

Multicloud Project Based Internship at IOC

Name: Arti Panjabrao Mule

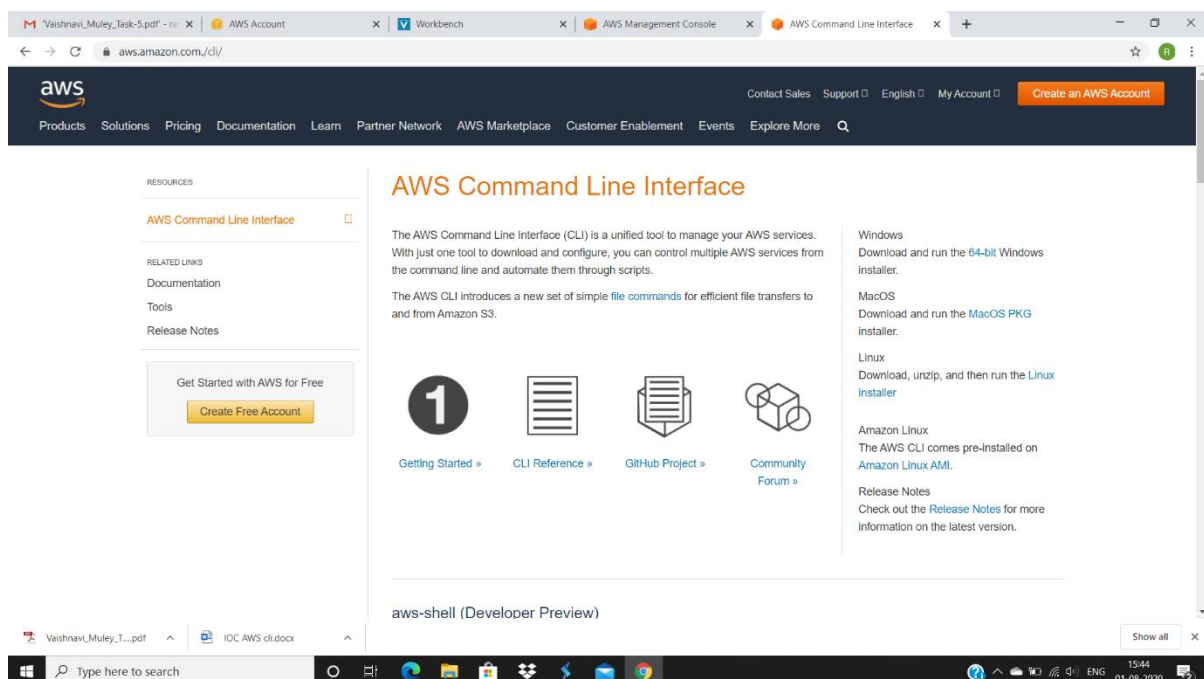
Ambassador Name: Atharav Panchpor.

College Name: Deogiri Institute of Engineering and Management Studies.

