

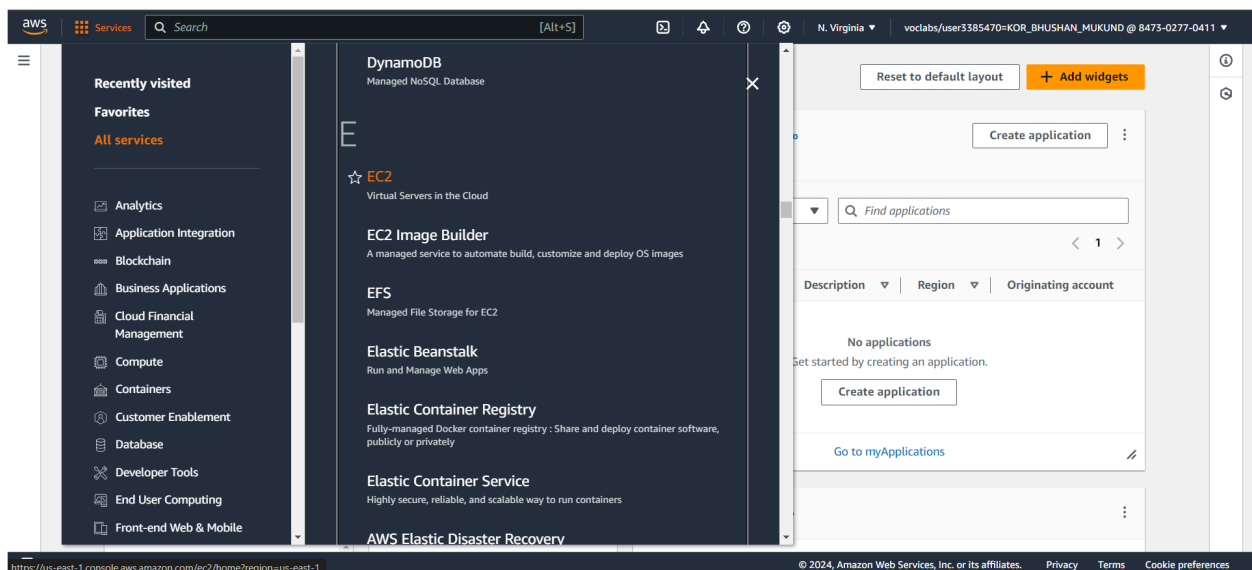
Aim: To understand the benefits of Cloud Infrastructure, Setup EC2 and Setup AWS Cloud9 IDE, Launch AWS Cloud9 IDE, and Perform Collaboration Demonstration.

A) EC2

EC2

Amazon EC2 (Elastic Compute Cloud) is a web service that provides resizable compute capacity in the cloud. It allows users to run virtual servers, known as instances, on demand. EC2 offers flexibility in scaling resources up or down based on your needs, making it ideal for hosting applications, running batch jobs, and more, with only the cost of the resources you actually use.

Step 1: Open Your AWS Academy or Personal AWS account and Search for EC2 in services.



