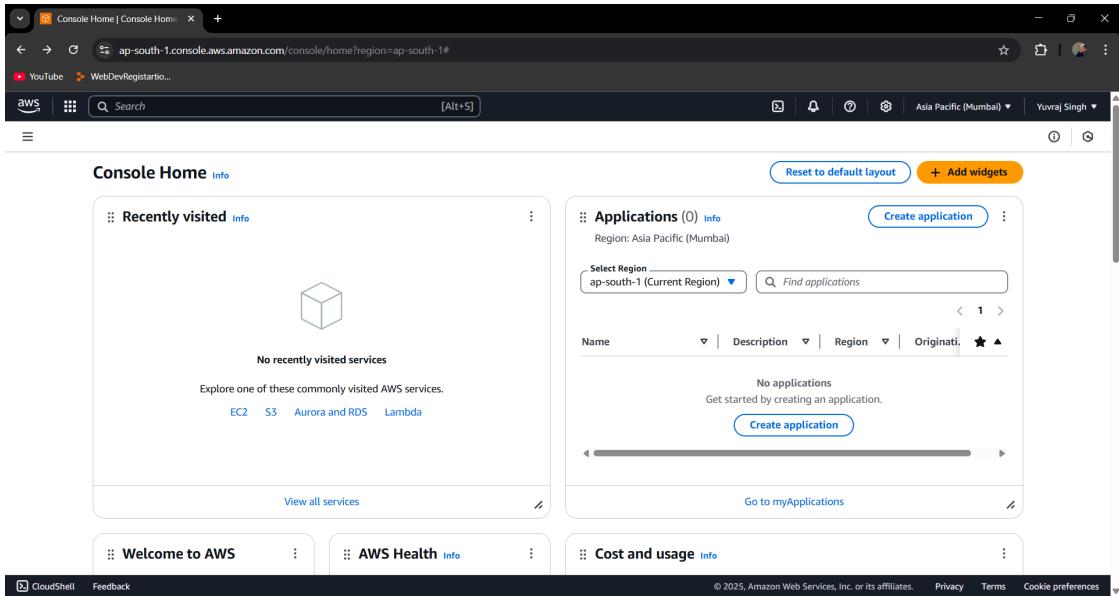


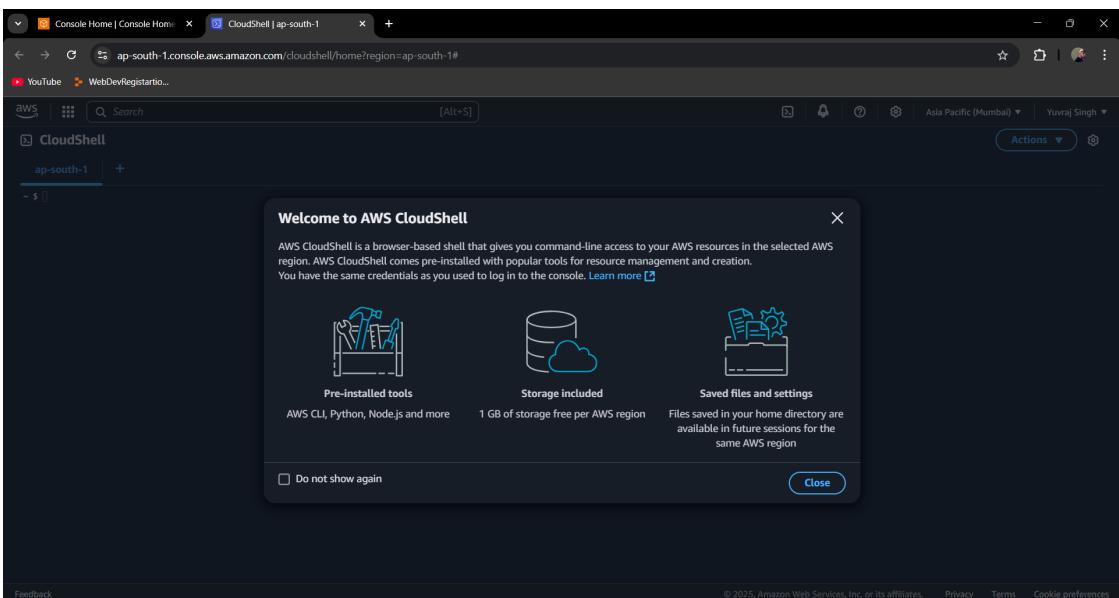
EXPERIMENT 1: Exploring AWS CloudShell and the AWS Cloud9 IDE

