

Atria Institute of Technology



Department of Information Science and Engineering

Big Data Analytics (18CS72)

Assignment-1

SUBMITTED BY

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Section: B

Submission Date:01/12/23

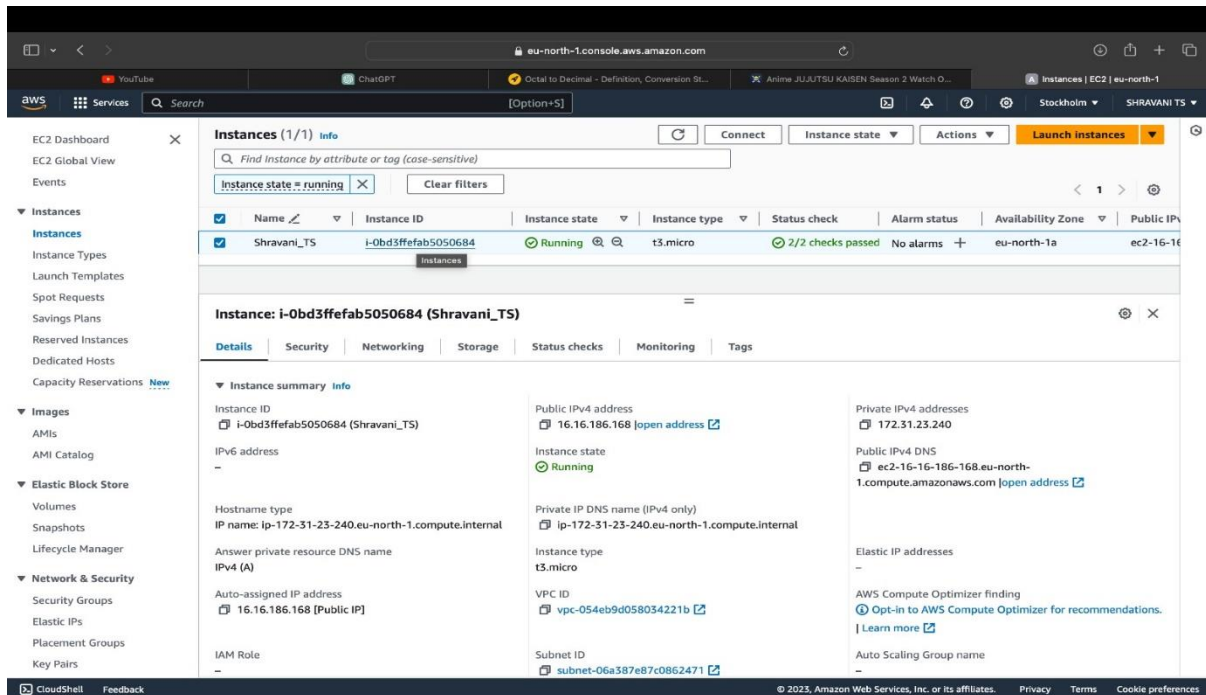
Course Handling Faculty Name:

Dr. K S Ananda Kumar
Associate Professor
Dept of ISE, Atria IT.

Table of contents

Sl. No	Description
1	1. create an EC2 Linux instance in AWS Cloud /Any cloud INSTANCE NAME - YOUR NAME INSTANCE TYPE - t2.micro/any other also. key pair name- your name storage - 10 GB Take the screenshot of instance running status Mention the private IP address and Public IP address. (Execute this program/concept and take a screenshot of the output)
2	Execute the basic Linux commands/ simple program on the instance (Execute this program and take a screenshot of the output)
3	Create the GitHub Account with your credentials, Same things stored in public repository in Github. Share the assignment in github link.

Instance Creation-01



- Instance:
i-0bd3ffefab5050684 (Shravani_TS)
- Instance ID:
i-0bd3ffefab5050684 (Shravani_TS)
- Public IPv4 address:
16.16.186.168
- Private IPv4 addresses:
172.31.23.240
- Instance state:
Running

Screenshots of AWS Instance:

These screenshots gives the details about the instance.

This screenshot displays the AWS Management Console for the instance 'Shrivani_TS' (ID: i-0bd3ffefab5050684). The instance is in a 'Running' state, using the 't3.micro' instance type, and is located in the 'eu-north-1a' availability zone. The console shows various tabs for instance details, including Networking, Security, Storage, Status checks, Monitoring, and Tags. The Networking tab is currently selected, showing details such as the Public IPv4 address (16.186.168), Private IPv4 addresses (172.31.23.240), and the VPC ID (vpc-054eb9d058034221b).