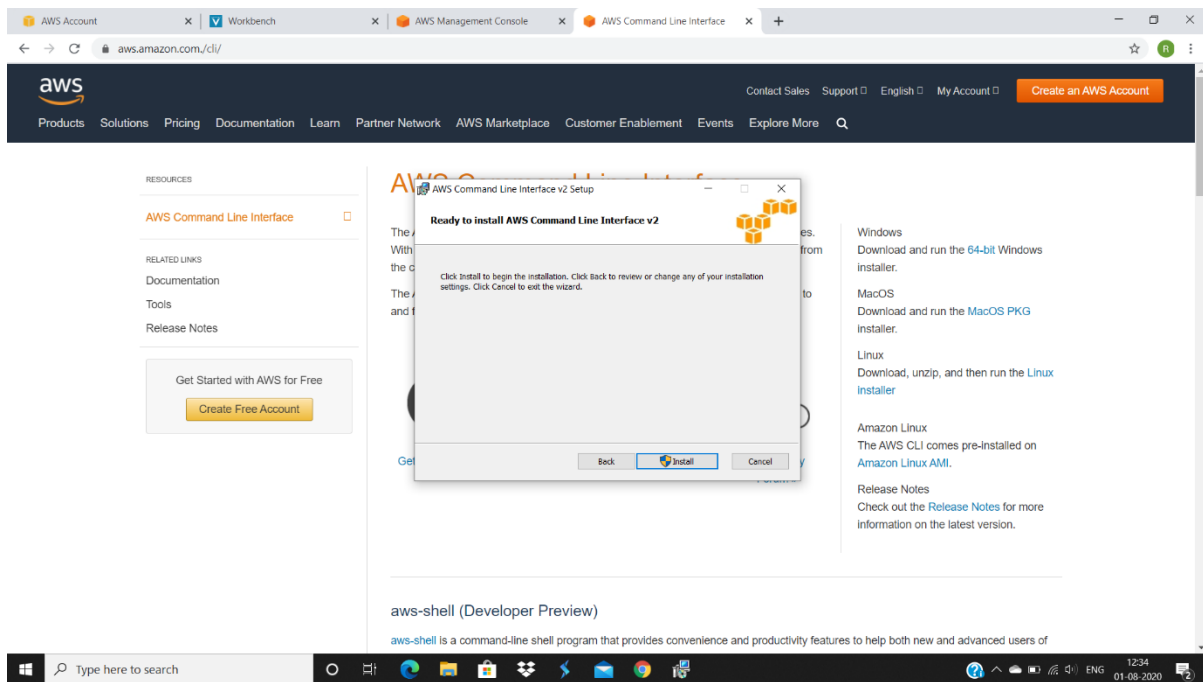
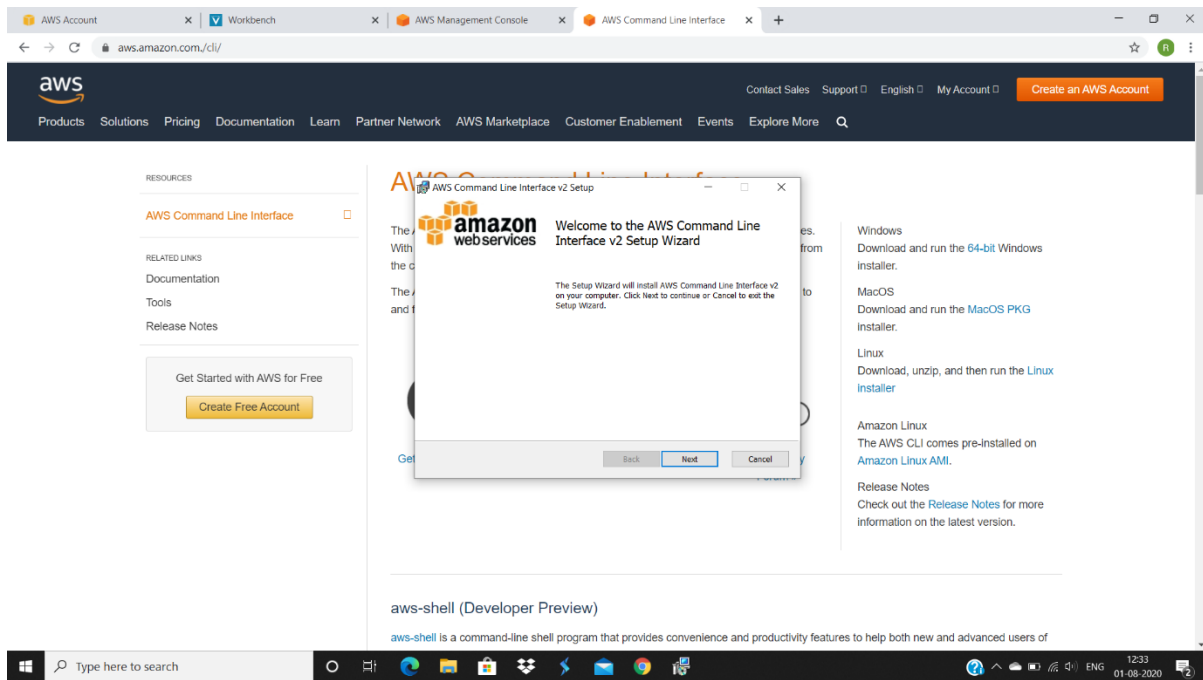
TASK

Create a 3G EBS volume and attach it to one running instance and create a 1GB partition on that and mount it on one directory. no need to make /etc/fstab entry. Remember all this thing using AWS CLI and terminal only.