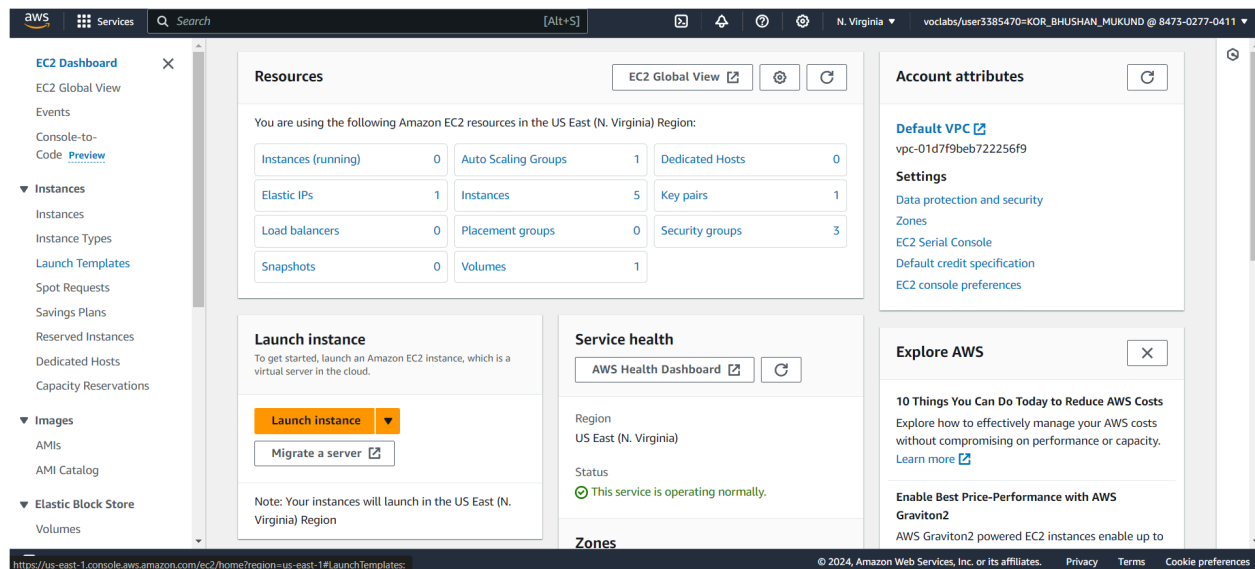
Name: Bhushan Mukund Kor

Academic Year: 2024-2025

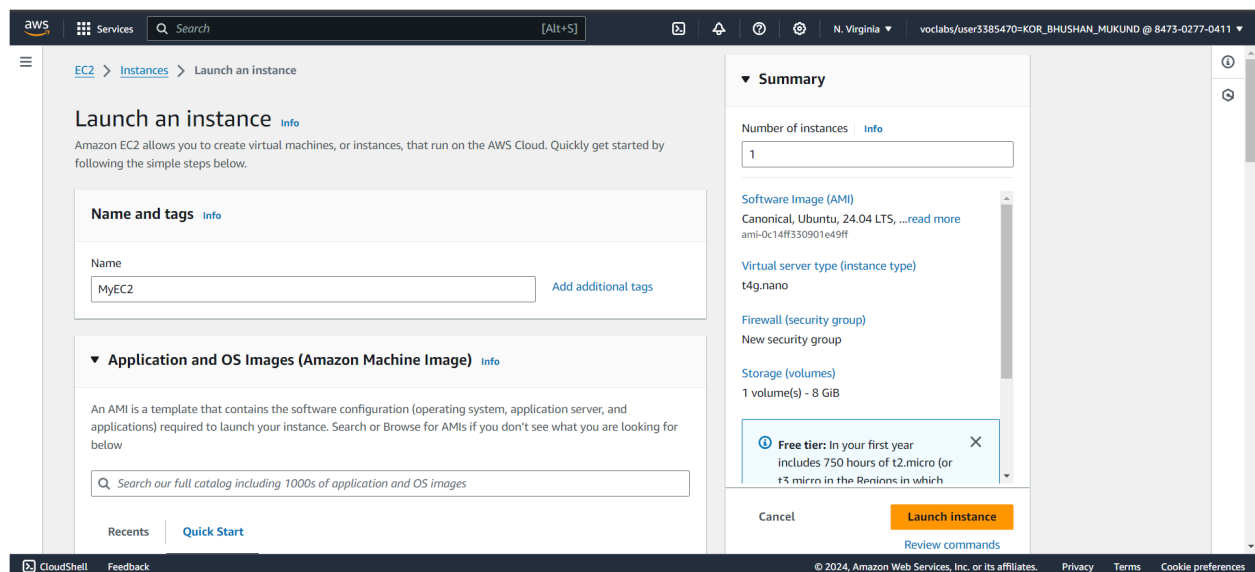
Division: D15C

Roll No: 28

Step 2: After Opening EC2 click on Launch instance.



Step 3: Give a name to your instance.



Step 4: Select the server as Ubuntu and you can select Architecture x86 or ARM .

Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name: [Add additional tags](#)

Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

[Recents](#) [Quick Start](#)

Summary

Number of instances [Info](#):

Software Image (AMI): Canonical, Ubuntu, 24.04 LTS, ...[read more](#)
ami-0c14ff330901e49ff

Virtual server type (instance type): t4g.nano

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which)

[Cancel](#) [Launch instance](#) [Review commands](#)

Step 5: Keep instance type by default and key pair as default (vockey).

Instance type [Info](#) [Get advice](#)

Instance type: [Compare instance types](#)

Family: t4g 2 vCPU 0.5 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0042 USD per Hour
On-Demand SUSE base pricing: 0.0042 USD per Hour

Additional costs apply for AMIs with pre-installed software

☒ All generations

Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required: [Create new key pair](#)

Network settings [Info](#) [Edit](#)

Network [Info](#)

Summary

Number of instances [Info](#):

Software Image (AMI): Canonical, Ubuntu, 24.04 LTS, ...[read more](#)
ami-0c14ff330901e49ff

Virtual server type (instance type): t4g.nano

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[Cancel](#) [Launch instance](#) [Review commands](#)

Step 6: Select the Create Security Group option and allow 2 permissions refer to screenshot. And if any error occurs allow only 1st permission.

The screenshot shows the AWS Management Console interface for creating a new EC2 instance. The 'Network settings' tab is active, displaying options for VPC, Subnet, and Auto-assign public IP. The 'Firewall (security groups)' section is expanded, showing the 'Create security group' option selected. Below this, there are checkboxes for allowing SSH traffic from anywhere and HTTPS traffic from the internet. The 'Summary' tab on the right shows the instance configuration, including the number of instances (1), Software Image (AMI), Virtual server type (t4g.nano), Firewall (security group), and Storage (volumes). A 'Free tier' notification is visible at the bottom of the summary panel.

Step 7: Configure storage to 8 GiB and gp3 if any error occurs make it to 10 GiB and gp3.

The screenshot shows the AWS Management Console interface for configuring storage for the EC2 instance. The 'Configure storage' tab is active, displaying a configuration for 1x 8 GiB gp3 Root volume (Not encrypted). A 'Free tier eligible customers' notification is visible. Below the configuration, there is a section for 'Advanced details' which includes a 'Click refresh to view backup information' button and a '0 x File systems' section. The 'Summary' tab on the right shows the instance configuration, including the number of instances (1), Software Image (AMI), Virtual server type (t4g.nano), Firewall (security group), and Storage (volumes). A 'Free tier' notification is visible at the bottom of the summary panel.

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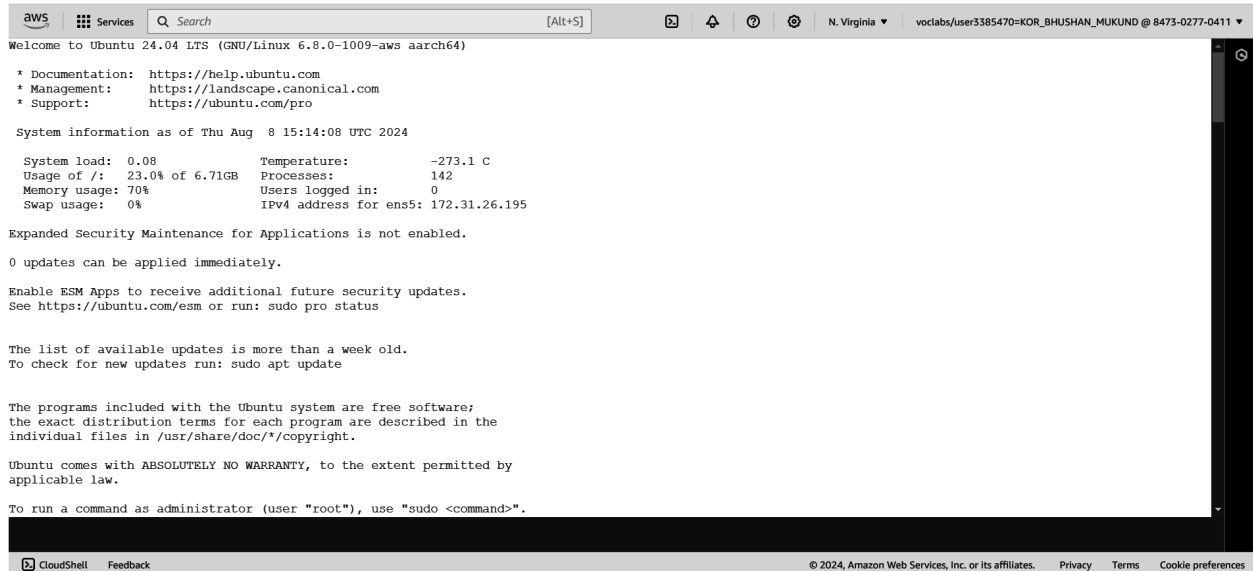
Roll No: 28

Step 10: Done Your EC2 instance is successfully created.