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
Shrivani_TS	i-0bd3ffefab5050684	Running	t3.micro	2/2 checks passed	No alarms	eu-north-1a	ec2-16-16

Instance: i-0bd3ffefab5050684 (Shrivani_TS)

Networking details

- Public IPv4 address: 16.186.168
- Private IPv4 addresses: 172.31.23.240
- Private IP DNS name (IPv4 only): ip-172-31-23-240.eu-north-1.compute.internal
- Subnet ID: subnet-06a387e87c0862471
- Availability zone: eu-north-1a
- Use RBN as guest OS hostname: Disabled
- Answer RBN DNS hostname IPv4: Enabled

Network Interfaces (1)

This screenshot displays the AWS Management Console for the instance 'Shrivani_TS' (ID: i-0bd3ffefab5050684), focusing on the 'Root device details' and 'Block devices' sections. The instance is in a 'Running' state, using the 't3.micro' instance type, and is located in the 'eu-north-1a' availability zone. The console shows various tabs for instance details, including Networking, Security, Storage, Status checks, Monitoring, and Tags. The Storage tab is currently selected, showing details such as the Root device name (/dev/xvda), Root device type (EBS), and EBS optimization (enabled).

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
Shrivani_TS	i-0bd3ffefab5050684	Running	t3.micro	2/2 checks passed	No alarms	eu-north-1a	ec2-16-16

Instance: i-0bd3ffefab5050684 (Shrivani_TS)