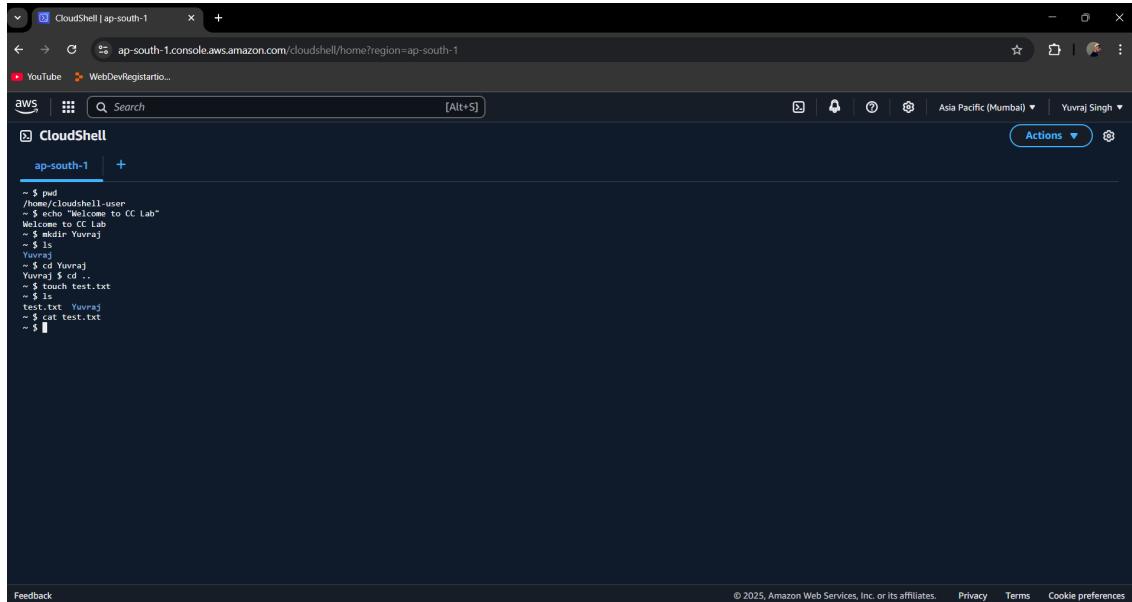
Steps for working with CloudShell

Step 1: Login to AWS Account

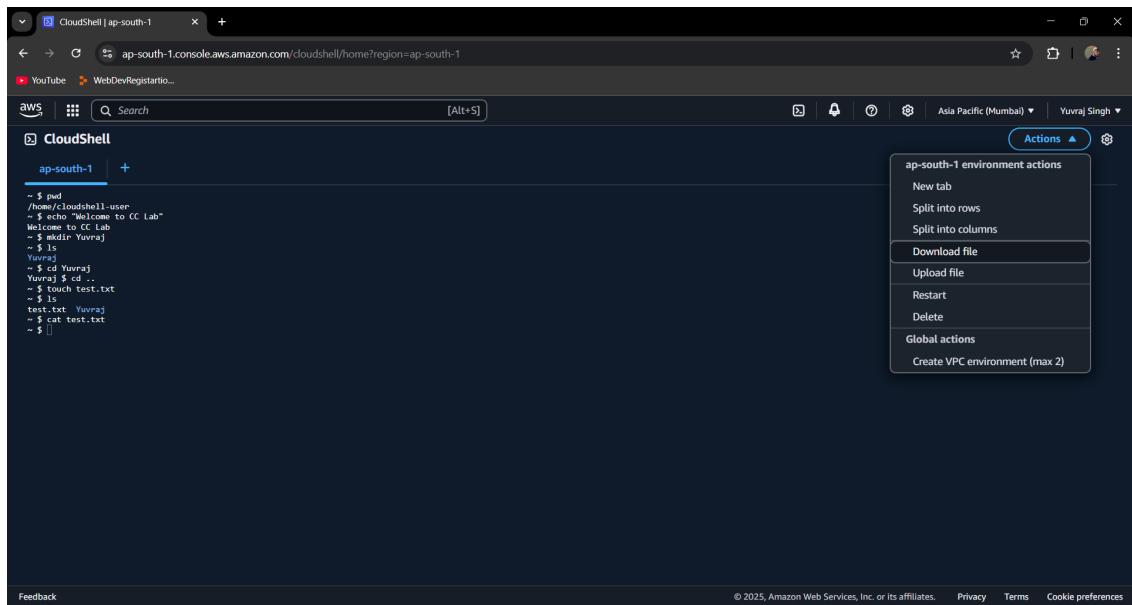


Step 2: Open CloudShell



Step 3: Execute shell commands in the terminal

```
~ $ pwd
/home/cloudshell-user
~ $ echo "Welcome to CC Lab"
Welcome to CC Lab
~ $ mkdir Yuvraj
~ $ ls
Yuvraj
~ $ cd Yuvraj
Yuvraj $ cd ..
~ $ touch test.txt
~ $ ls
test.txt Yuvraj
~ $ cat test.txt
~ $
```

Step 4: To download the created file, choose Download file option from Actions dropdown menu

```
~ $ pwd
/home/cloudshell-user
~ $ echo "Welcome to CC Lab"
Welcome to CC Lab
~ $ mkdir Yuvraj
~ $ ls
Yuvraj
~ $ cd Yuvraj
Yuvraj $ cd ..
~ $ touch test.txt
~ $ ls
test.txt Yuvraj
~ $ cat test.txt
~ $
```

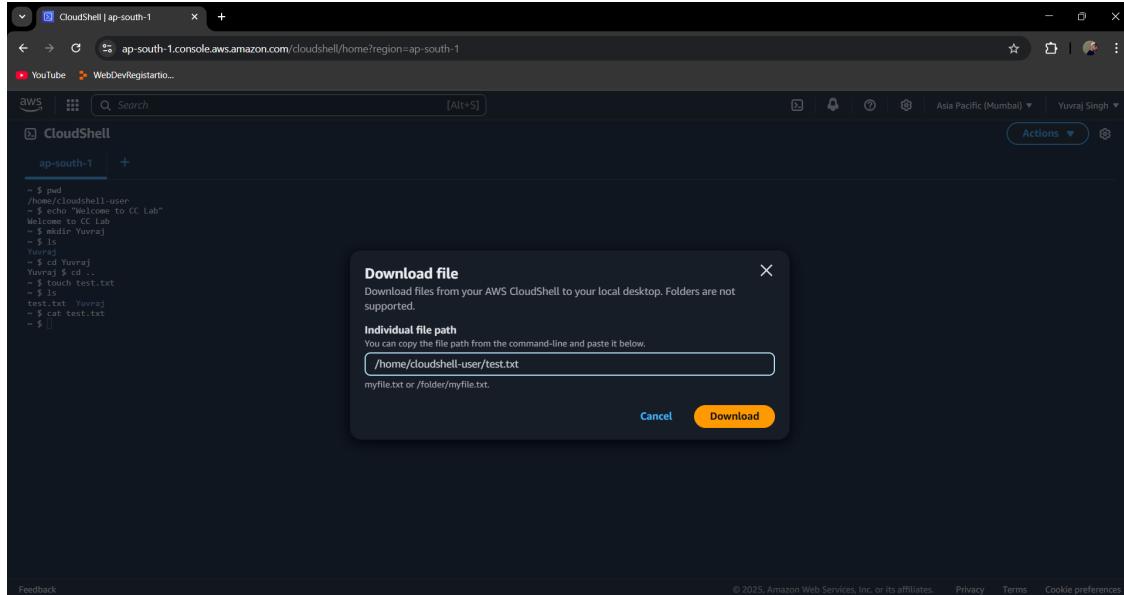
ap-south-1 environment actions

- New tab
- Split into rows
- Split into columns
- Download file**
- Upload file
- Restart
- Delete