The screenshot shows the AWS Management Console interface. At the top, there's a navigation bar with the AWS logo, 'Services', a search bar, and user information. The main content area is titled 'Launch an instance' and features a green success banner stating 'Successfully initiated launch of instance (i-0c35b5bbfddf03e5c)'. Below this, there's a 'Next Steps' section with a search bar and several actionable cards: 'Create billing and free tier usage alerts', 'Connect to your instance', 'Connect an RDS database', and 'Create EBS snapshot policy'. At the bottom, a table lists the instance 'MyEC2' with ID 'i-0c35b5bbfddf03e5c', status 'Running', type 't4g.nano', and region 'us-east-1a'.

Step 11: Click on the instance ID then click on connect to connect to environment.

The screenshot shows the 'Instance summary' page for the EC2 instance 'i-0c35b5bbfddf03e5c (MyEC2)'. The page is divided into three columns displaying various instance details. The left column includes the Instance ID, IPv6 address, Hostname type, Answer private resource DNS name, Auto-assigned IP address, IAM Role, and IMDSv2. The middle column shows the Public IPv4 address, Instance state (Running), Private IP DNS name, Instance type, VPC ID, Subnet ID, and Instance ARN. The right column lists Private IPv4 addresses, Public IPv4 DNS, Elastic IP addresses, AWS Compute Optimizer finding, and Auto Scaling Group name. A 'Connect' button is visible at the top right of the instance details section.



```
aws Services Search [Alt+S] N. Virginia voclabs/user3385470=KOR_BHUSHAN_MUKUND @ 8473-0277-0411
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1009-aws aarch64)

* Documentation: https://help.ubuntu.com
* Management:   https://landscape.canonical.com
* Support:      https://ubuntu.com/pro

System information as of Thu Aug 8 15:14:08 UTC 2024

System load: 0.08      Temperature: -273.1 C
Usage of /: 23.0% of 6.71GB Processes: 142
Memory usage: 70%     Users logged in: 0
Swap usage: 0%        IPv4 address for ens5: 172.31.26.195

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences
```

Step 12: Run the following command in Ubuntu (On EC2 Instance).

1. `sudo -l`
2. `sudo apt update`
3. `uname -a`
4. `df --help` and `df`
5. `ls`
6. `mkdir test`
7. `ls`
8. `cd test`
9. `touch file1`
10. `ls`
11. `touch file2 file3`
12. `ls`
13. `rm file1`
14. `ls`
15. `rm file*`
16. `ls`
17. `cd`
18. `ls`
19. `rmdir test`
20. `ls`
21. `mkdir test1 test2 test3`
22. `ls`
23. `rmdir test*`
24. `ls`

25. History

26. top

27. vmstat

```
ubuntu@ip-172-31-26-195:~$ sudo -l
Matching Defaults entries for ubuntu on ip-172-31-26-195:
    env_reset, mail_badpass, secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin, use_pty
```

User ubuntu may run the following commands on ip-172-31-26-195:

```
(ALL : ALL) ALL
(ALL) NOPASSWD: ALL
```

```
ubuntu@ip-172-31-26-195:~$ sudo apt update
Hit:1 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble InRelease
Get:2 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates InRelease [126 kB]
Get:3 http://ports.ubuntu.com/ubuntu-ports noble-security InRelease [126 kB]
Get:4 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports InRelease [126 kB]
Get:5 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/universe arm64 Packages [15.3 MB]
Get:6 http://ports.ubuntu.com/ubuntu-ports noble-security/main arm64 Packages [262 kB]
Get:7 http://ports.ubuntu.com/ubuntu-ports noble-security/main Translation-en [64.4 kB]
Get:8 http://ports.ubuntu.com/ubuntu-ports noble-security/main arm64 Components [5428 B]
Get:9 http://ports.ubuntu.com/ubuntu-ports noble-security/main arm64 c-n-f Metadata [3696 B]
Get:10 http://ports.ubuntu.com/ubuntu-ports noble-security/universe arm64 Packages [244 kB]
Get:11 http://ports.ubuntu.com/ubuntu-ports noble-security/universe Translation-en [108 kB]
Get:12 http://ports.ubuntu.com/ubuntu-ports noble-security/universe arm64 Components [8632 B]
Get:13 http://ports.ubuntu.com/ubuntu-ports noble-security/universe arm64 c-n-f Metadata [9356 B]
Get:14 http://ports.ubuntu.com/ubuntu-ports noble-security/restricted arm64 Packages [206 kB]
Get:15 http://ports.ubuntu.com/ubuntu-ports noble-security/restricted Translation-en [40.7 kB]
Get:16 http://ports.ubuntu.com/ubuntu-ports noble-security/restricted arm64 Components [212 B]
Get:17 http://ports.ubuntu.com/ubuntu-ports noble-security/restricted arm64 c-n-f Metadata [372 B]
Get:18 http://ports.ubuntu.com/ubuntu-ports noble-security/multiverse arm64 Packages [10.1 kB]
Get:19 http://ports.ubuntu.com/ubuntu-ports noble-security/multiverse Translation-en [2808 B]
Get:20 http://ports.ubuntu.com/ubuntu-ports noble-security/multiverse arm64 Components [212 B]
Get:21 http://ports.ubuntu.com/ubuntu-ports noble-security/multiverse arm64 c-n-f Metadata [344 B]
Get:22 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/universe Translation-en [5982 kB]
Get:23 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/universe arm64 Components [3573 kB]
Get:24 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/universe arm64 c-n-f Metadata [295 kB]
Get:25 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/multiverse arm64 Packages [223 kB]
Get:26 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/multiverse Translation-en [118 kB]
Get:27 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/multiverse arm64 Components [31.6 kB]
Get:28 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble/multiverse arm64 c-n-f Metadata [7152 B]
Get:29 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/main arm64 Packages [334 kB]
Get:30 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/main Translation-en [86.2 kB]
Get:31 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/main arm64 c-n-f Metadata [5720 B]
Get:32 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/universe arm64 Packages [315 kB]
Get:33 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/universe Translation-en [135 kB]
Get:34 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/universe arm64 Components [45.0 kB]
Get:35 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/universe arm64 c-n-f Metadata [12.5 kB]
Get:36 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/restricted arm64 Packages [237 kB]
Get:37 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/restricted Translation-en [46.4 kB]
Get:38 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/restricted arm64 c-n-f Metadata [368 B]
Get:39 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/multiverse arm64 Packages [10.1 kB]
Get:40 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/multiverse Translation-en [3608 B]
Get:41 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/multiverse arm64 Components [212 B]
Get:42 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-updates/multiverse arm64 c-n-f Metadata [340 B]
Get:43 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/main arm64 Components [208 B]
Get:44 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/main arm64 c-n-f Metadata [112 B]
Get:45 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/universe arm64 Packages [10.3 kB]
Get:46 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/universe Translation-en [10.5 kB]
Get:47 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/universe arm64 Components [17.7 kB]
Get:48 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/universe arm64 c-n-f Metadata [1020 B]
Get:49 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/restricted arm64 Components [216 B]
Get:50 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/restricted arm64 c-n-f Metadata [116 B]
Get:51 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/multiverse arm64 Components [212 B]
Get:52 http://us-east-1.ec2.ports.ubuntu.com/ubuntu-ports noble-backports/multiverse arm64 c-n-f Metadata [116 B]
Fetched 28.2 MB in 13s (2122 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
47 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