Root device details

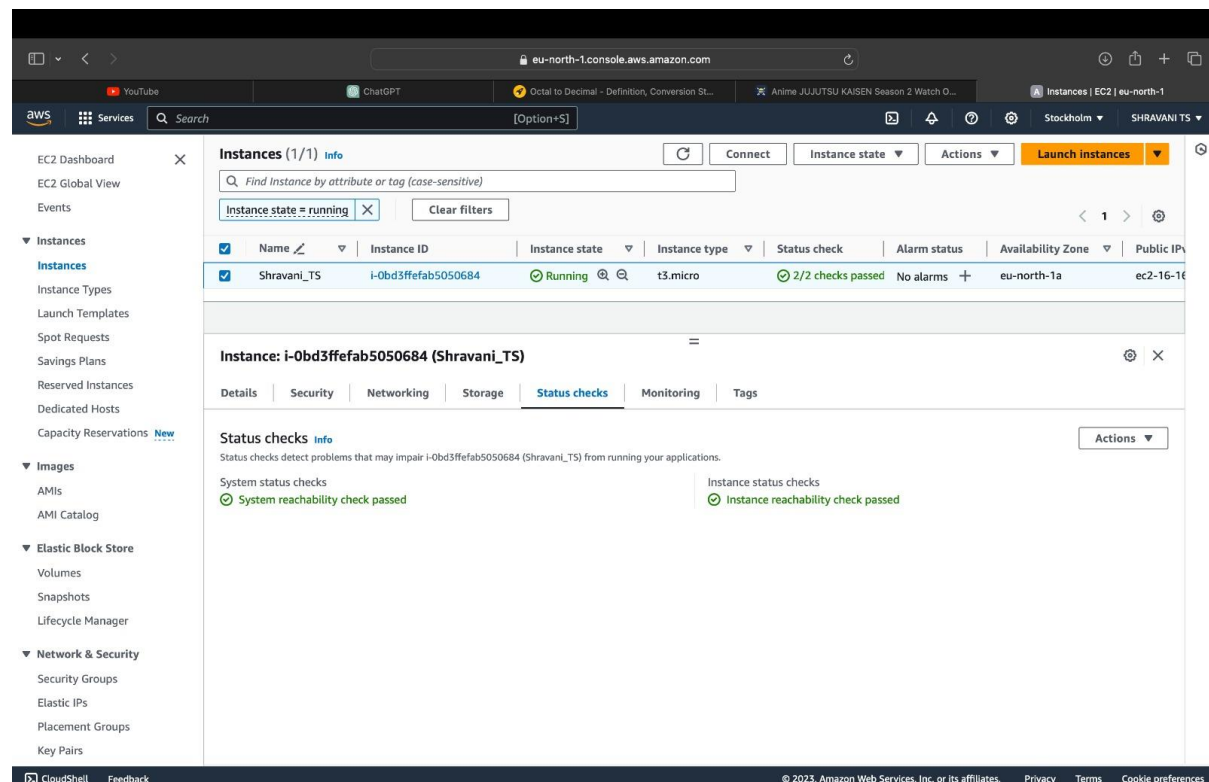
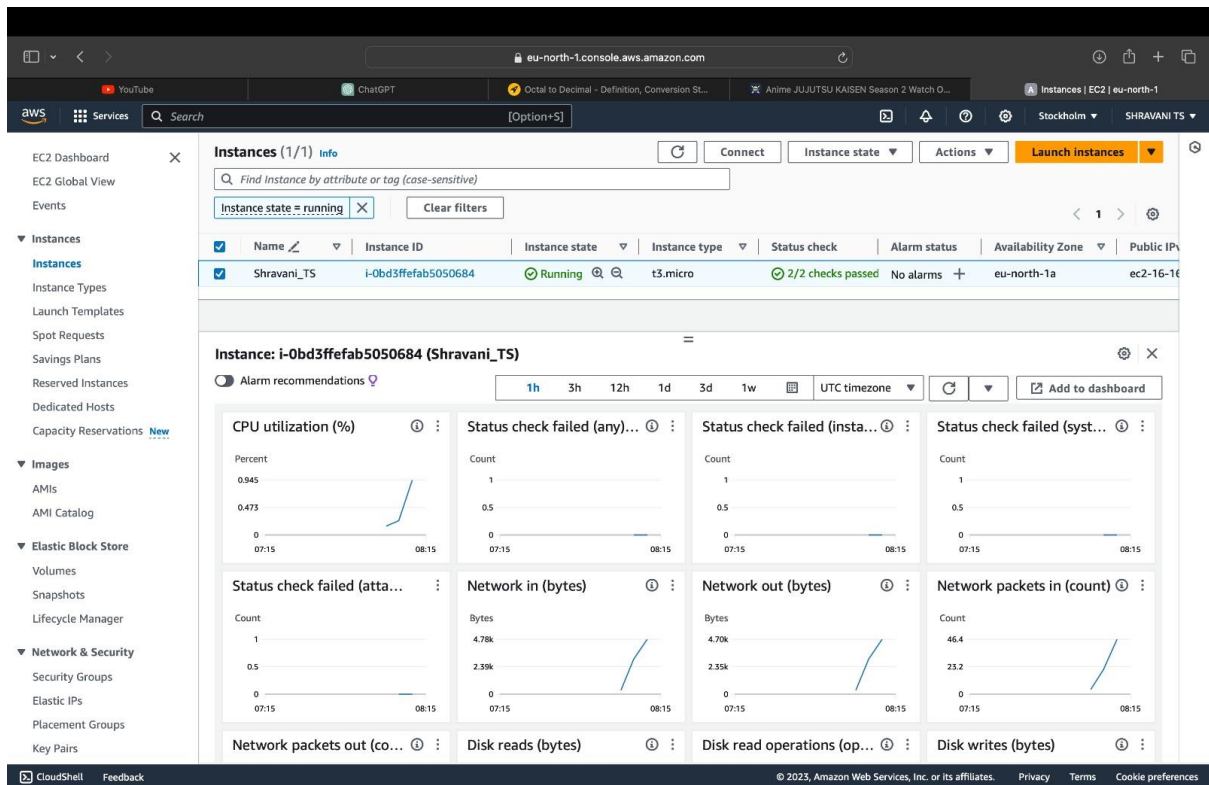
- Root device name: /dev/xvda
- Root device type: EBS
- EBS optimization: enabled

Block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID
vol-070839a2ddb678a8d	/dev/xvda	10	Attached	2023/12/01 13:31 GMT+5:30	No	-