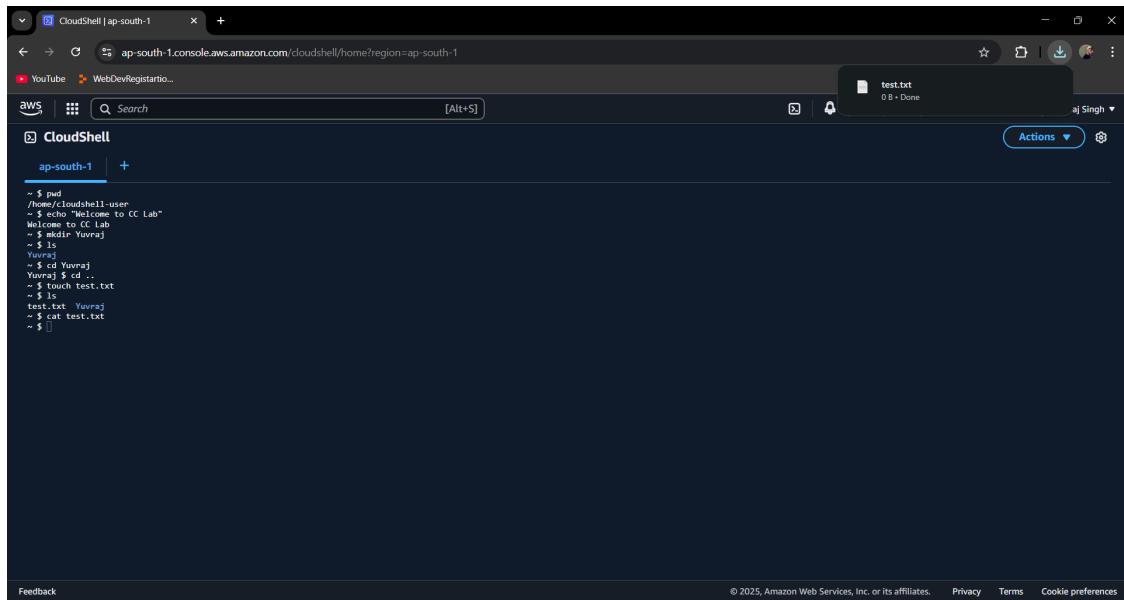
Global actions

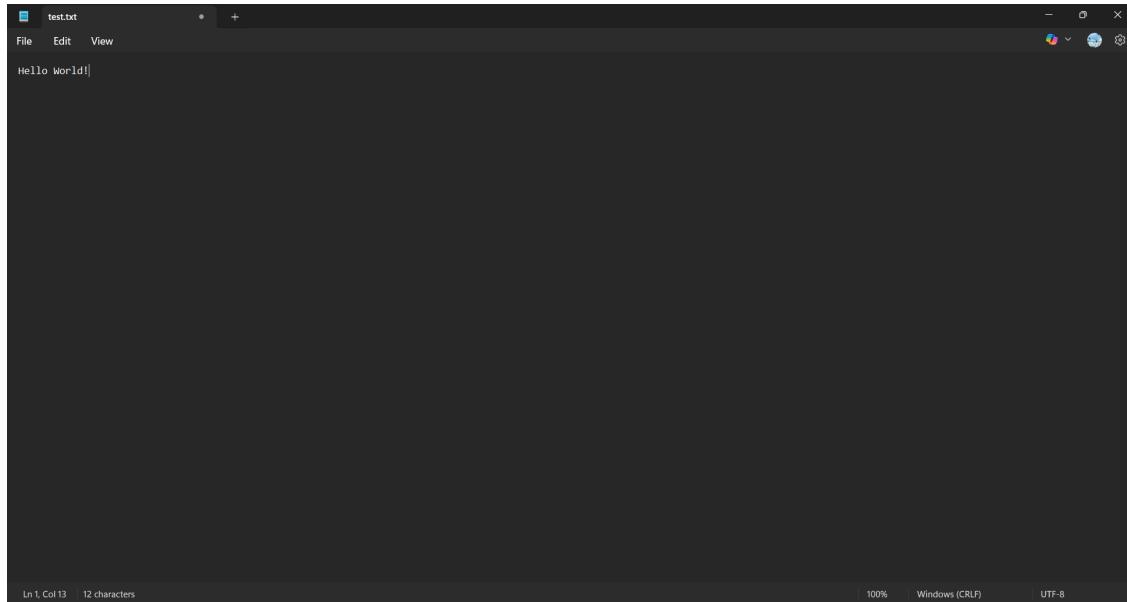
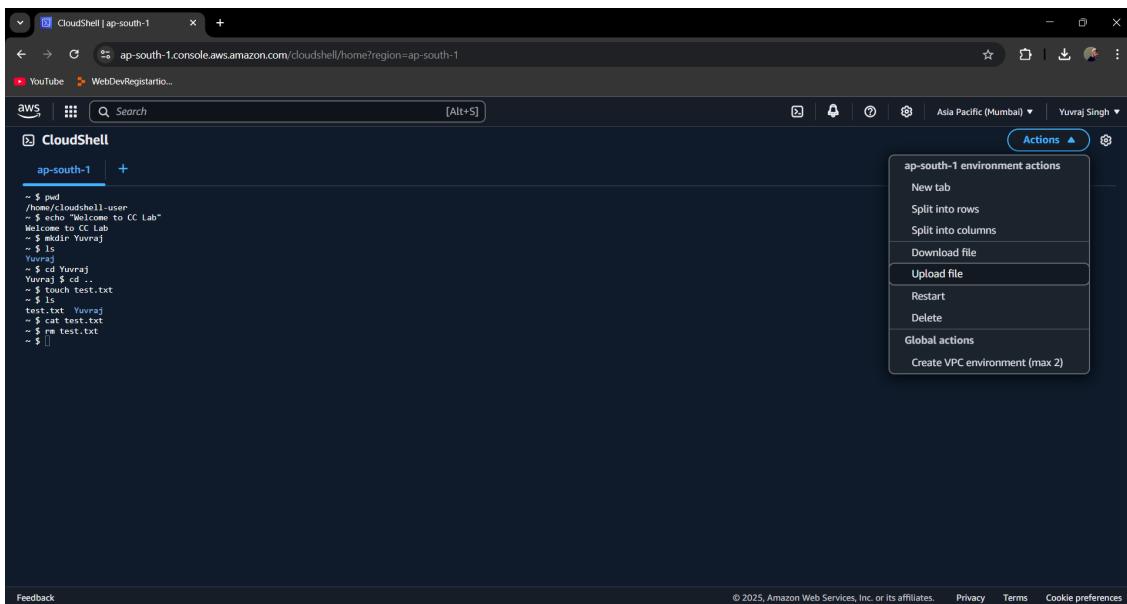
- Create VPC environment (max 2)

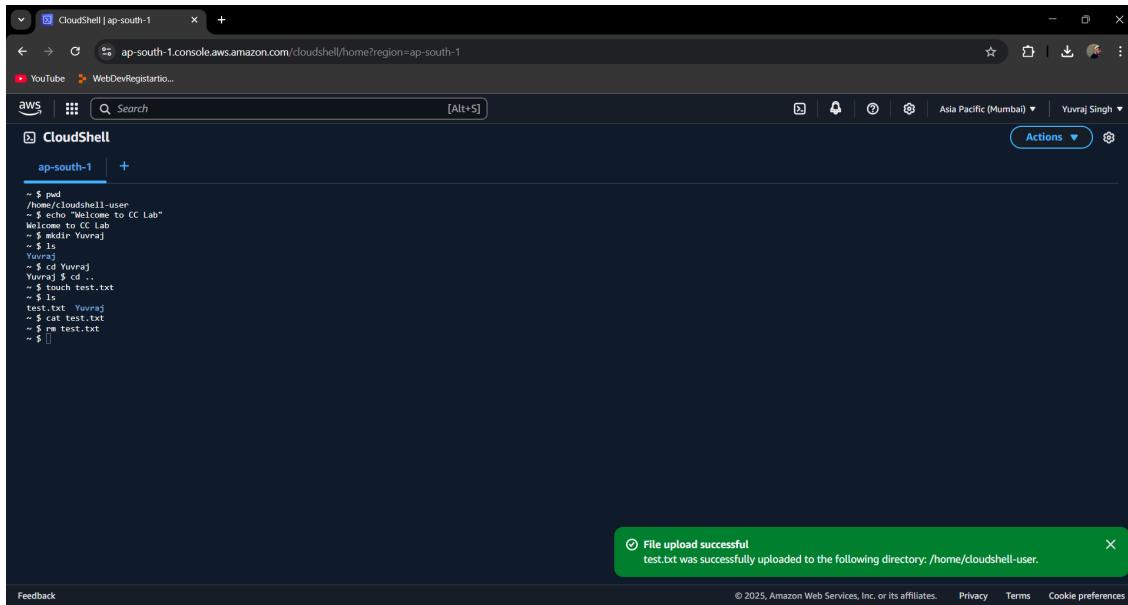
Step 5: Provide the path to the file created (e.g. test.txt) and click on Download button



Step 6: An empty file “test.txt” is downloaded



Step 7: Add some content to the downloaded file (i.e. test.txt) and save it**Step 8:** Execute 'rm' command to delete the earlier created file and upload the altered file by clicking on Upload file option from the Actions dropdown menu

Step 9: Upload the test.txt file

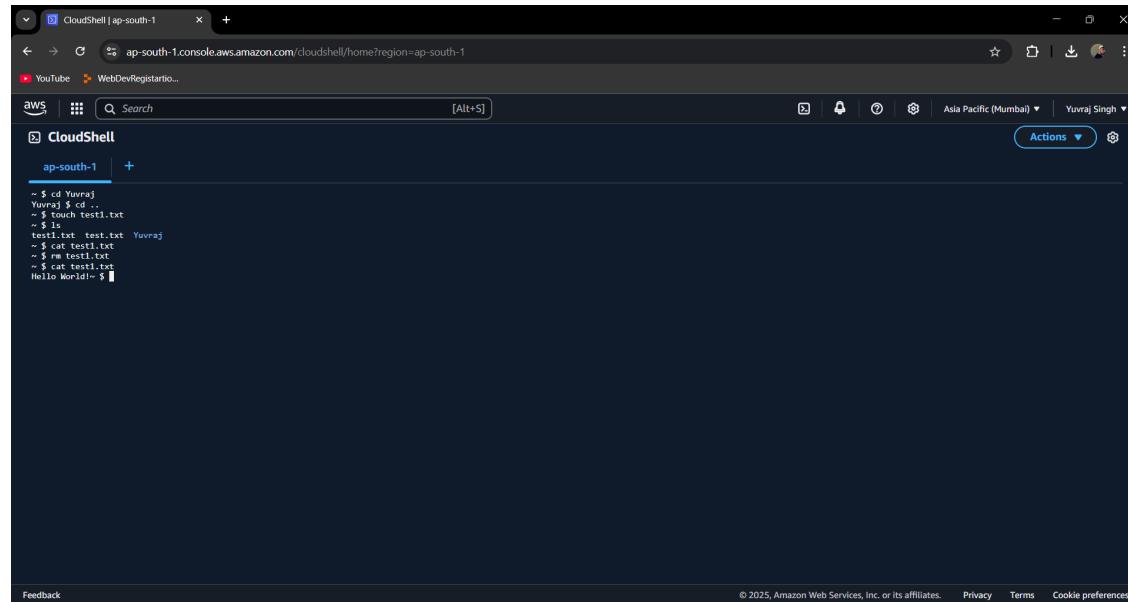
A screenshot of the AWS CloudShell interface. The terminal window shows a series of commands being run:

```
~ $ pwd
/home/cloudshell-user
~ $ echo "Welcome to CC Lab"
Welcome to CC Lab
~ $ mkdir CC_Lab
~ $ cd CC_Lab
~ $ ls
Yuvraj
~ $ touch test.txt
~ $ cat test.txt
~ $ rm test.txt
~ $
```

Below the terminal, a green notification box displays:

File upload successful
test.txt was successfully uploaded to the following directory: /home/cloudshell-user.