```
ubuntu@ip-172-31-26-195:~$ uname -a
Linux ip-172-31-26-195 6.8.0-1009-aws #9-Ubuntu SMP Fri May 17 20:15:49 UTC 2024 aarch64 aarch64 aarch64 GNU/Linux
ubuntu@ip-172-31-26-195:~$
```

```
ubuntu@ip-172-31-26-195:~$ df --help
```

```
Usage: df [OPTION]... [FILE]...
```

```
Show information about the file system on which each FILE resides,
or all file systems by default.
```

Mandatory arguments to long options are mandatory for short options too.

```
-a, --all                include pseudo, duplicate, inaccessible file systems
-B, --block-size=SIZE    scale sizes by SIZE before printing them; e.g.,
                          '-BM' prints sizes in units of 1,048,576 bytes;
                          see SIZE format below
-h, --human-readable     print sizes in powers of 1024 (e.g., 1023M)
-H, --si                 print sizes in powers of 1000 (e.g., 1.1G)
-i, --inodes             list inode information instead of block usage
-k                       like --block-size=1K
-l, --local              limit listing to local file systems
    --no-sync            do not invoke sync before getting usage info (default)
    --output[=FIELD_LIST] use the output format defined by FIELD_LIST,
                          or print all fields if FIELD_LIST is omitted.
-P, --portability        use the POSIX output format
    --sync              invoke sync before getting usage info
    --total             elide all entries insignificant to available space,
                          and produce a grand total
-t, --type=TYPE          limit listing to file systems of type TYPE
-T, --print-type         print file system type
-x, --exclude-type=TYPE  limit listing to file systems not of type TYPE
-v                       (ignored)
    --help              display this help and exit
    --version           output version information and exit
```

Display values are in units of the first available SIZE from --block-size, and the DF_BLOCK_SIZE, BLOCK_SIZE and BLOCKSIZE environment variables. Otherwise, units default to 1024 bytes (or 512 if POSIXLY_CORRECT is set).

Display values are in units of the first available SIZE from --block-size, and the DF_BLOCK_SIZE, BLOCK_SIZE and BLOCKSIZE environment variables. Otherwise, units default to 1024 bytes (or 512 if POSIXLY_CORRECT is set).

The SIZE argument is an integer and optional unit (example: 10K is 10*1024). Units are K,M,G,T,P,E,Z,Y,R,Q (powers of 1024) or KB,MB,... (powers of 1000). Binary prefixes can be used, too: KiB=K, MiB=M, and so on.

FIELD_LIST is a comma-separated list of columns to be included. Valid field names are: 'source', 'fstype', 'itotal', 'iused', 'iavail', 'ipcent', 'size', 'used', 'avail', 'pcent', 'file' and 'target' (see info page).

GNU coreutils online help: <<https://www.gnu.org/software/coreutils/>>

Report any translation bugs to <<https://translationproject.org/team/>>

Full documentation <<https://www.gnu.org/software/coreutils/df>>

or available locally via: info '(coreutils) df invocation'


```
ubuntu@ip-172-31-26-195:~$ mkdir test
ubuntu@ip-172-31-26-195:~$ ls
test
ubuntu@ip-172-31-26-195:~$ cd test
ubuntu@ip-172-31-26-195:~/test$ touch file1
ubuntu@ip-172-31-26-195:~/test$ ls
file1
ubuntu@ip-172-31-26-195:~/test$ touch file2 file3
ubuntu@ip-172-31-26-195:~/test$ ls
file1 file2 file3
ubuntu@ip-172-31-26-195:~/test$ rm file1
ubuntu@ip-172-31-26-195:~/test$ ls
file2 file3
ubuntu@ip-172-31-26-195:~/test$ rm file*
ubuntu@ip-172-31-26-195:~/test$ ls
ubuntu@ip-172-31-26-195:~/test$ cd

ubuntu@ip-172-31-26-195:~$ ls
test
ubuntu@ip-172-31-26-195:~$ rmdir test
ubuntu@ip-172-31-26-195:~$ ls
ubuntu@ip-172-31-26-195:~$ mkdir test1 test2 test3
ubuntu@ip-172-31-26-195:~$ ls
test1 test2 test3
ubuntu@ip-172-31-26-195:~$ rmdir test*
ubuntu@ip-172-31-26-195:~$ ls
ubuntu@ip-172-31-26-195:~$ history
```