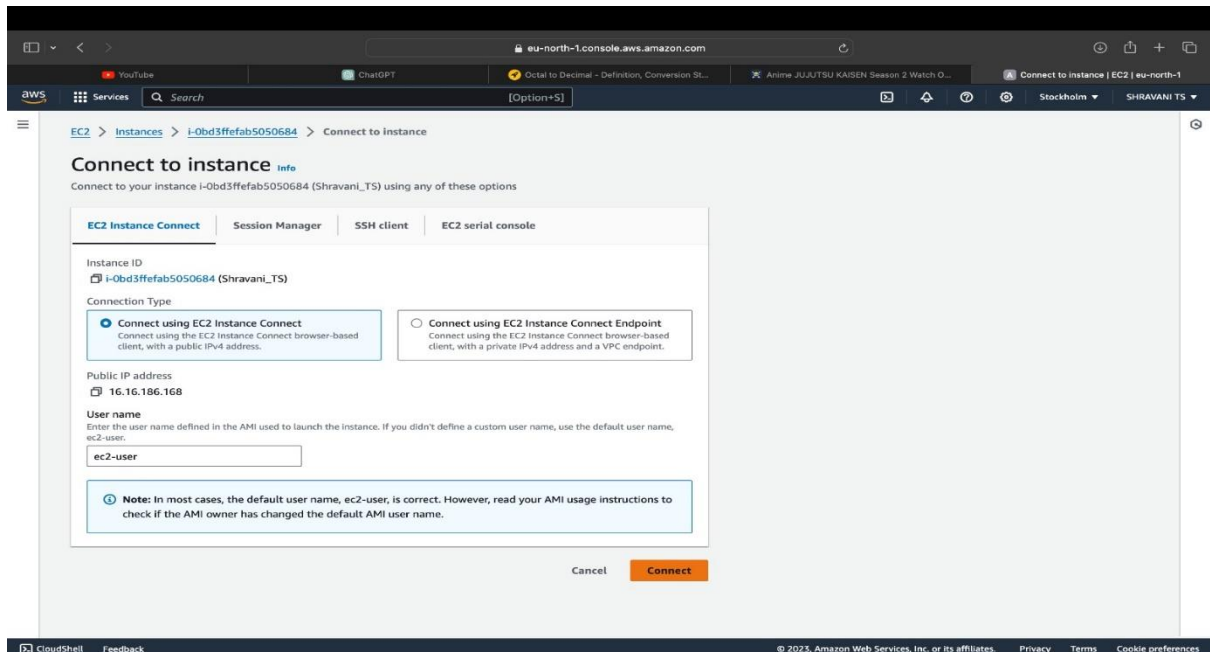
Recent root volume replacement tasks

Task ID	Task state	Start time	Completion time	Tags
No recent replace root volume tasks				



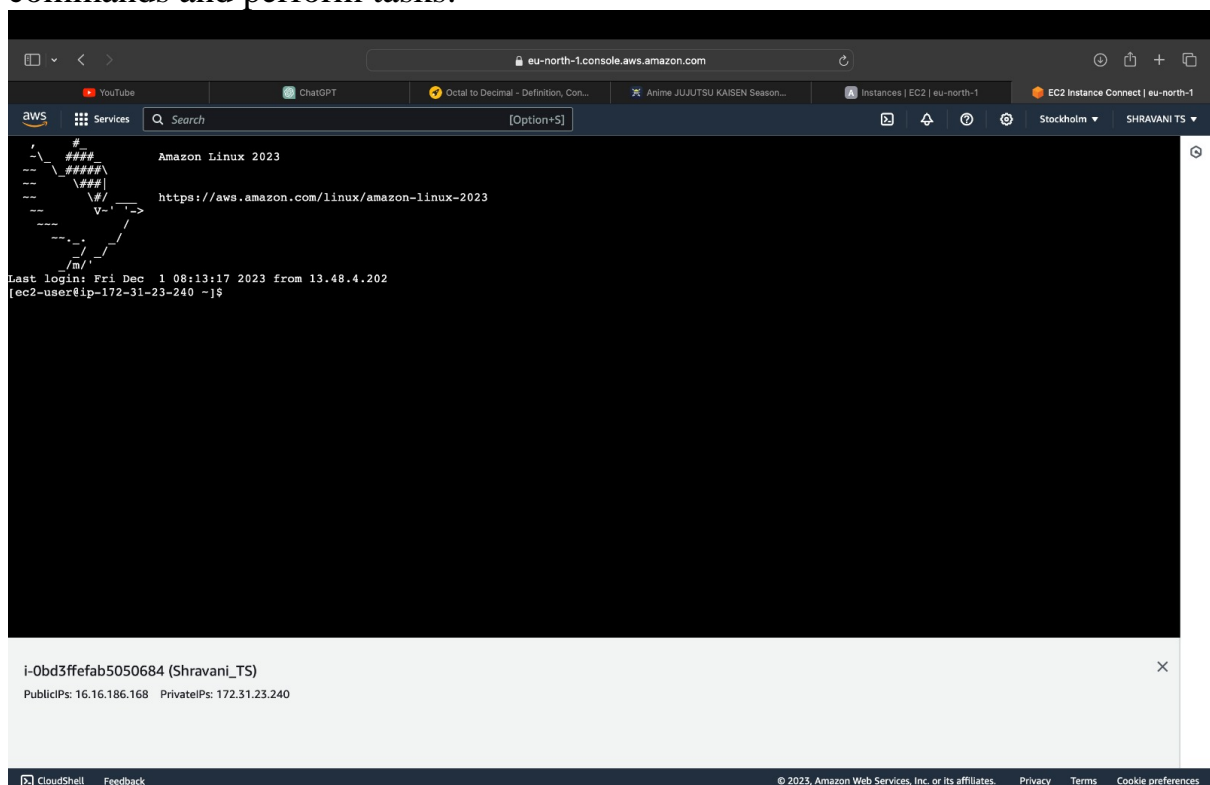
Connecting to the Instance:

We can connect to the instance we created by selecting connect using EC2 Instance Connect.