At the bottom of the screen, there is a footer with links: Feedback, © 2025, Amazon Web Services, Inc. or its affiliates., Privacy, Terms, and Cookie preferences.

Step 10: Once uploaded successfully, check the contents of “test.txt” using the ‘cat’ command

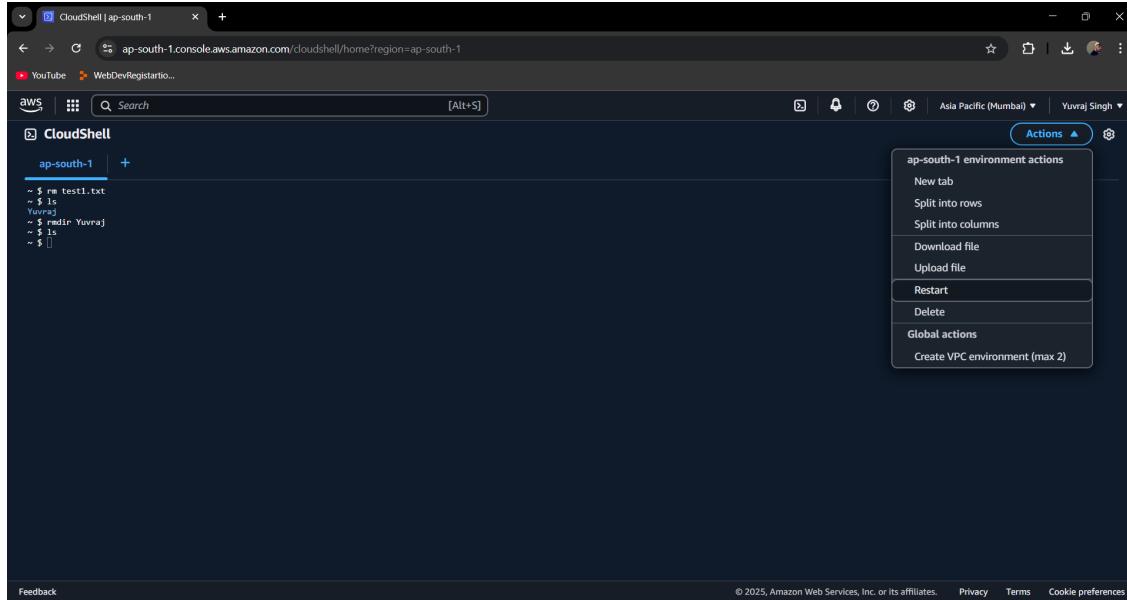
A screenshot of the AWS CloudShell interface. The terminal window shows the following commands and their output:

```
~ $ cd Yuvraj
Yuvraj $ cd ..
~ $ touch test1.txt
~ $ cat test1.txt
test1.txt  test.txt  Yuvraj
~ $ cat test1.txt
~ $ rm test1.txt
~ $ cat test1.txt
Hello World!~ $
```

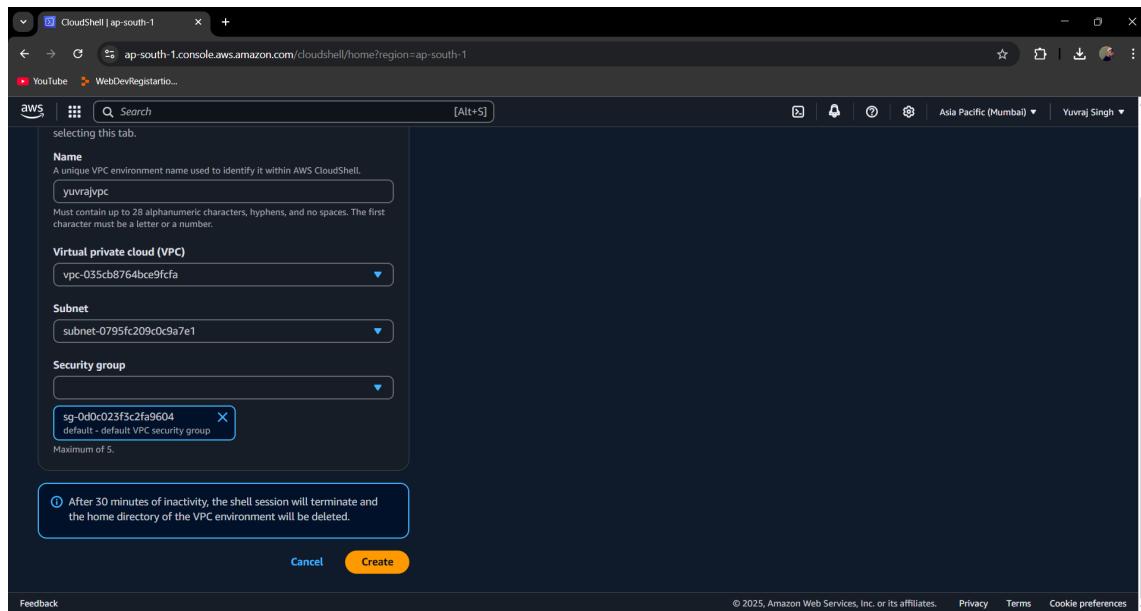
At the bottom of the screen, there is a footer with links: Feedback, © 2025, Amazon Web Services, Inc. or its affiliates., Privacy, Terms, and Cookie preferences.

Steps for creating a VPC (Virtual Private Cloud) Environment

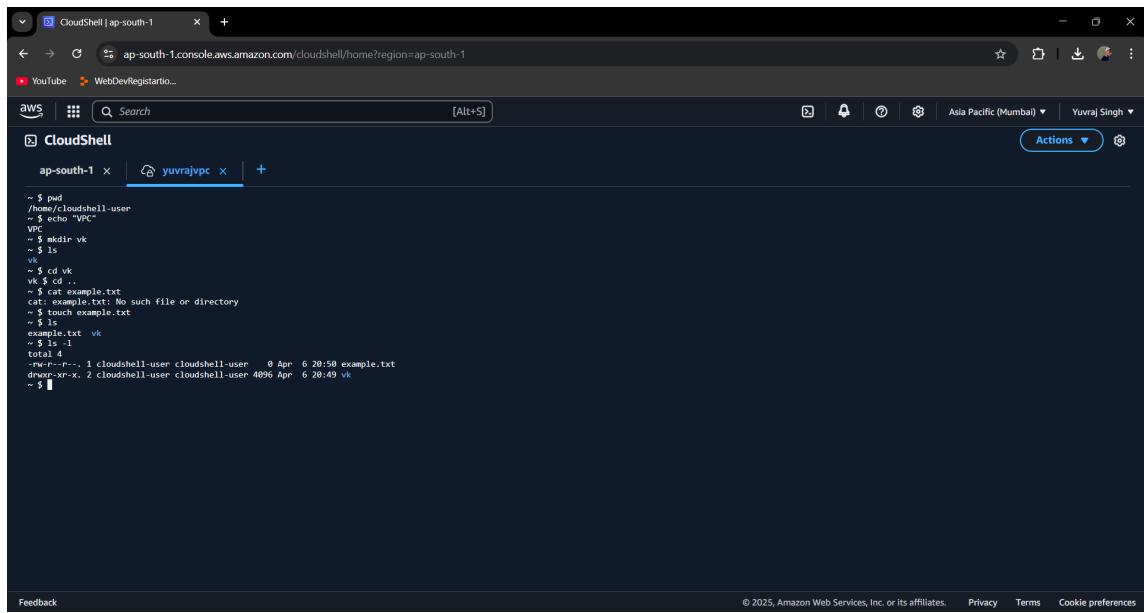
Step 1: From the Actions menu choose option ‘Create VPC environment (max 2)’



Step 2: Give VPC a name (e.g. yuvrajvpc) and choose VPC, Subnet and the default security group and click on Create button