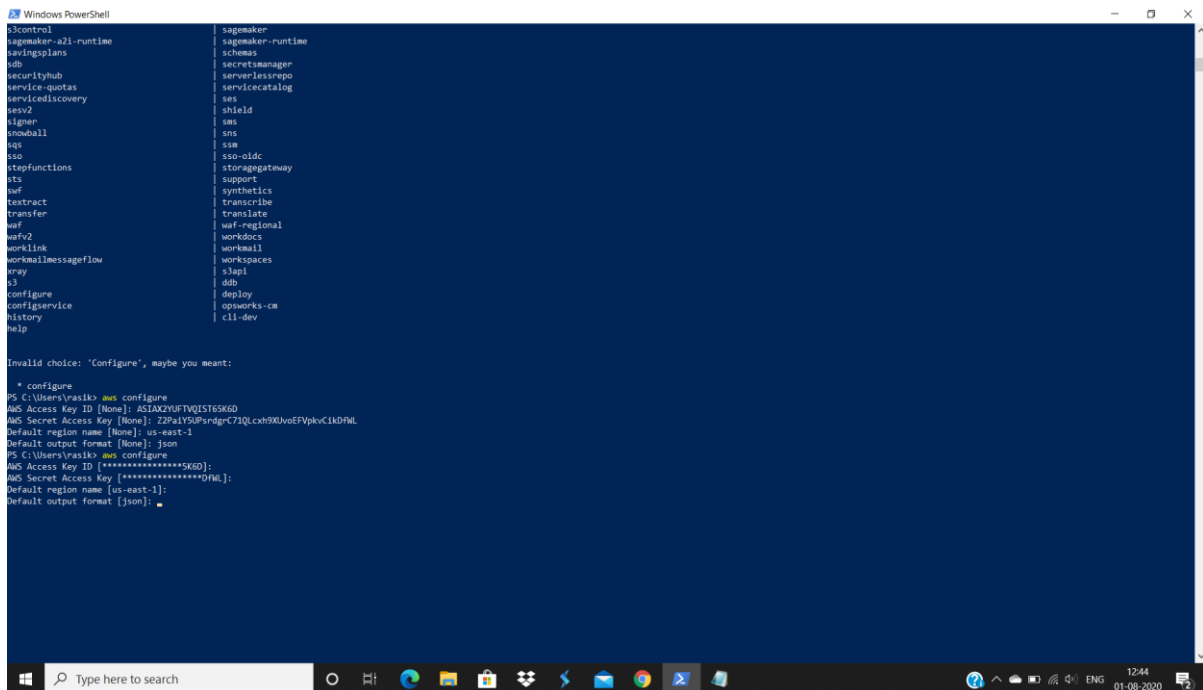
Step 1: Install the AWS command line interface. (go to <https://aws.amazon.com/cli/> and download the installer. I downloaded 64-Bit Windows installer)



Then open it and keep everything as default and finish installation as shown below.



Step 2: Now go to Windows PowerShell and configure AWS CLI.



```
Windows PowerShell
s3control
sagemaker
sagemaker-a2i-runtime
savingsplans
sdb
securityhub
service-quotas
servicediscovery
sesv2
signer
snowball
sqs
ssm
stepfunctions
sts
waf
wafv2
worklink
workmailmessageflow
xray
k3
configure
configservice
history
help

sagemaker
sagemaker-runtime
schemas
secretsmanager
serverlessrepo
servicecatalog
ses
shield
sms
sns
ssm
sso-oidc
storagegateway
support
synthetics
transcribe
translate
waf-regional
workdocs
workmail
workspaces
xapi
dab
deploy
opsworks-cm
cli-dev

Invalid choice: 'Configure', maybe you meant:
* configure
PS C:\Users\rasika> aws configure
AWS Access Key ID [None]: ASIAK2YUFTVQJST65K6D
AWS Secret Access Key [None]: Z2Pa1Y5UPsrdgrC7lQcXh9WJvdEFVpkvC1kDmL
Default region name [None]: us-east-1
Default output format [None]: json
PS C:\Users\rasika> aws configure
AWS Access Key ID [*****5K6D]:
AWS Secret Access Key [*****DmL]:
Default region name [us-east-1]:
Default output format [json]:
```