```
ubuntu@ip-172-31-26-195:~$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
/dev/root        7034376 1831888   5186104  27% /
tmpfs            212128      0    212128   0% /dev/shm
tmpfs            84852     1040    83812   2% /run
tmpfs            5120        0     5120   0% /run/lock
efivarfs         128         4      125   3% /sys/firmware/efi/efivars
/dev/nvme0n1p16  911580    57648   790292   7% /boot
/dev/nvme0n1p15  99791     6475    93317   7% /boot/efi
tmpfs            42424      12     42412   1% /run/user/1000
```


```
ubuntu@ip-172-31-26-195:~$ history
```

```
 1  sudo -l
 2  apt update
 3  sudo apt update
 4  mkdir test
 5  ls
 6  cd test
 7  touch file1
 8  ls
 9  touch file2 file3
10  ls
11  rm file1
12  ls
13  rm file*
14  ls
15  cd
16  ls
17  rmdir test
18  mkdir test1 test2 test3
19  ls
20  rmdir test*
21  ls
22  history
23  top
24  vmstat
25  df
26  whatis df
27  df --help
28  uname -a
29  ls
30  mkdir test
31  ls
32  rmdir test
33  ls
34  mkdir test1 test2 test3
35  ls
36  rmdir test*
37  ls
38  history
```