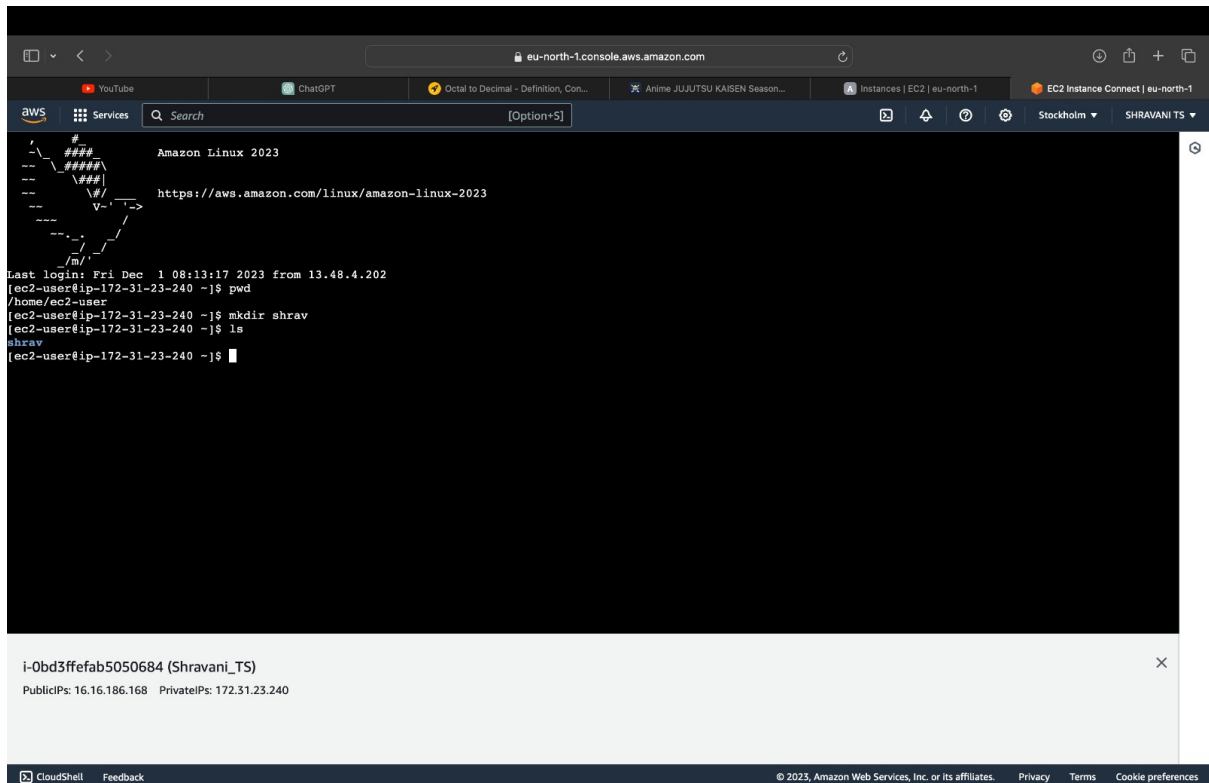


The Terminal:

After connecting to the instance, the terminal opens where we can now run our commands and perform tasks.



Running commands on the terminal:

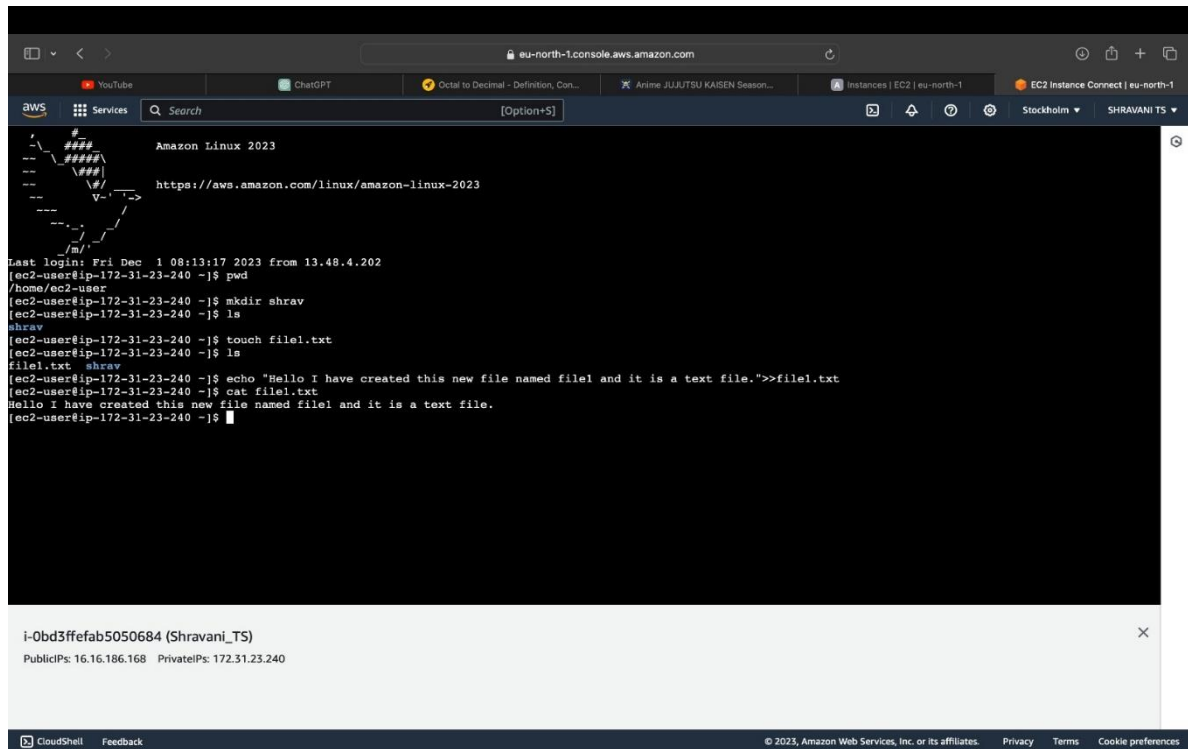


```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

Last login: Fri Dec 1 08:13:17 2023 from 13.48.4.202
[ec2-user@ip-172-31-23-240 ~]$ pwd
/home/ec2-user
[ec2-user@ip-172-31-23-240 ~]$ mkdir shrav
[ec2-user@ip-172-31-23-240 ~]$ ls
shrav
[ec2-user@ip-172-31-23-240 ~]$
```

i-Obd3ffefab5050684 (Shravani_TS)
PublicIPs: 16.16.186.168 PrivateIPs: 172.31.23.240

- **pwd:**
pwd is used to present working directory, this gave the output /home/ec2-user
- **mkdir:**
The mkdir (**make directory**) command creates a new directory in the provided location. I have created a directory called shrav.
- **ls:**
The ls command (**list**) prints a list of the current directory's contents. Therefore we got the directory created display as output.