Step 3: Execute the same commands as of CloudShell in the VPC window except for download and upload file options

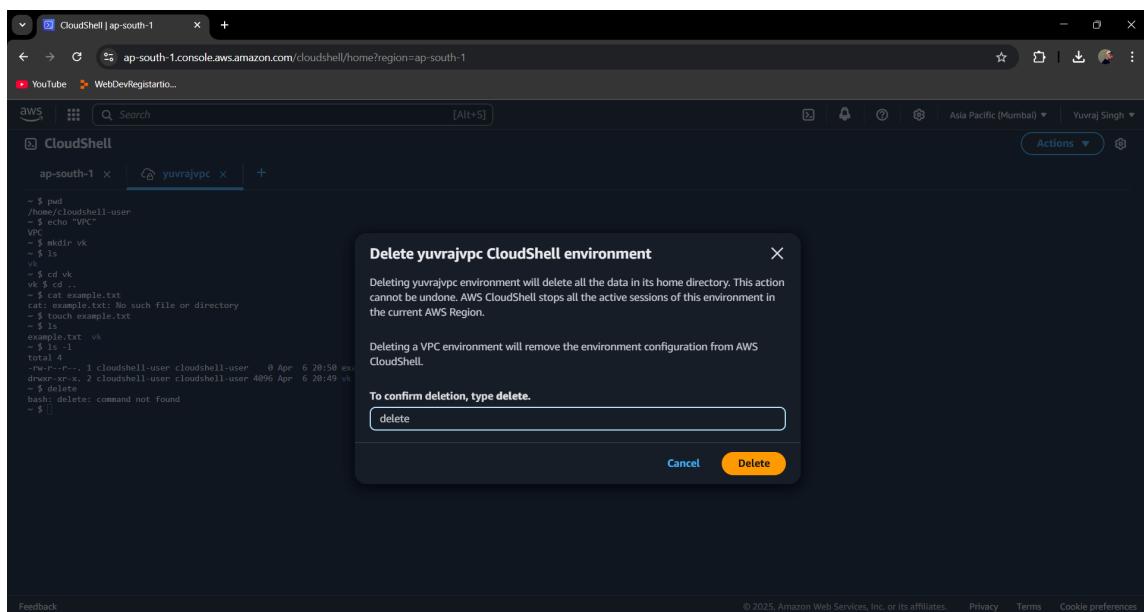


```

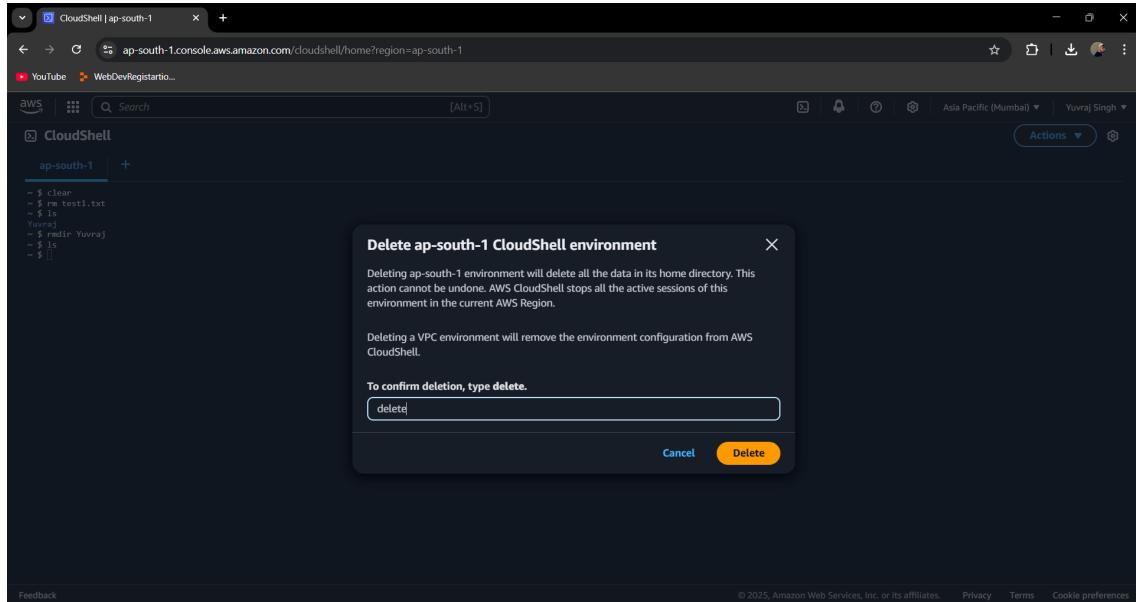
~ $ pwd
/home/cloudshell-user
~ $ echo "VPC"
VPC
~ $ mkdir vk
~ $ ls
vk
~ $ cd vk
vk $ cd ..
cat: example.txt: No such file or directory
~ $ touch example.txt
~ $ ls
example.txt vk
~ $ ls -l
total 4
-rw-r--r--. 1 cloudshell-user cloudshell-user 0 Apr 6 20:50 example.txt
drwxr-xr-x. 2 cloudshell-user cloudshell-user 4096 Apr 6 20:49 vk
~ $ rm example.txt
~ $ ls -l
total 4
-rw-r--r--. 1 cloudshell-user cloudshell-user 0 Apr 6 20:50 example.txt
drwxr-xr-x. 2 cloudshell-user cloudshell-user 4096 Apr 6 20:49 vk
~ $ 

```

Step 4: Once all the commands are executed, delete the VPC by typing delete and clicking on Delete button

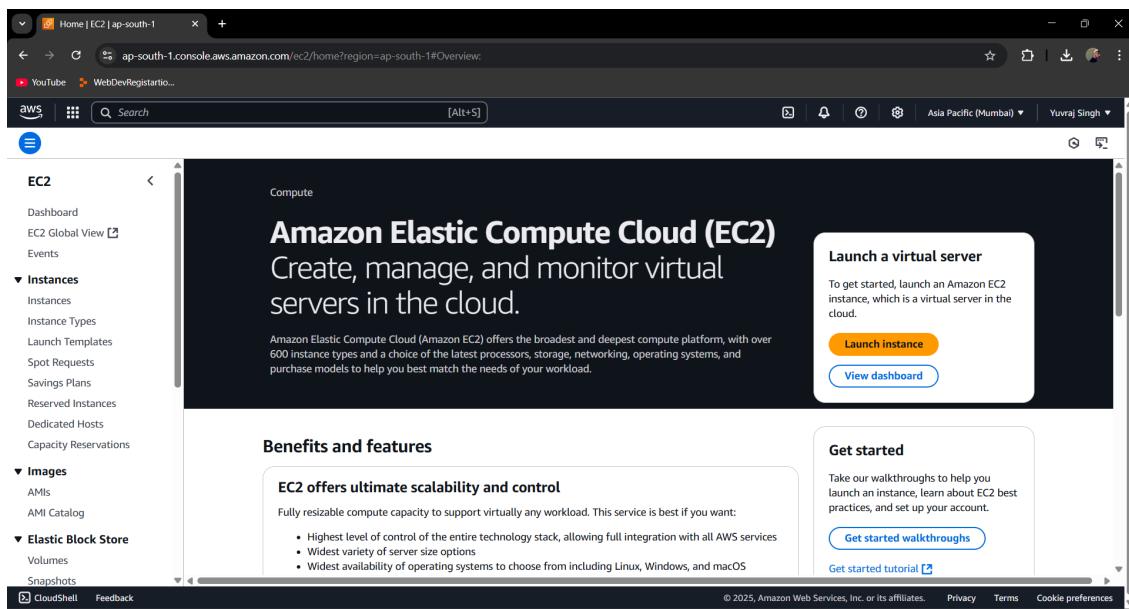


Step 5: Also delete the CloudShell instance once the commands are executed in a similar fashion