```
ubuntu@ip-172-31-26-195:~$
```

```
ubuntu@ip-172-31-26-195:~$ vmstat
```

| procs | memory | | | | swap | | io | | system | | cpu | | | | | | |
|-------|--------|------|-------|------|--------|----|----|-----|--------|----|-----|----|----|----|----|----|----|
| r | b | swpd | free | buff | cache | si | so | bi | bo | in | cs | us | sy | id | wa | st | gu |
| 2 | 0 | 0 | 36688 | 3180 | 128208 | 0 | 0 | 193 | 137 | 43 | 0 | 0 | 0 | 99 | 0 | 0 | 0 |

 Services

[Alt+S]



N. Virginia

voclabs/user3385470=KOR_BHUSHAN_MUKUND @ 8473-0277-0411

top - 15:21:51 up 1:09, 1 user, load average: 0.00, 0.02, 0.00
Tasks: 139 total, 1 running, 138 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.2 us, 0.2 sy, 0.0 ni, 99.7 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 414.3 total, 33.1 free, 272.6 used, 127.2 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 141.8 avail Mem

| PID | USER | PR | NI | VIRT | RES | SHR | S | %CPU | %MEM | TIME+ | COMMAND |
|-----|------|-----|-----|-------|------|------|---|------|------|---------|-------------------------|
| 1 | root | 20 | 0 | 22456 | 9668 | 5572 | S | 0.0 | 2.3 | 0:01.64 | systemd |
| 2 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | kthreadd |
| 3 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | pool_workqueue_release |
| 4 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-rcu_g |
| 5 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-rcu_p |
| 6 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-slub_ |
| 7 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-netns |
| 9 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/0:0H-kblockd |
| 12 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-mm_pe |
| 13 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | rcu_tasks_rude_kthread |
| 14 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | rcu_tasks_trace_kthread |
| 15 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.02 | ksoftirqd/0 |
| 16 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.09 | rcu_sched |
| 17 | root | rt | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.01 | migration/0 |
| 18 | root | -51 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | idle_inject/0 |
| 19 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | cpuhp/0 |