(Note: Fill the details as shown,

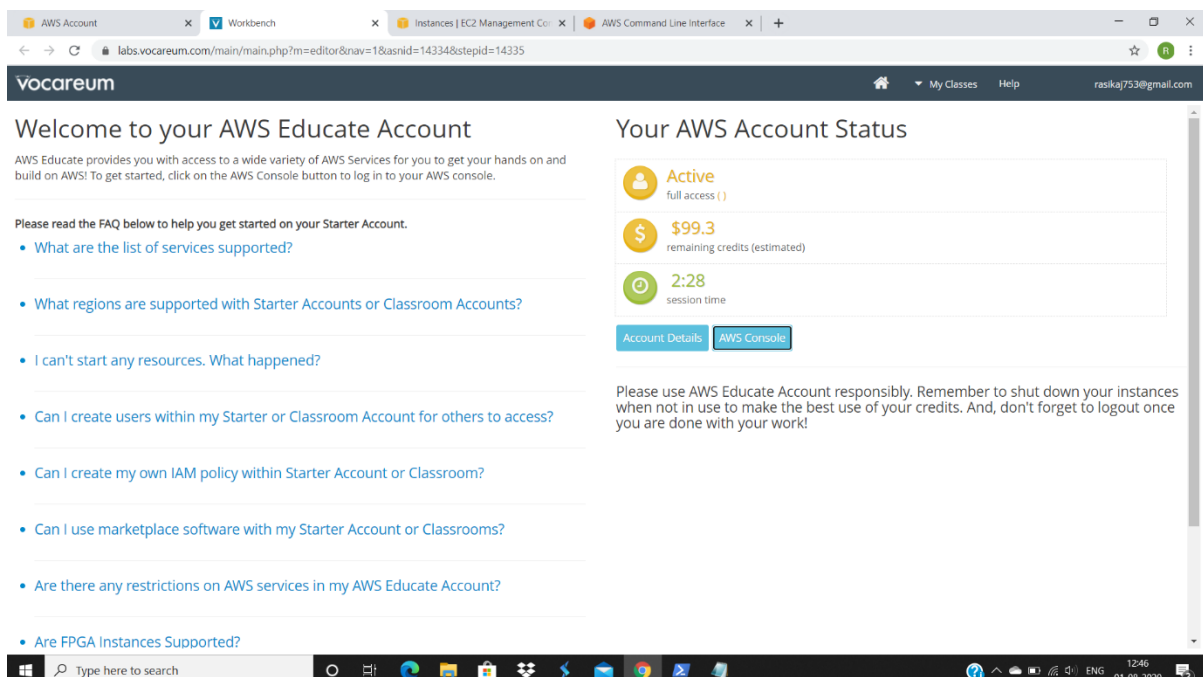
Default region name [None]: us-east-1

Default output format [None]: json

AWS Access Key ID [None]: insert your access key id

AWS Secret Access Key [None]: insert your secret access key

You can get both the key id and secret key from your account details as shown below)



The screenshot shows the 'Your AWS Account Status' page on the AWS Educate portal. The page includes a welcome message, a list of frequently asked questions (FAQs), and a summary of account status. The account is active with full access. The remaining credits are \$99.3 (estimated), and the session time is 2:28. There are buttons for 'Account Details' and 'AWS Console'. A disclaimer at the bottom states: 'Please use AWS Educate Account responsibly. Remember to shut down your instances when not in use to make the best use of your credits. And, don't forget to logout once you are done with your work!'.

Welcome to your AWS Educate Account

AWS Educate provides you with access to a wide variety of AWS Services for you to get your hands on and build on AWS! To get started, click on the AWS Console button to log in to your AWS console.

Please read the FAQ below to help you get started on your Starter Account.

- What are the list of services supported?
- What regions are supported with Starter Accounts or Classroom Accounts?
- I can't start any resources. What happened?
- Can I create users within my Starter or Classroom Account for others to access?
- Can I create my own IAM policy within Starter Account or Classroom?
- Can I use marketplace software with my Starter Account or Classrooms?
- Are there any restrictions on AWS services in my AWS Educate Account?
- Are FPGA Instances Supported?