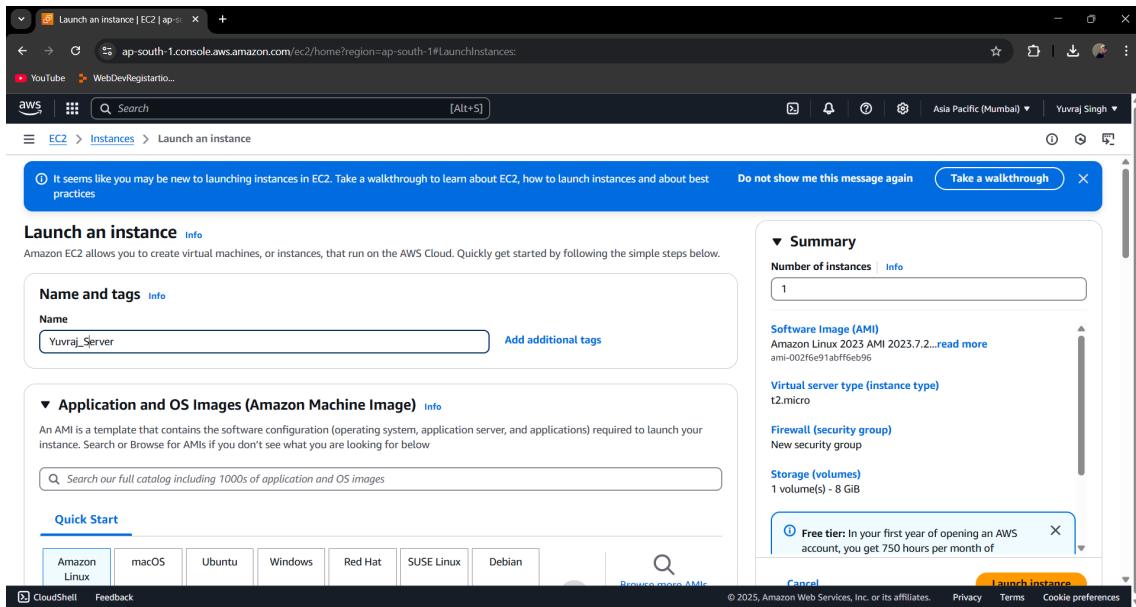


Steps to create EC2 (Elastic Computing 2) instance

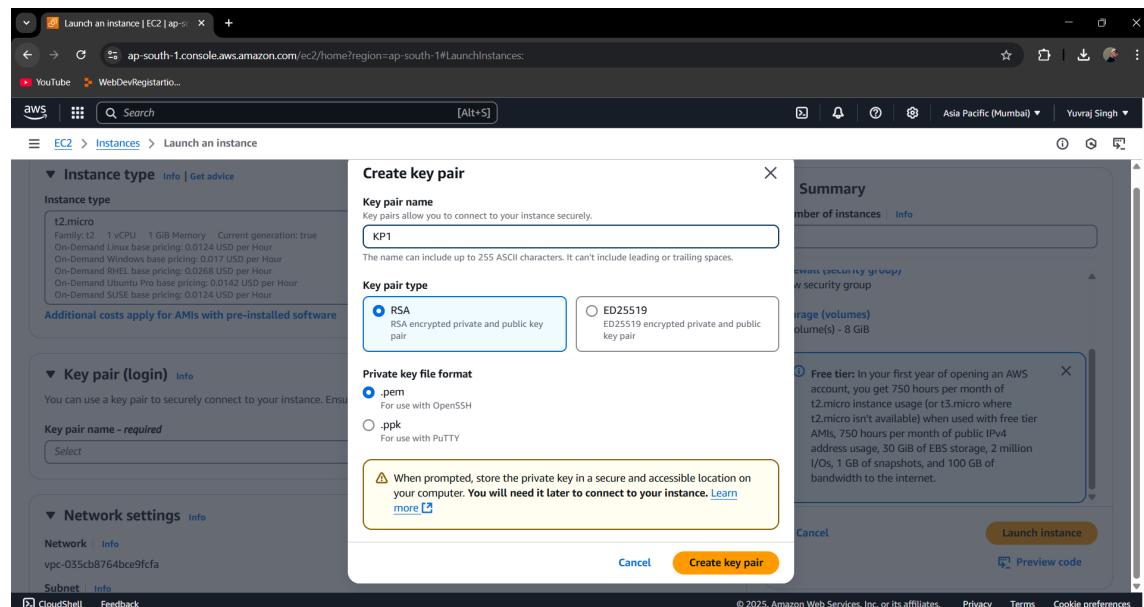
Step 1: Open EC2 dashboard in AWS Console and click on Launch Instance button



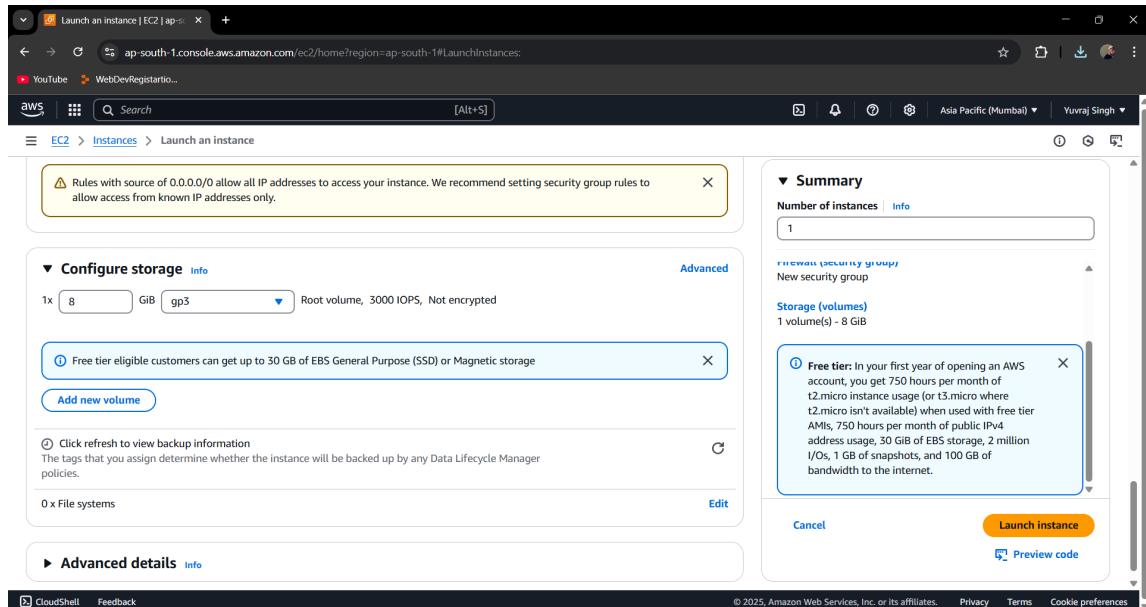
Step 2: Name the instance and scroll down



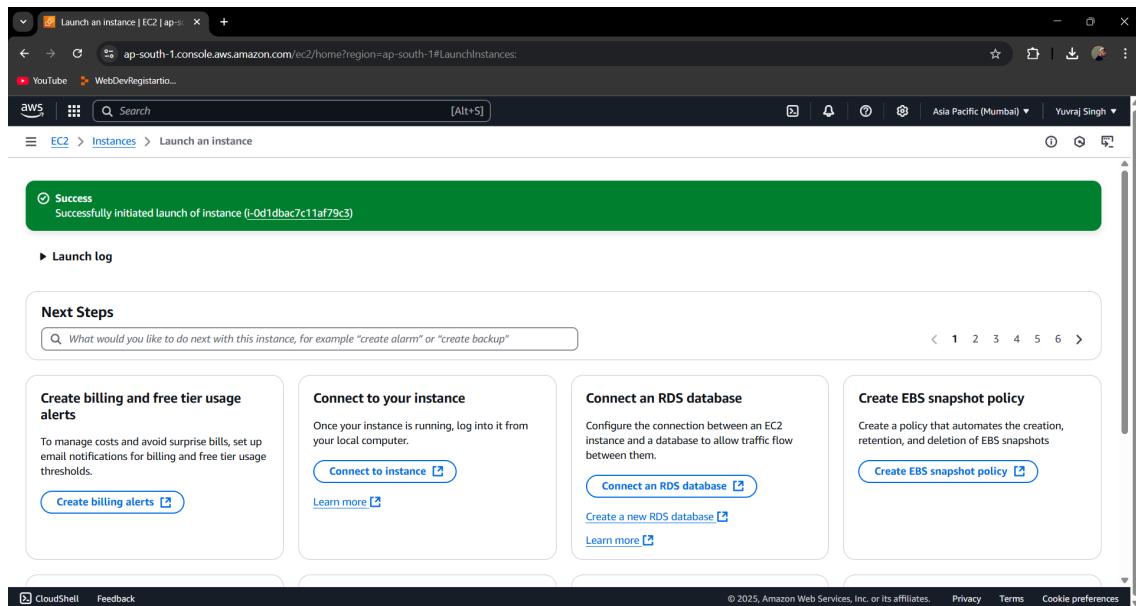
Step 3: Click on create new key pair and create a new key pair by providing a name and clicking on Create key pair button