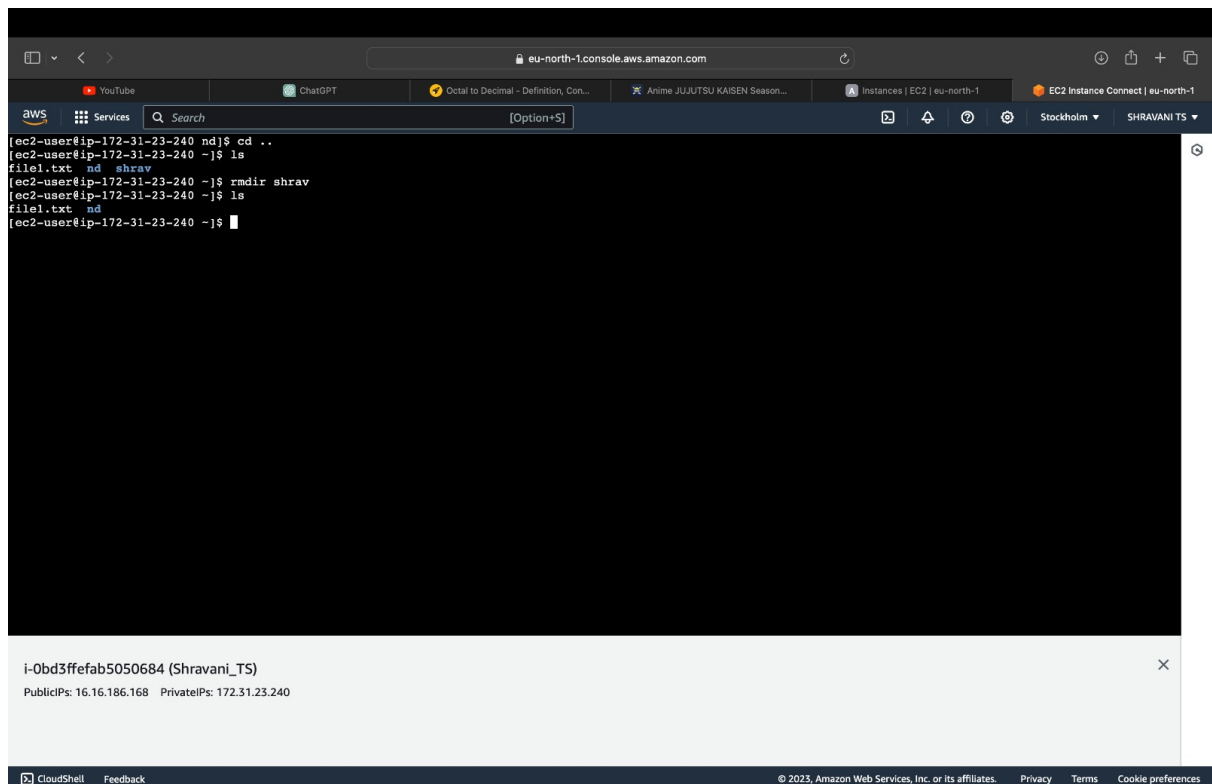
```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

Last login: Fri Dec 1 08:13:17 2023 from 13.48.4.202
[ec2-user@ip-172-31-23-240 ~]$ pwd
/home/ec2-user
[ec2-user@ip-172-31-23-240 ~]$ mkdir shrav
[ec2-user@ip-172-31-23-240 ~]$ ls
shrav
[ec2-user@ip-172-31-23-240 ~]$ touch file1.txt
[ec2-user@ip-172-31-23-240 ~]$ ls
file1.txt  shrav
[ec2-user@ip-172-31-23-240 ~]$ echo "Hello I have created this new file named file1 and it is a text file.">>file1.txt
[ec2-user@ip-172-31-23-240 ~]$ cat file1.txt
Hello I have created this new file named file1 and it is a text file.
[ec2-user@ip-172-31-23-240 ~]$
```

i-Obd3ffefab5050684 (Shravani_TS)
PublicIPs: 16.16.186.168 PrivateIPs: 172.31.23.240

- touch:
 - The touch command's primary purpose is to modify an existing file's timestamp. The command creates an empty file if it does not exist. Due to this effect, touch is also a quick way to make a new file (or a batch of files).
 - Here I have created a txt file called file1.
 - Using ls command we can find where these files have been created .
- cat:
 - The cat command (concatenate) displays the contents of a file in the terminal (standard output or stdout).
 - To use the command, provide a file name from the current directory.
 - Here I provide the txt file called file1.txt.

- echo:
 - The echo command to print arguments to the terminal.
 - Here I have used echo “hello I have created this file name file1 and it is a text file.”.
 - The >> operator redirects output to a file.



The screenshot shows an AWS CloudShell terminal window. The terminal output is as follows:

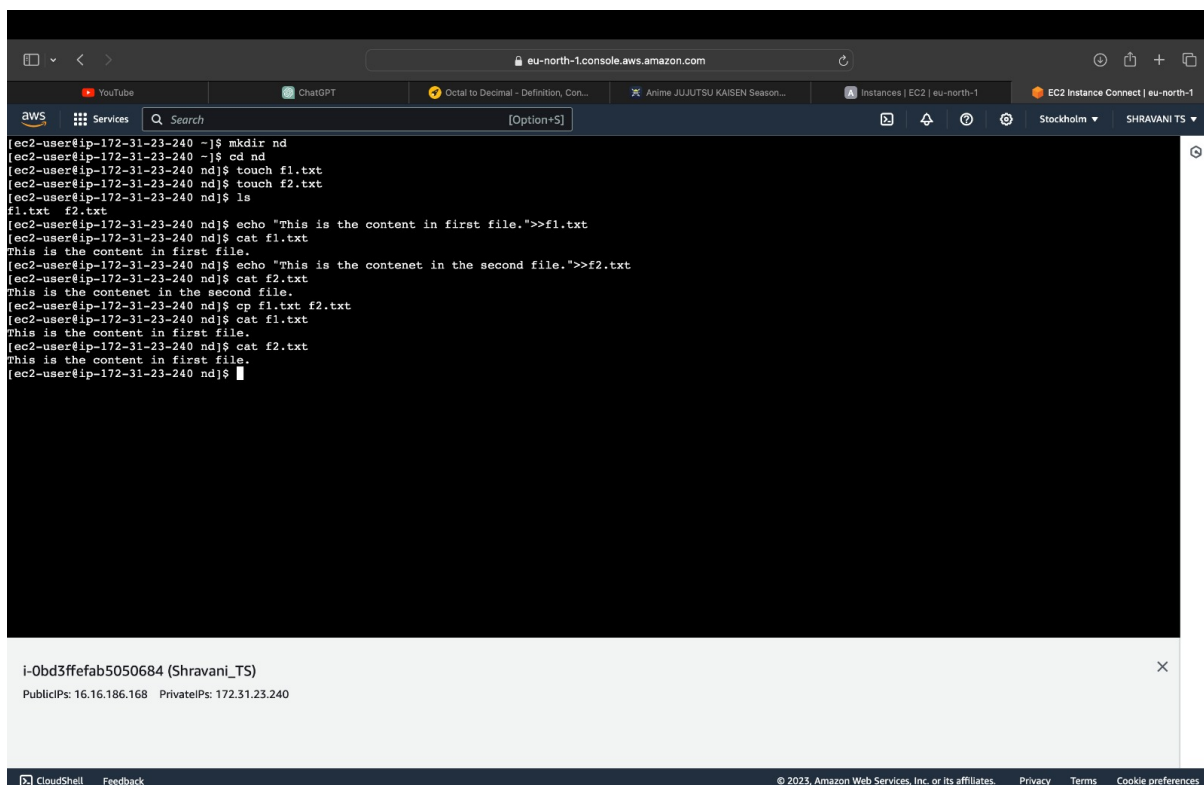
```
[ec2-user@ip-172-31-23-240 ~]$ cd ..  
[ec2-user@ip-172-31-23-240 ~]$ ls  
file1.txt  nd  shrav  
[ec2-user@ip-172-31-23-240 ~]$ rmdir shrav  
[ec2-user@ip-172-31-23-240 ~]$ ls  
file1.txt  nd  
[ec2-user@ip-172-31-23-240 ~]$
```

Below the terminal output, the instance details are shown:

i-Obd3ffefab5050684 (Shravani_TS)
PublicIPs: 16.16.186.168 PrivateIPs: 172.31.23.240

- cd :
 - The cd command is used to change to a directory.
 - Syntax:
`cd <directory_name>`
 - The ls command can then be used to get the names of the files and other directories in the current directory.

- rmdir :
 - The rmdir command is used to remove/delete a directory from the file system.
 - Syntax:
`rmdir <directory_name>`
 - After deleting the directory we can use the ls command to check.



The screenshot shows an AWS CloudShell terminal window with the following commands and output:

```
ec2-user@ip-172-31-23-240 ~]$ mkdir nd
ec2-user@ip-172-31-23-240 ~]$ cd nd
ec2-user@ip-172-31-23-240 nd]$ touch f1.txt
ec2-user@ip-172-31-23-240 nd]$ touch f2.txt
ec2-user@ip-172-31-23-240 nd]$ ls
f1.txt  f2.txt
ec2-user@ip-172-31-23-240 nd]$ echo "This is the content in first file.">>f1.txt
ec2-user@ip-172-31-23-240 nd]$ cat f1.txt
This is the content in first file.
ec2-user@ip-172-31-23-240 nd]$ echo "This is the contenet in the second file.">>f2.txt
ec2-user@ip-172-31-23-240 nd]$ cat f2.txt
This is the contenet in the second file.
ec2-user@ip-172-31-23-240 nd]$ cp f1.txt f2.txt
ec2-user@ip-172-31-23-240 nd]$ cat f1.txt
This is the content in first file.
ec2-user@ip-172-31-23-240 nd]$ cat f2.txt
This is the content in first file.
ec2-user@ip-172-31-23-240 nd]$
```

Below the terminal output, a metadata box shows the instance ID: i-Obd3ffefab5050684 (Shravani_TS) and its IP addresses: PublicIPs: 16.16.186.168, PrivateIPs: 172.31.23.240.

- cp:
 - The main way to copy files and directories in Linux is through the cp (**copy**) command. cp <source file> <target file>.
 - The source and target files must have different names since the command copies in the same directory. Provide a path before the file name to copy to another location.
 - Here we are copying the content of f1.txt into f2.txt using cp [cp f1.txt f2.txt]
 - Then when we use cat on file.txt it shows “hello this is the content in first file” so content is successfully copied.
 - Now we make use of echo and >> to add a new line in f2.txt i.e “hello this is the content in second file”.