| 20 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | cpuhp/1 |
| 21 | root | -51 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | idle_inject/1 |
| 22 | root | rt | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.01 | migration/1 |
| 23 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.02 | ksoftirqd/1 |

ubuntu@ip-172-31-26-195:~\$ cat

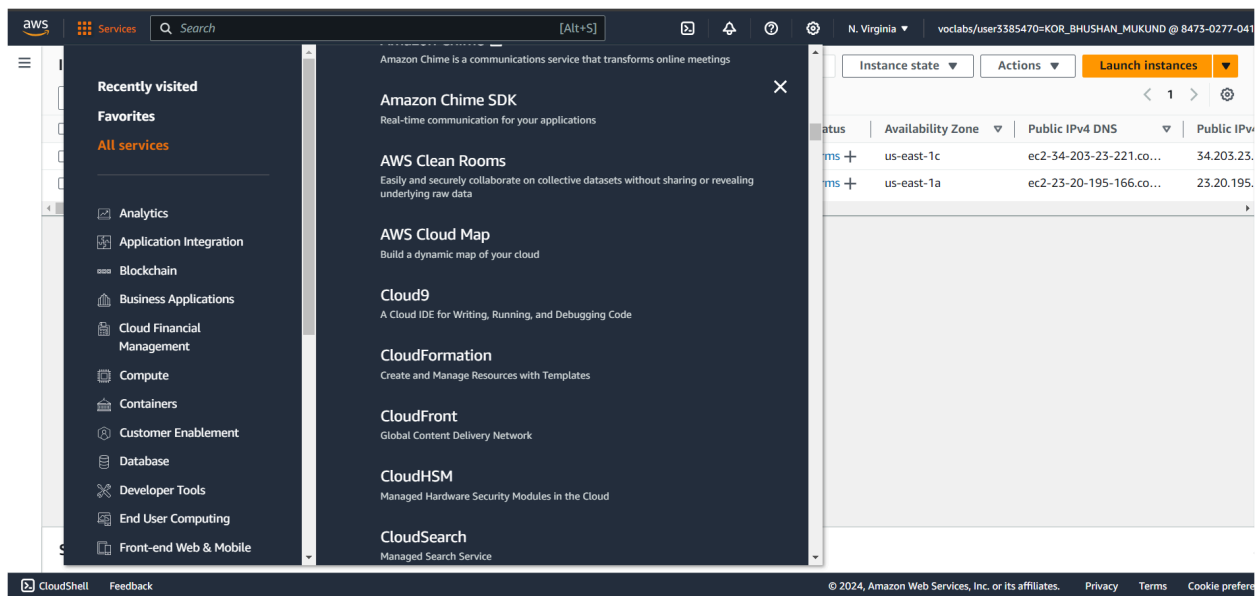
B) Cloud 9 and Cloud 9 IDE

Cloud 9 and Cloud 9 IDE

Cloud 9 is a popular term in English meaning extreme happiness or euphoria. It has no technical association with development tools.

Cloud 9 IDE, on the other hand, is an online integrated development environment (IDE) that allows developers to write, run, and debug code in various programming languages directly in the cloud. It was originally an independent product but is now part of Amazon Web Services (AWS).

Step 1: Select Cloud 9 from services in AWS.



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Academic Year: 2024-2025

Division: D15C

Roll No: 28

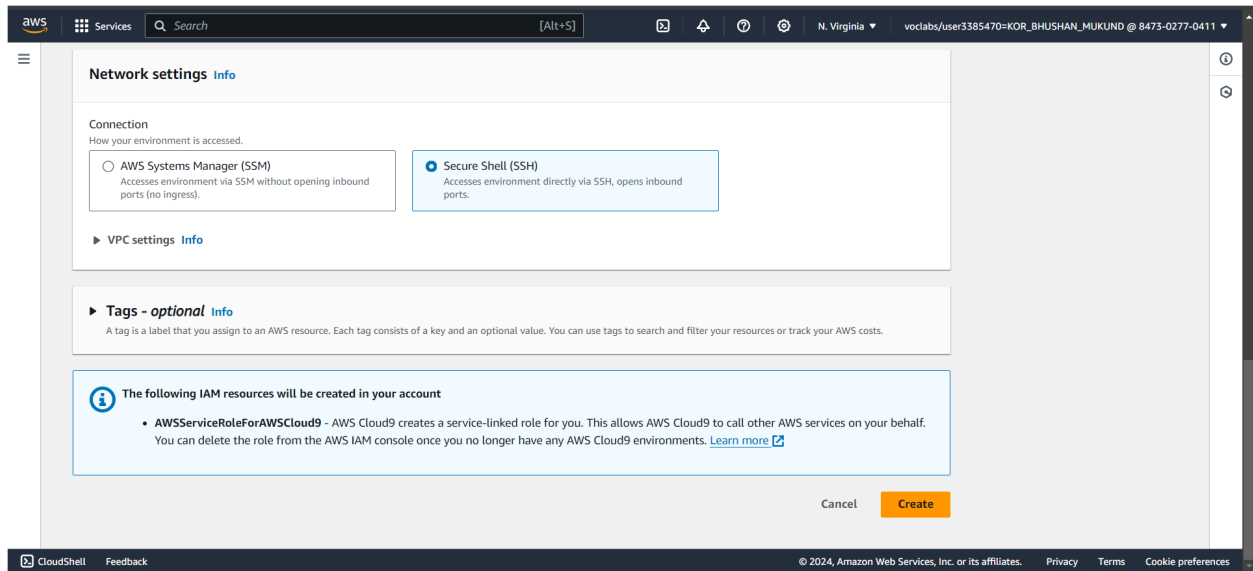
Step 2: Now Click on Create Environment and give name to your environment and select new EC2 instance option.

The screenshot shows the 'Create environment' page in the AWS Cloud9 console. The 'Name' field is filled with 'Bhushan_Cloud_9'. The 'Description' field is filled with 'Cloud 9 for Lab 1 Experiment and learning.'. Under 'Environment type', the 'New EC2 instance' option is selected. The 'Existing compute' option is also visible but not selected.

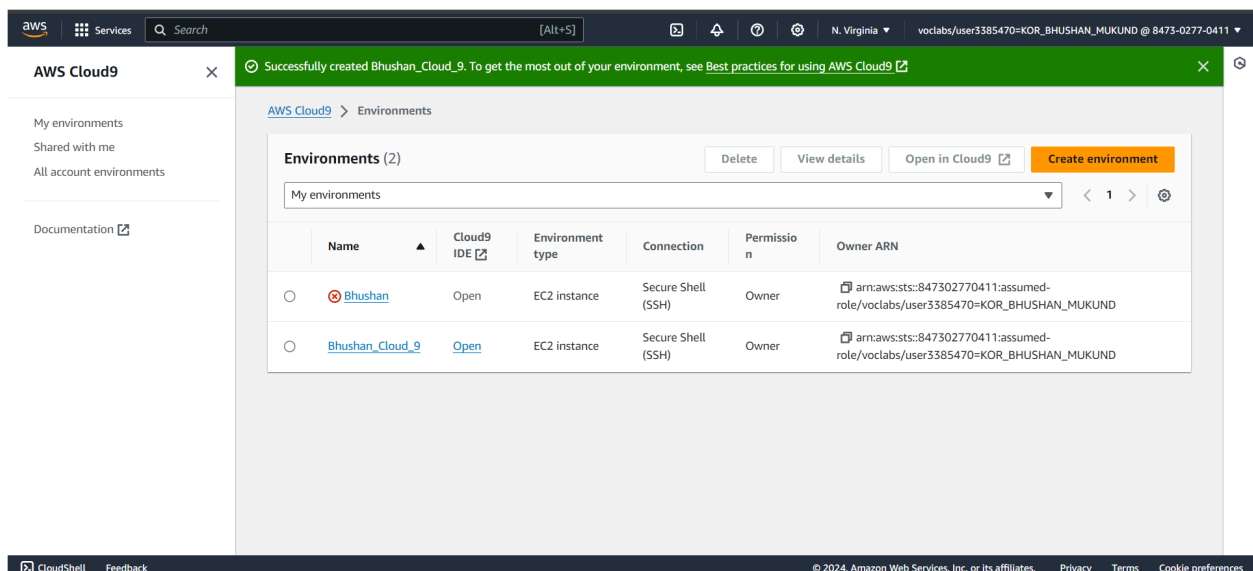
Step 3: Keep other things by default then select platform as Amazon Linux 2023 or latest and time 30 minutes.

The screenshot shows the 'New EC2 instance' page in the AWS Cloud9 console. The 'Instance type' is 't2.micro (1 GIB RAM + 1 vCPU)'. The 'Platform' is 'Amazon Linux 2023'. The 'Timeout' is '30 minutes'.

Step 4: Select Secure Shell (SSH) and click on Create.



Step 5: Now It will create the environment after that open it.

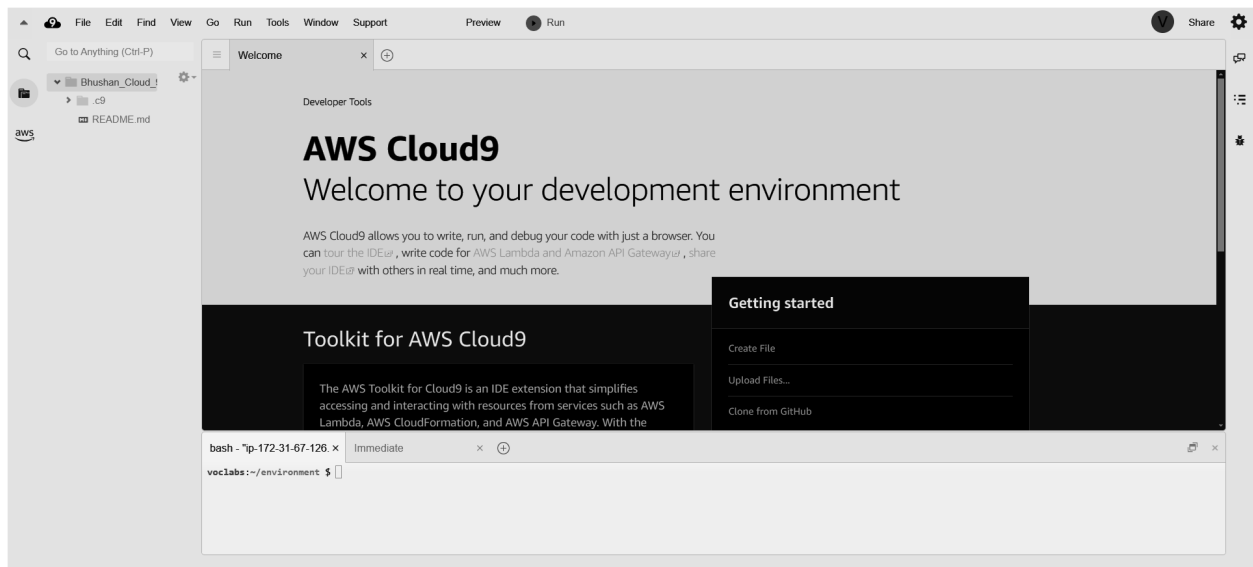
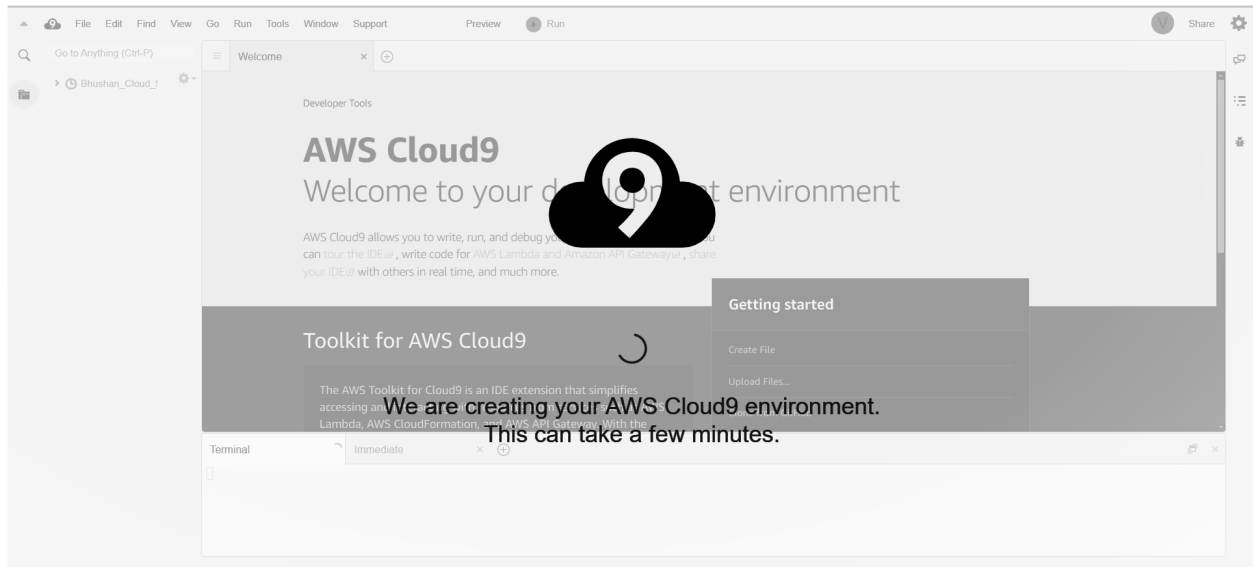


Name: Bhushan Mukund Kor

Academic Year: 2024-2025

Division: D15C

Roll No: 28



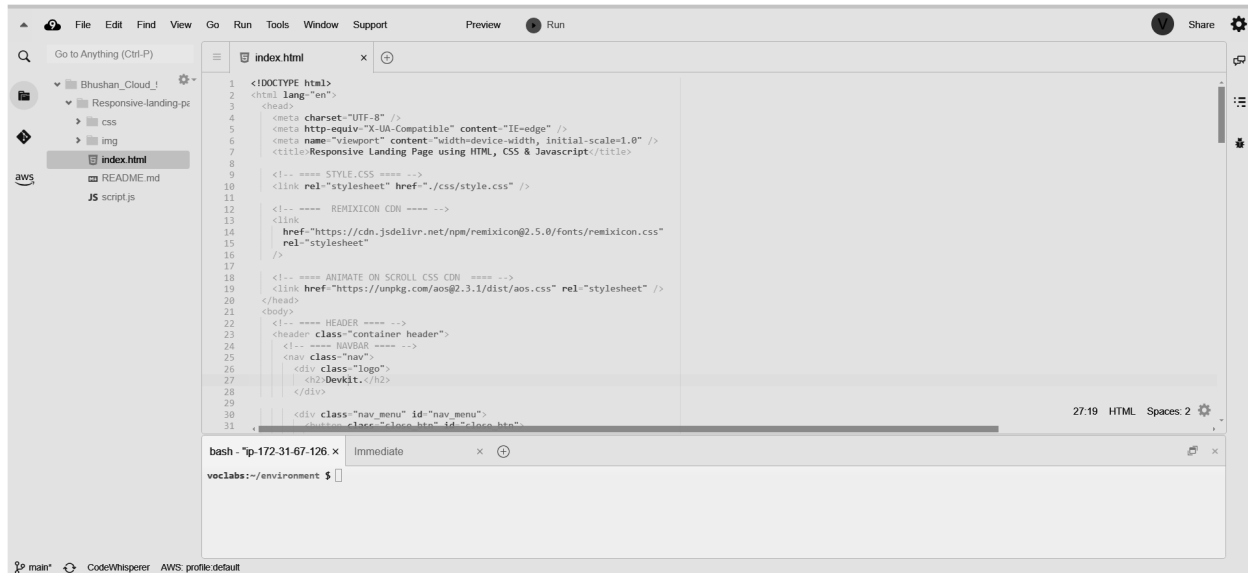
Name: Bhushan Mukund Kor