Step 4: Keep the default options for the rest and click on Launch Instance button



Step 5: A confirmation message regarding Success of launch of our new instance is displayed



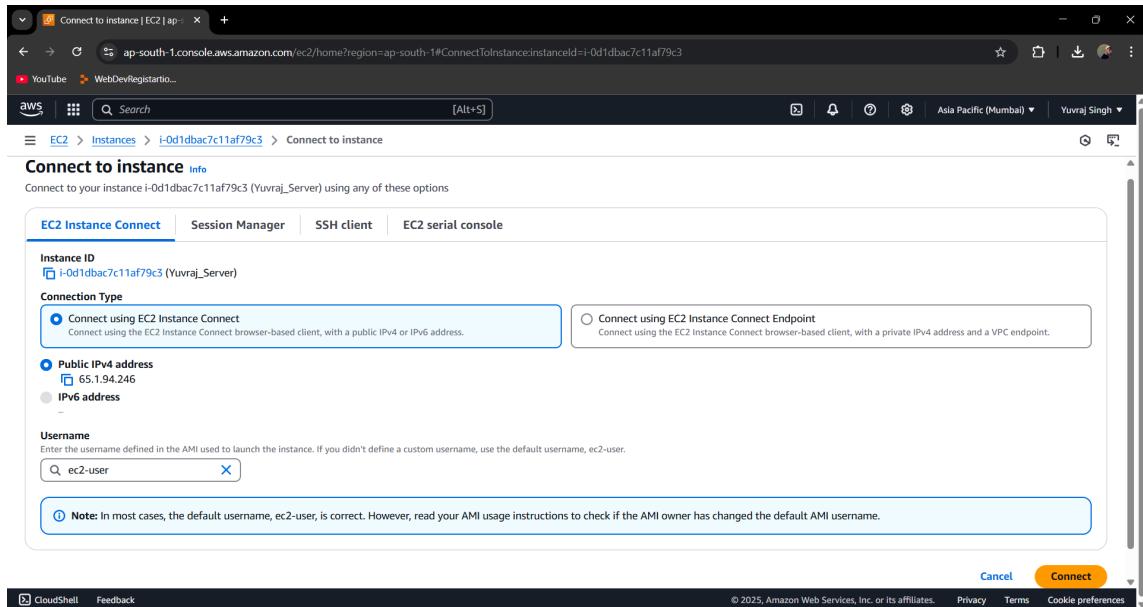
Step 6: Click on Instances. It displays the instances that are running. Click on Instance ID to know about a particular instance.

The screenshot shows the AWS EC2 Instances page. The left sidebar shows navigation options like Dashboard, EC2 Global View, Events, Instances (selected), Images, and Elastic Block Store. The main content area shows a table of instances with one row selected. The selected instance is 'Yuvraj_Server' with ID 'i-0d1dbac7c11af79c3'. The instance is listed as 'Running' with type 't2.micro' and status 'Initializing'. Below the table, a detailed view for the selected instance is shown, including its summary, public and private IP addresses, and instance state.

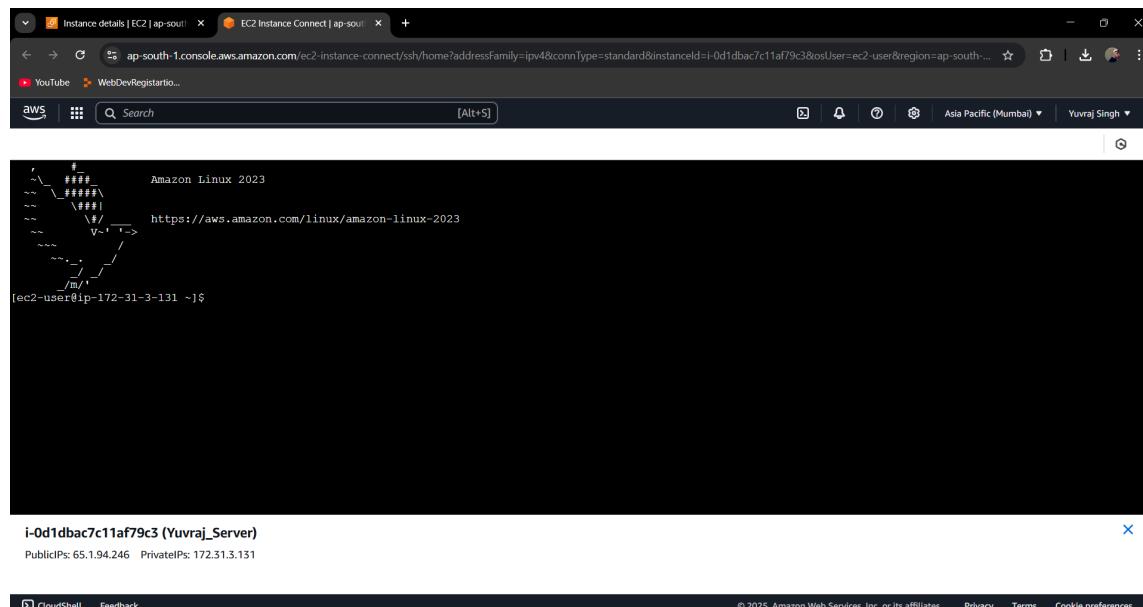
Step 7: Click on the Connect button on the top-right to connect to an instance

The screenshot shows the AWS EC2 Instance details page for the instance 'i-0d1dbac7c11af79c3'. The left sidebar is identical to the previous screenshot. The main content area is titled 'Instance summary for i-0d1dbac7c11af79c3 (Yuvraj_Server)'. It displays detailed information about the instance, including its ID, type (t2.micro), state (Running), and various network and configuration details. The 'Connect' button is prominently displayed in the top right corner of the main content area.

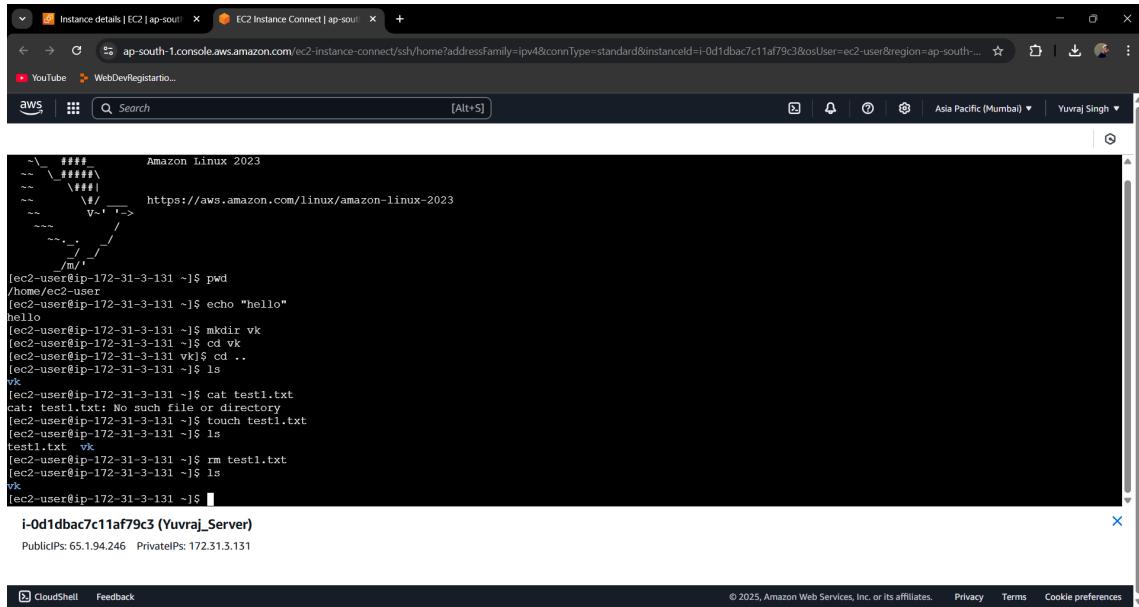
Step 8: Keep the default options and click on Connect button