Your AWS Account Status

- Active**
full access ()
- \$99.3**
remaining credits (estimated)
- 2:28**
session time

[Account Details](#) [AWS Console](#)

Please use AWS Educate Account responsibly. Remember to shut down your instances when not in use to make the best use of your credits. And, don't forget to logout once you are done with your work!

Step 3: Write the following commands Create

a key pair:

```
> aws ec2 create-key-pair --key-name name-of key --query "KeyMaterial" -  
output text
```

|out-file -encoding ascii -filepath name-of-key.pem Create
security group:

```
>aws ec2 create-security-group --group-name your-group-name --description  
"allow all tcp protocol" -
```

-output table Authorize

security group:

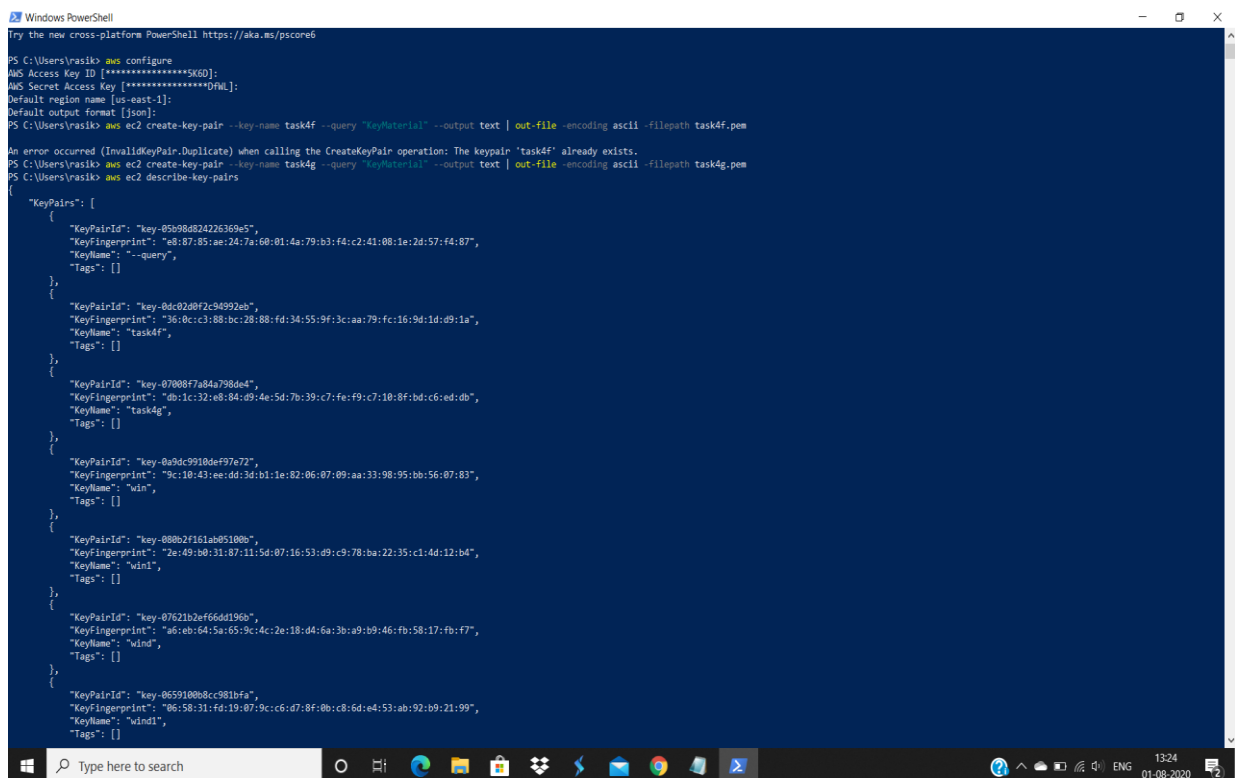
```
>aws ec2 authorize-security-group-ingress --group-name your-group-name -  
protocol tcp
```

```
--port 0-65535 --cidr 0.0.0.0/0 Launch
```

instance:

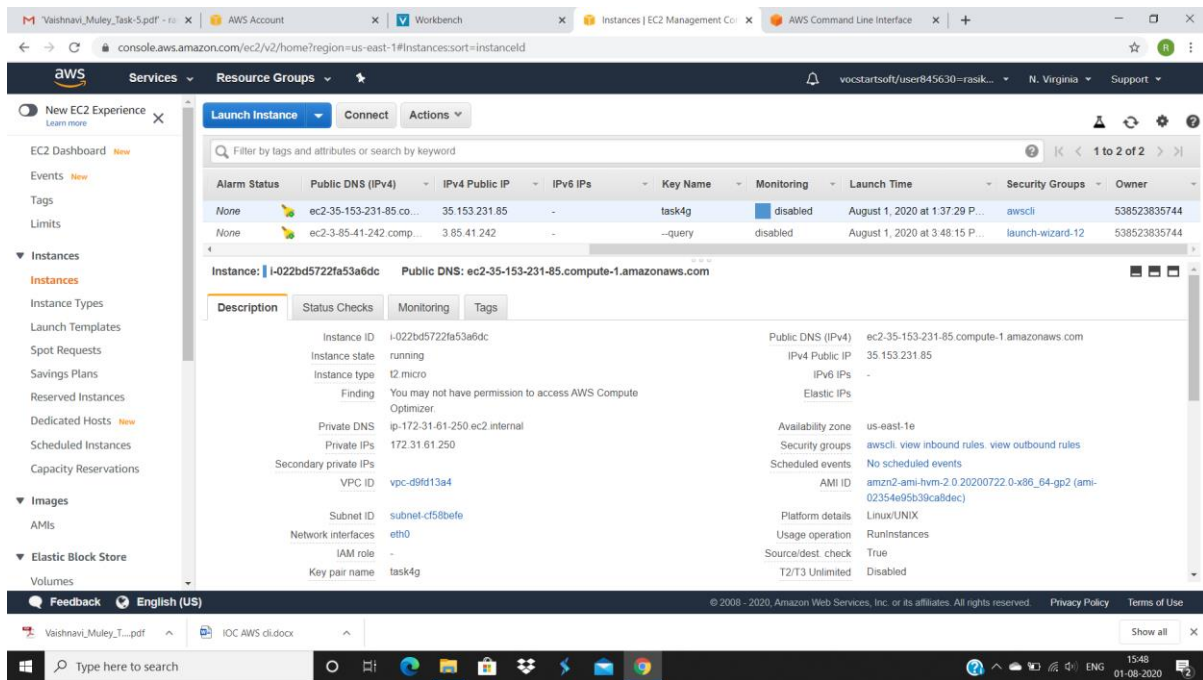
```
>aws ec2 run-instances --image-id id-of-ami --count number-of-instances-  
tolaunch
```

```
--instance-type your-choice --key-name your-key-name --security-group  
yourgroup-name
```



```
Windows PowerShell
Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\rasiko> aws configure
AWS Access Key ID [*****SK60]:
AWS Secret Access Key [*****DFHL]:
Default region name [us-east-1]:
Default output format [json]:
PS C:\Users\rasiko> aws ec2 create-key-pair --key-name task4f --query "KeyMaterial" --output text | out-file -encoding ascii -filepath task4f.pem
An error occurred (InvalidPair.Duplicate) when calling the CreateKeyPair operation: The keypair 'task4f' already exists.
PS C:\Users\rasiko> aws ec2 create-key-pair --key-name task4g --query "KeyMaterial" --output text | out-file -encoding ascii -filepath task4g.pem
PS C:\Users\rasiko> aws ec2 describe-key-pairs
{
  "KeyPairs": [
    {
      "KeyPairId": "key-85b98d824226369e5",
      "KeyFingerprint": "e8:87:85:ae:24:7a:68:01:4a:79:b3:f4:c2:41:88:1e:2d:57:f4:87",
      "KeyName": "--query",
      "Tags": []
    },
    {
      "KeyPairId": "key-0dc02d8f2c94992eb",
      "KeyFingerprint": "36:0c:c3:88:bc:28:88:fd:34:55:9f:3c:aa:79:fc:16:9d:1d:d9:1a",
      "KeyName": "task4f",
      "Tags": []
    },
    {
      "KeyPairId": "key-07008f7a84a798de4",
      "KeyFingerprint": "db:1c:32:e8:04:d9:4e:5d:7b:39:c7:fe:f9:c7:10:8f:bd:c6:ed:db",
      "KeyName": "task4g",
      "Tags": []
    },
    {
      "KeyPairId": "key-0a84c99104ef97e72",
      "KeyFingerprint": "9c:10:43:ee:dd:3d:b1:1e:82:06:07:09:aa:33:98:95:bb:56:07:83",
      "KeyName": "win",
      "Tags": []
    },
    {
      "KeyPairId": "key-880b2f161ab05100b",
      "KeyFingerprint": "2e:49:b0:31:87:11:5d:07:16:53:d9:c9:78:ba:22:35:c1:4d:12:b4",
      "KeyName": "win1",
      "Tags": []
    },
    {
      "KeyPairId": "key-07621b2ef66dd196b",
      "KeyFingerprint": "a6:eb:64:5a:65:9c:4c:2e:18:d4:6a:3b:a9:b9:46:fb:58:17:fb:f7",