Academic Year: 2024-2025

Division: D15C

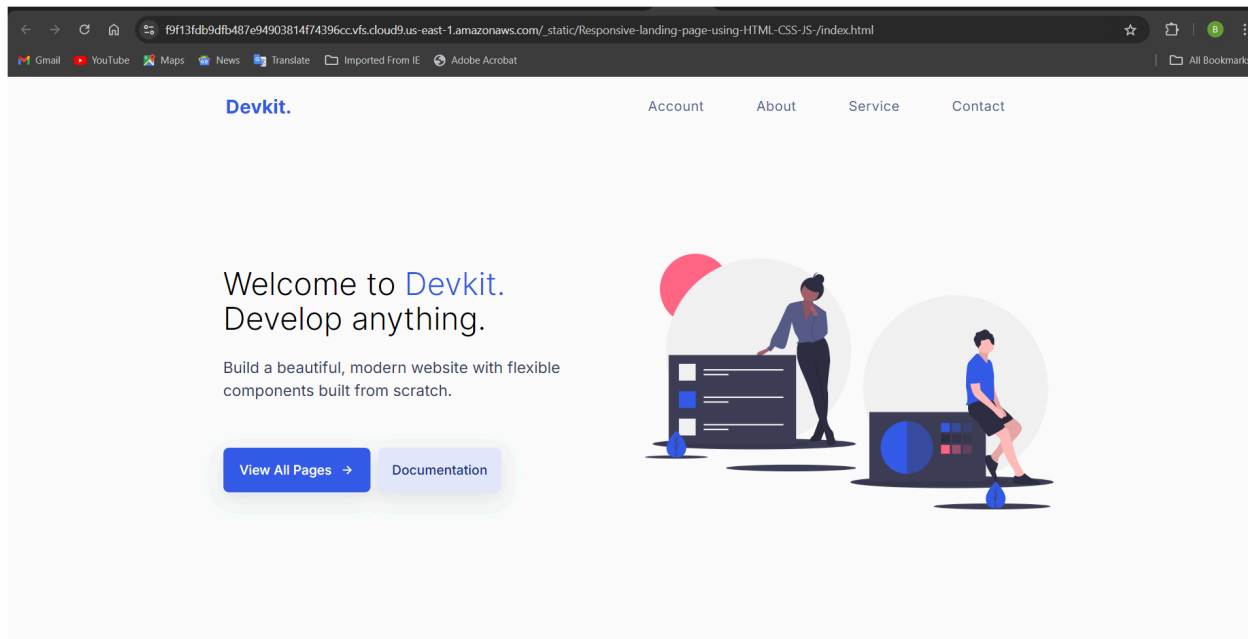
Roll No: 28

Step 6: Add some files or create some files and see the preview of it. Here we have created an index.html file.



The screenshot shows a code editor with a file explorer on the left. The file explorer shows a project named 'Bhushan_Cloud_1' with subfolders 'css' and 'img', and files 'index.html', 'README.md', and 'JS script.js'. The 'index.html' file is selected and its content is displayed in the editor. The code is as follows:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8" />
5   <meta http-equiv="X-UA-Compatible" content="IE=edge" />
6   <meta name="viewport" content="width=device-width, initial-scale=1.0" />
7   <title>Responsive Landing Page using HTML, CSS & Javascript</title>
8
9   <!-- STYLE.CSS -->
10  <link rel="stylesheet" href="./css/style.css" />
11
12  <!-- REMIXICON CDN -->
13  <link
14    href="https://cdn.jsdelivr.net/npm/remixicon@2.5.0/fonts/remixicon.css"
15    rel="stylesheet"
16  />
17
18  <!-- ANIMATE ON SCROLL CSS CDN -->
19  <link href="https://unpkg.com/aos@2.3.1/dist/aos.css" rel="stylesheet" />
20 </head>
21 <body>
22   <!-- HEADER -->
23   <header class="container header">
24     <!-- NAVBAR -->
25     <nav class="nav">
26       <div class="logo">
27         <h2>Devkit.</h2>
28       </div>
29       <div class="nav_menu" id="nav_menu">
30         <ul class="close_btn" id="close_btn">
```



Step 7: Now let's share the file with IAM users.

Share this environment

Links to share

Environment:

https://us-east-1.console.aws.amazon.com/cloud9/ide/f9f13fdb9dfb48

Application:

98.80.97.50

To make your application accessible from the internet, please follow [our documentation](#).

Who has access

ReadWrite

You (online)

RW

☐ Don't allow members to save their tab state

Invite Members

IAM username

R RW

Invite

Invite an existing IAM user or [create a new user](#).

Done

Step 8: Note That sharing is not possible as we are using AWS academy account in which we do not have access to the IAM policies. And Also 2nd Important thing to note that is AWS has closed Cloud 9 for those who have created their AWS account after 25 Jul 2024. Instead of Cloud 9 AWS has alternative as AWS IDE Toolkits and AWS cloudshell.