Step 9: An Amazon-Linux terminal is displayed



Step 10: Execute the commands executed in VPC in this terminal



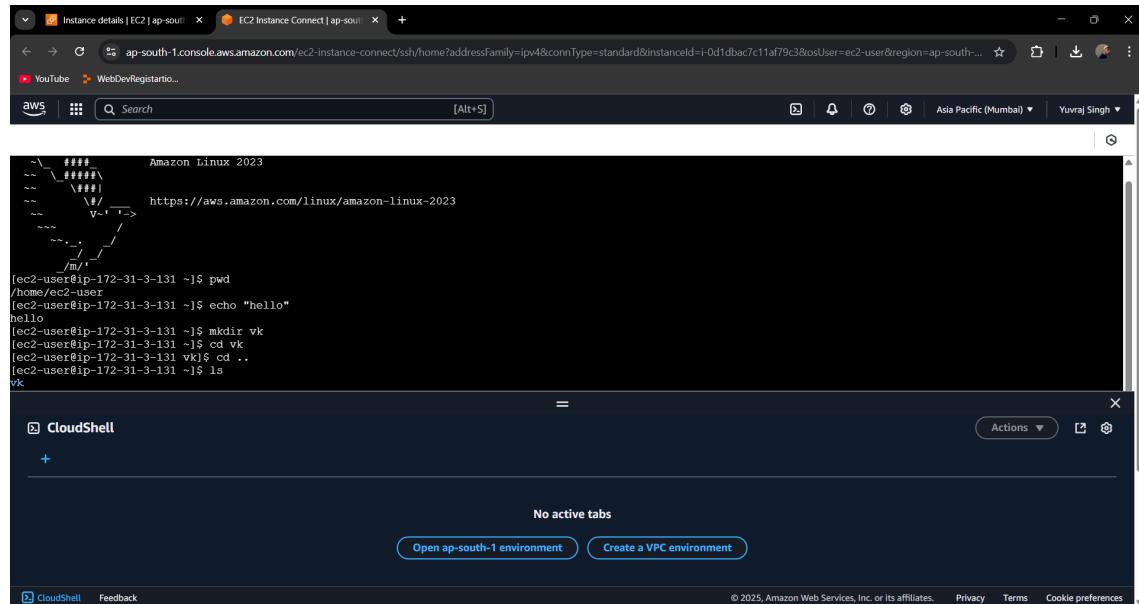
```

Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

[ec2-user@ip-172-31-3-131 ~]$ pwd
/home/ec2-user
[ec2-user@ip-172-31-3-131 ~]$ echo "hello"
hello
[ec2-user@ip-172-31-3-131 ~]$ mkdir vk
[ec2-user@ip-172-31-3-131 ~]$ cd vk
[ec2-user@ip-172-31-3-131 vk]$ cd ..
[ec2-user@ip-172-31-3-131 ~]$ ls
vk
[ec2-user@ip-172-31-3-131 ~]$ cat test1.txt
cat: test1.txt: No such file or directory
[ec2-user@ip-172-31-3-131 ~]$ touch test1.txt
[ec2-user@ip-172-31-3-131 ~]$ ls
test1.txt
[ec2-user@ip-172-31-3-131 ~]$ rm test1.txt
[ec2-user@ip-172-31-3-131 ~]$ ls
vk
[ec2-user@ip-172-31-3-131 ~]$ i-0d1dbac7c11af79c3 (Yuvraj_Server)
Public IPs: 65.1.94.246 Private IPs: 172.31.3.131

```

Step 11: The CloudShell button on the bottom-left corner can be clicked to open a shell terminal. We can execute commands and create VPC directly from here.



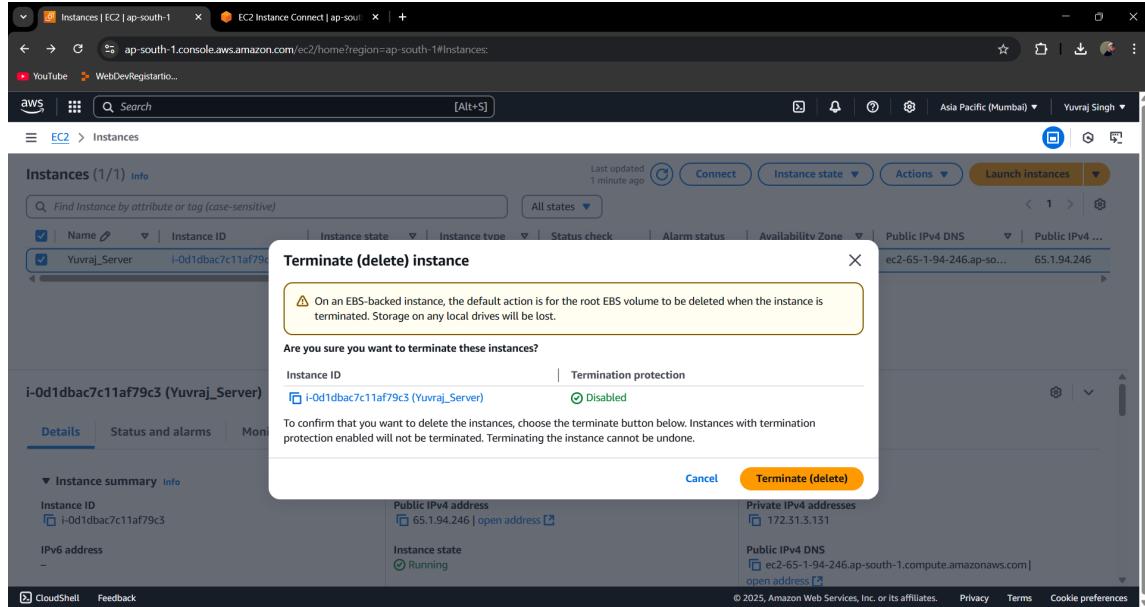
```

Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

[ec2-user@ip-172-31-3-131 ~]$ pwd
/home/ec2-user
[ec2-user@ip-172-31-3-131 ~]$ echo "hello"
hello
[ec2-user@ip-172-31-3-131 ~]$ mkdir vk
[ec2-user@ip-172-31-3-131 ~]$ cd vk
[ec2-user@ip-172-31-3-131 vk]$ cd ..
[ec2-user@ip-172-31-3-131 ~]$ ls
vk
[ec2-user@ip-172-31-3-131 ~]$ cat test1.txt
cat: test1.txt: No such file or directory
[ec2-user@ip-172-31-3-131 ~]$ touch test1.txt
[ec2-user@ip-172-31-3-131 ~]$ ls
test1.txt
[ec2-user@ip-172-31-3-131 ~]$ rm test1.txt
[ec2-user@ip-172-31-3-131 ~]$ ls
vk
[ec2-user@ip-172-31-3-131 ~]$ i-0d1dbac7c11af79c3 (Yuvraj_Server)
Public IPs: 65.1.94.246 Private IPs: 172.31.3.131

```

Step 12: Delete the EC2 instance after execution by clicking on Terminate(delete) instance



Step 13: A popped-up message indicates the successful termination of the instance and also delete the corresponding key pair and Security groups associated with this instance in similar manner

We can sign-out of the AWS account after these steps.