      "KeyName": "wind",
      "Tags": []
    },
    {
      "KeyPairId": "key-0659100b8cc981bfa",
      "KeyFingerprint": "06:58:31:fd:19:07:9c:c6:d7:8f:0b:c8:6d:e4:53:ab:92:b9:21:99",
      "KeyName": "wind1",
      "Tags": []
    }
  ]
}
```

```

ec2-user@ip-172-31-61-250~
[ec2-user@ip-172-31-61-250 ~]$ exit
logout
Connection to ec2-35-153-231-85.compute-1.amazonaws.com closed.
PS C:\Users\rasik> aws ec2 create-volume --size 3 --availability-zone us-east-1e
An error occurred (InvalidZone.NotFound) when calling the CreateVolume operation: The zone 'us-east-1e' does not exist.
PS C:\Users\rasik> aws ec2 create-volume --size 3 --availability-zone us-east-1e
{
  "AvailabilityZone": "us-east-1e",
  "CreateTime": "2020-08-01T09:08:46+00:00",
  "Encrypted": false,
  "Size": 3,
  "SnapshotId": "",
  "State": "creating",
  "VolumeId": "vol-0c3a6b2a7cda5e51c",
  "Iops": 100,
  "Tags": [],
  "VolumeType": "gp3",
  "MultiAttachEnabled": false
}
PS C:\Users\rasik> aws ec2 attach-volume --volume-id vol-0c3a6b2a7cda5e51c --instance-id i-022bd5722fa53a6dc --device /dev/sdf
{
  "AttachTime": "2020-08-01T09:14:19.970000+00:00",
  "Device": "/dev/sdf",
  "InstanceId": "i-022bd5722fa53a6dc",
  "State": "attaching",
  "VolumeId": "vol-0c3a6b2a7cda5e51c"
}
PS C:\Users\rasik> ssh -i "task4g.pem" ec2-user@ec2-35-153-231-85.compute-1.amazonaws.com
Last login: Sat Aug 1 09:05:00 2020 from 106.193.195.17

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Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-61-250 ~]$ lsblk
NAME        MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda        202:0    0 80G 0 disk
└─xvda1     202:1    0 80G 0 part /
xvdf        202:80   0 3G 0 disk
[ec2-user@ip-172-31-61-250 ~]$ sudo fdisk/dev/xvdf
sudo: fdisk/dev/xvdf: command not found
[ec2-user@ip-172-31-61-250 ~]$ sudo fdisk /dev/xvdf

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS disklabel with disk identifier 0x9ba2c2fa.

Command (m for help):

