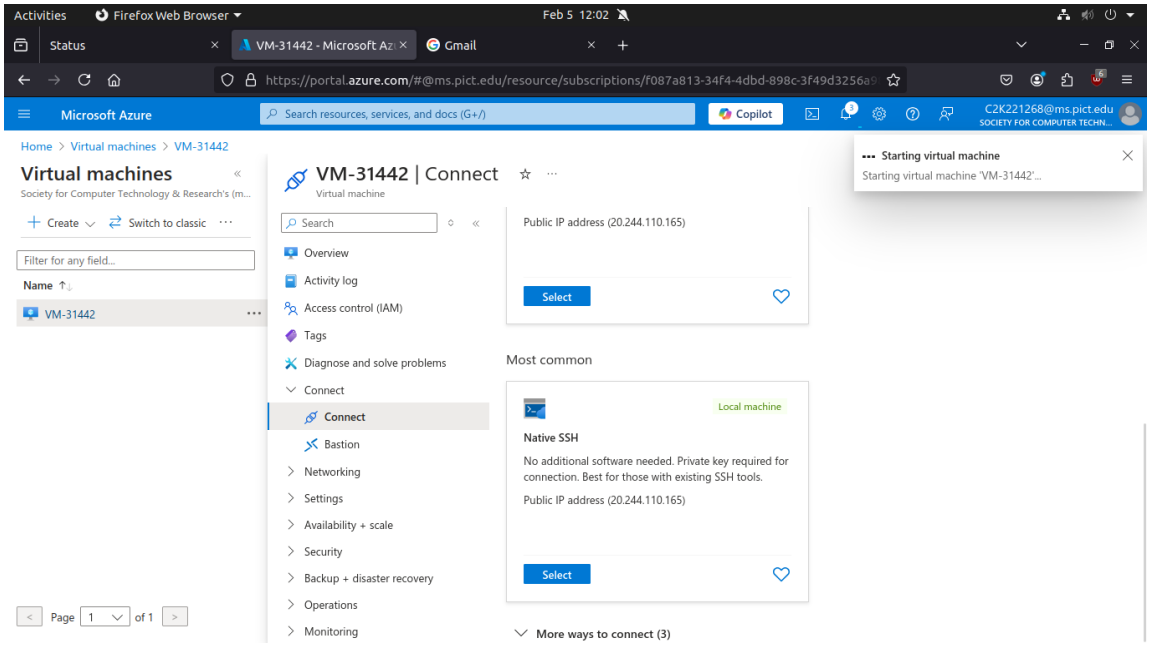
- Virtual Machine created successfully.

3. Access the Virtual Machine

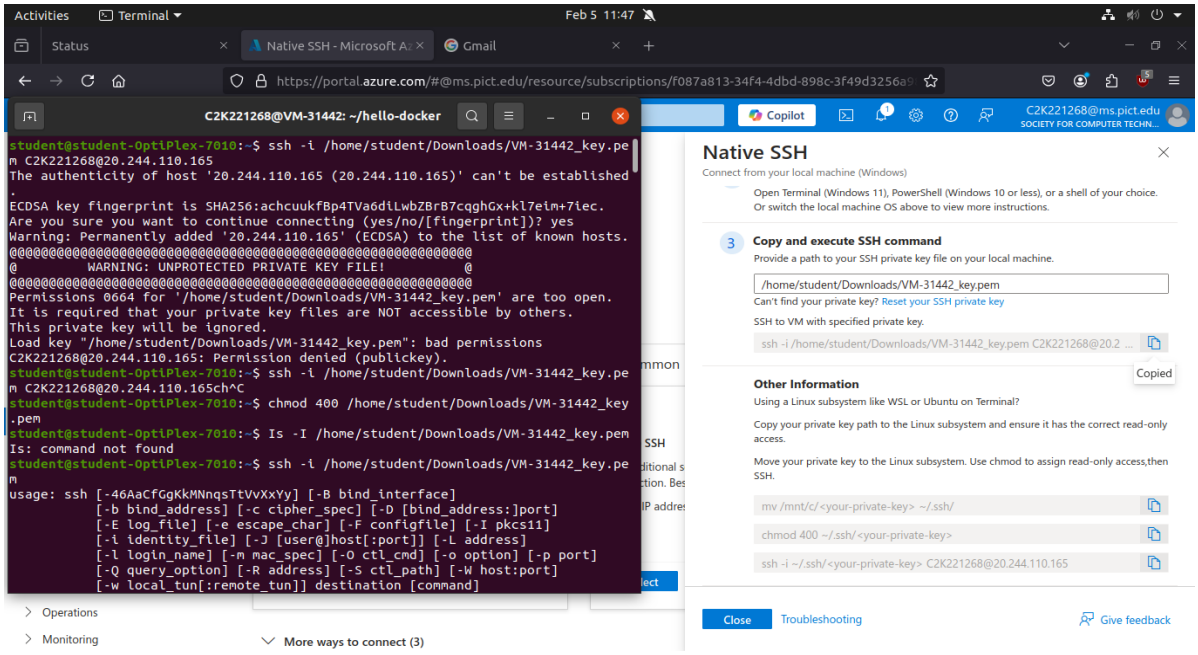
- Start virtual machine by clicking on **“Start”** button