```

Step 6: Type the following commands

> `aws ec2 create-volume --size 3 --availability-zone us-east-1e`

> `aws ec2 attach-volume --volume-id your-volume-id --instance-id your instance id --device /dev/sdf`

> `ssh -i "your-key-name.pem" ec2-user@your-public-dns-of-instance`

Step 7: Now type the following commands

```
[ec2-user@ your-public-dns-of-instance]$ lsblk
[ec2-user@ your-public-dns-of-instance]$ sudo fdisk /dev/xvdf
Command (m for help): m
Command (m for help): n
Command (m for help): wq
[ec2-user@ your-public-dns-of-instance]$ sudo partprobe /dev/xvdf
[ec2-user@ your-public-dns-of-instance]$ sudo lsblk
[ec2-user@ your-public-dns-of-instance]$ sudo mkdir /ioc
[ec2-user@ your-public-dns-of-instance]$ sudo mkfs.xfs /dev/xvdf1
[ec2-user@ your-public-dns-of-instance]$ sudo mount /dev/xvdf1 /ioc
[ec2-user@ your-public-dns-of-instance]$ sudo touch filename.txt /ioc
[ec2-user@ your-public-dns-of-instance]$ ls
[ec2-user@ your-public-dns-of-instance]$ sudo lsblk
[ec2-user@ your-public-dns-of-instance]$ exit
```

```
ec2-user@ip-172-31-61-250-
Using default response p.
Partition number (2-4, default 2):
First sector (2099200-6291455, default 2099200):
Last sector, +sectors or +size(K,M,G,T,P) (2099200-6291455, default 6291455): +5G
Created a new partition 1 of type 'Linux' and of size 5 GiB.
Last sector, +sectors or +size(K,M,G,T,P) (2099200-6291455, default 6291455): +5G
Created a new partition 2 of type 'Linux' and of size 1 GiB.
Last sector, +sectors or +size(K,M,G,T,P) (2099200-6291455, default 6291455): +1G
Created a new partition 2 of type 'Linux' and of size 1 GiB.
Command (m for help): m
Help:
DOS (MBR)
a toggle a bootable flag
b edit nested BSD disklabel
c toggle the dos compatibility flag
Generic
d delete a partition
f list free unpartitioned space
l list known partition types
n add a new partition
p print the partition table
t change a partition type
v verify the partition table
i print information about a partition
Misc
m print this menu
u change display/entry units
x extra functionality (experts only)
Script
l load disk layout from sfdisk script file
o dump disk layout to sfdisk script file
Save & Exit
w write table to disk and exit
q quit without saving changes
Create a new label
g create a new empty GPT partition table
G create a new empty SGI (IRIX) partition table
o create a new empty DOS partition table
s create a new empty Sun partition table
Command (m for help): wq
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
```

```
ec2-user@ip-172-31-61-250-
Syncing disks.
ec2-user@ip-172-31-61-250 ~$ sudo parted /dev/xvdf
ec2-user@ip-172-31-61-250 ~$ sudo lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda 202:0 0 8G 0 disk
└─xvda1 202:1 0 8G 0 part /
xvdf 202:80 0 3G 0 disk
├─xvdf1 202:81 0 3G 0 part
└─xvdf2 202:82 0 3G 0 part
ec2-user@ip-172-31-61-250 ~$ sudo mkdir /ioc
ec2-user@ip-172-31-61-250 ~$ sudo mkfs.xfs /dev/xvdf1
meta-data=/dev/xvdf1 isize=512  agcount=4, agsize=65536 blks
          =          sectsz=512   attr=2, projid32bit=1
          =          crc=1        finobt=1, sparse=0
data      =          bsize=4096   blocks=262144, imaxpct=25
          =          sunit=0      swidth=0 blks
naming     -version 2             bsize=4096   ascicli=0 #ftype=1
log        -internal log          bsize=4096   blocks=2560, version=2
          =          sectsz=512   sunit=0 blks, lazy-count=1
realtime   -none                  extsz=4096   blocks=0, rtextents=0
ec2-user@ip-172-31-61-250 ~$ sudo mount /dev/xvdf1 /ioc
ec2-user@ip-172-31-61-250 ~$ sudo touch rasik.txt /ioc
sudo: touch: command not found
ec2-user@ip-172-31-61-250 ~$ sudo touch rasika.txt /ioc
ec2-user@ip-172-31-61-250 ~$ ls
rasika.txt
ec2-user@ip-172-31-61-250 ~$ sudo lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda 202:0 0 8G 0 disk
└─xvda1 202:1 0 8G 0 part /
xvdf 202:80 0 3G 0 disk
├─xvdf1 202:81 0 3G 0 part /ioc
└─xvdf2 202:82 0 3G 0 part
ec2-user@ip-172-31-61-250 ~$
```