- Choose **Native SSH -> Select -> Connect**



- **Copy path of .pem file** location paste to step 3 empty input
- Copy string from same step and paste to **terminal.**

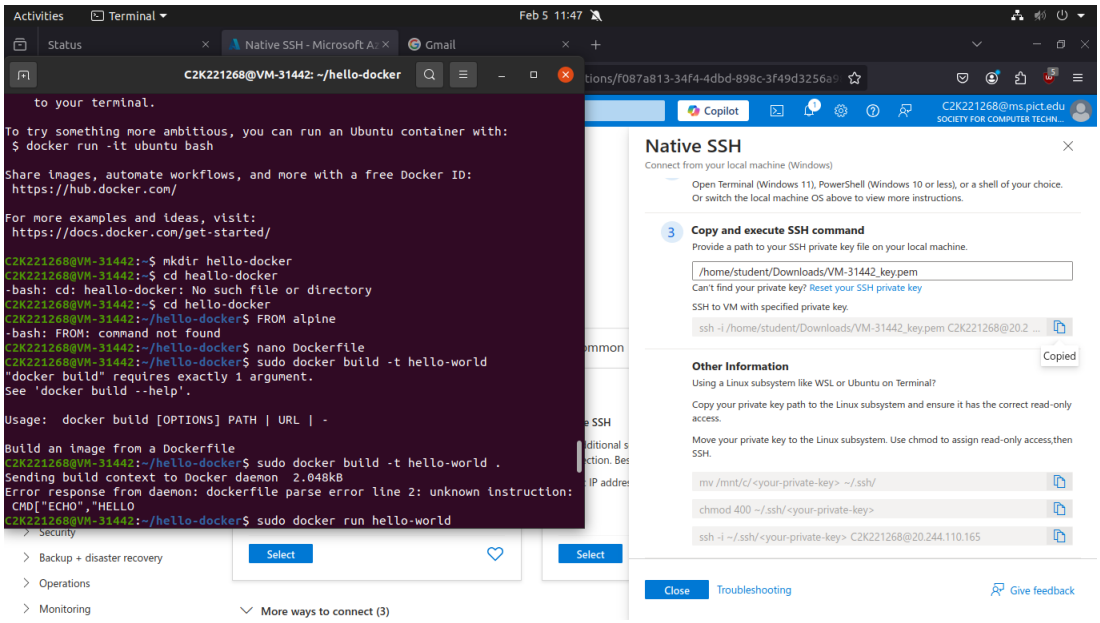


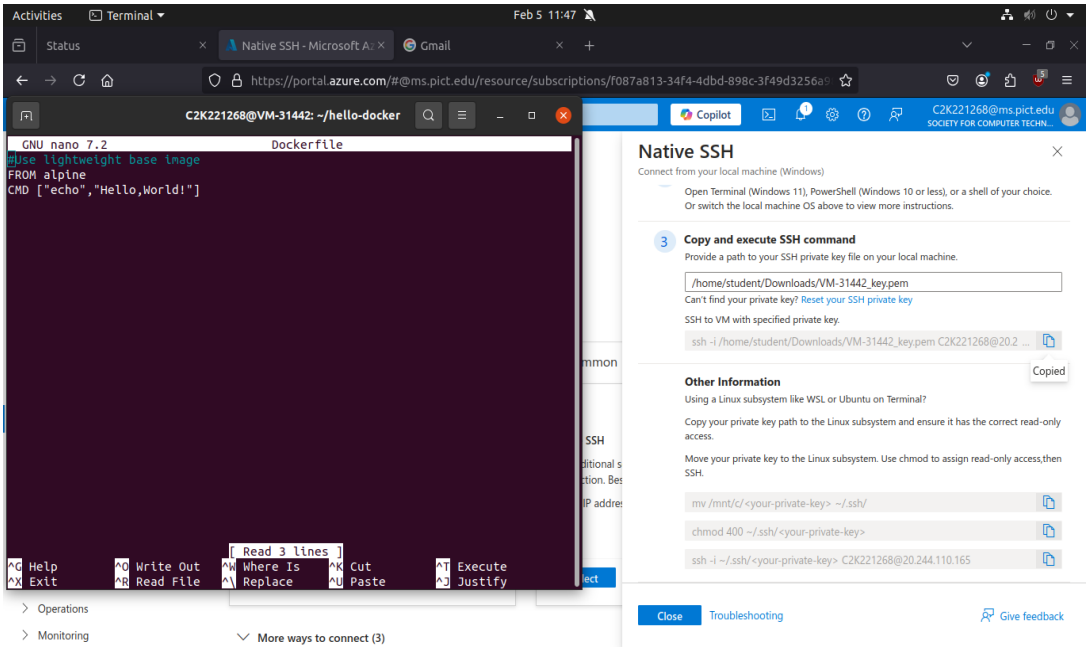
- **Execute following commands to run SSH:**

1. chmod 400 /home/student/Downloads/VM_name
2. ls -l /home/student/Downloads/VM_name
3. ssh -i /home/student/Downloads/VM_name
4. Paste copied string

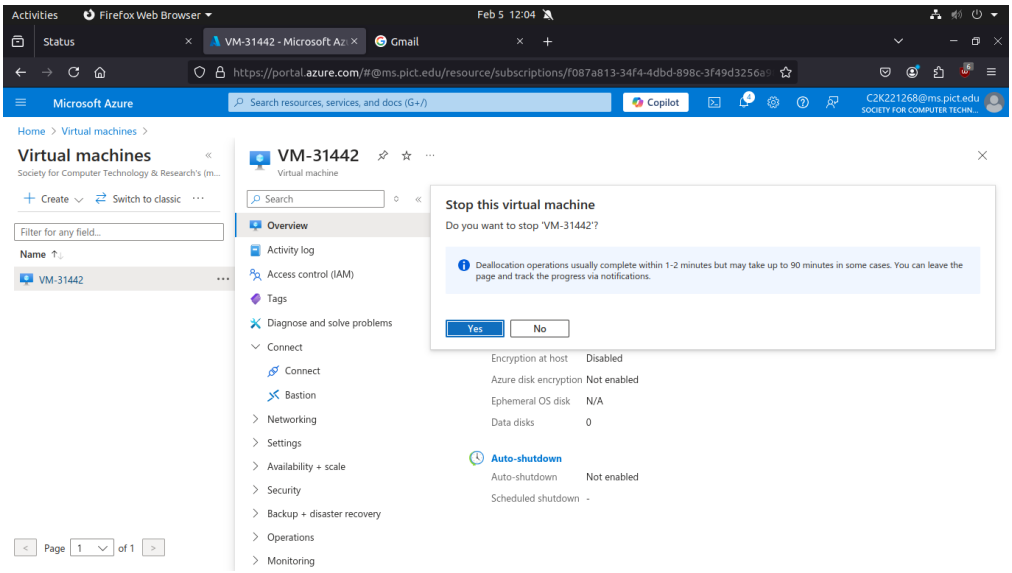
4 Install Docker on the Virtual Machine

- sudo apt update
- sudo apt install docker.io
- sudo systemctl enable docker
- sudo systemctl start docker
- sudo docker –version





- **STOP** the virtual machine.



Conclusion:

1. **Created an Azure VM**: We signed up for Azure, created a virtual machine with the free tier, and configured its settings.
2. **Installed Docker on the VM**: We installed Docker on the virtual machine to enable containerization.
3. **Transferred and Ran Program**: We transferred our program to the VM, created a Docker container, and ran the program inside the container.
4. **Stopped or Deleted VM**: Finally, we stopped or deleted the VM to prevent further costs, ensuring an efficient and cost-effective setup.