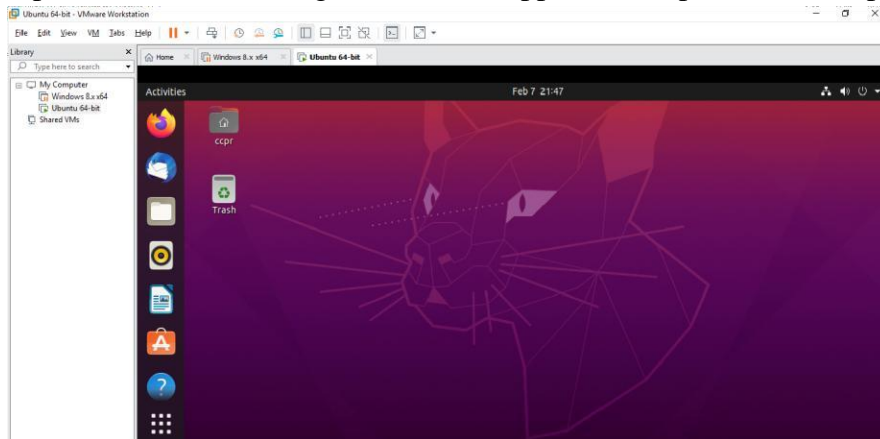


Step 9: Now the following window will appear then open command prompt.



Step 10: Update Ubuntu by executing following commands

- Sudo apt update
- Sudo apt upgrade

```
ccpr@ubuntu: ~/Desktop
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

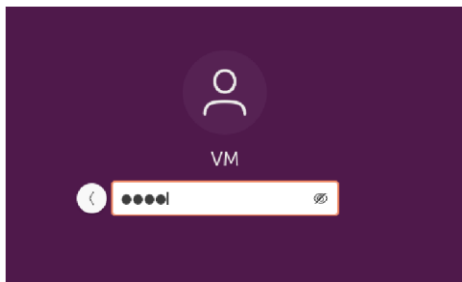
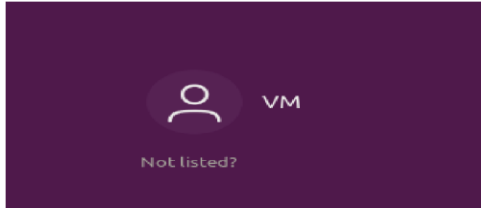
ccpr@ubuntu:~/Desktop$ sudo apt-get update
[sudo] password for ccpr:
Hit:1 http://us.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
ccpr@ubuntu:~/Desktop$ sudo apt-get upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following packages have been kept back:
  fwupd gir1.2-javascriptcoregtk-4.0 gir1.2-webkit2-4.0 libfwupd2
  libfwupdplugin5 libjavascriptcoregtk-4.0-18 libwebkit2gtk-4.0-37
  python3-software-properties python3-update-manager
  software-properties-common software-properties-gtk ubuntu-advantage-tools
  update-manager update-manager-core
The following packages will be upgraded:
  accountsservice amd64-microcode apparmor apport apport-gtk apt apt-utils
  avahi-autoipd avahi-daemon avahi-utils base-files bind9-dnsutils bind9-host
```

```
Processing triggers for initramfs-tools (0.136ubuntu6.7) ...
update-initramfs: Generating /boot/initrd.img-5.15.0-131-generic
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.17) ...
Processing triggers for rsyslog (8.2001.0-1ubuntu1.3) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for cracklib-runtime (2.9.6-3.2) ...
Processing triggers for plymouth-theme-ubuntu-text (0.9.4git20200323-0ubuntu6.2) ...
update-initramfs: deferring update (trigger activated)
Processing triggers for shared-mime-info (1.15-1) ...
Processing triggers for install-info (6.7.0.dfsg.2-5) ...
Processing triggers for fontconfig (2.13.1-2ubuntu3) ...
Processing triggers for desktop-file-utils (0.24-1ubuntu3) ...
Processing triggers for ca-certificates (20240203-20.04.1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
Processing triggers for libgdk-pixbuf2.0-0:amd64 (2.40.0+dfsg-3ubuntu0.5) ...
Processing triggers for initramfs-tools (0.136ubuntu6.7) ...
update-initramfs: Generating /boot/initrd.img-5.15.0-131-generic
```

Step 11: Now reboot the system by the 'sudo reboot' or 'init 6' command.

```
ccpr@ubuntu:~/Desktop$ sudo reboot
```

Step 12: Now select your created machine and enter the respective password.



Step 13: Create new user called stack

```
ccpr@ubuntu:~/Desktop$ sudo adduser stack
[sudo] password for ccpr:
Adding user 'stack' ...
Adding new group 'stack' (1001) ...
Adding new user 'stack' (1001) with group 'stack' ...
Creating home directory '/home/stack' ...
Copying files from '/etc/skel' ...
New password:
Retype new password:
Sorry, passwords do not match.
passwd: Authentication token manipulation error
passwd: password unchanged
Try again? [y/N] y
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for stack
Enter the new value, or press ENTER for the default
```

Step 14: Log in as root.

```
ccpr@ubuntu:~/Desktop$ sudo -i
root@ubuntu:~#
```

Step 15: Assign the sudo privileges to stack user as follows (#echo "stack ALL=(ALL) NOPASSWD:ALL" | sudo tee /etc/sudoers.d/stack)

```
root@ubuntu:~# echo "stack ALL=(ALL) NOPASSWD:ALL" | sudo tee /etc/sudoers.d/stack
stack ALL=(ALL) NOPASSWD:ALL
root@ubuntu:~#
```

Step 16: Switch to the stack user, by following command “sudo su - stack”.

```
root@ubuntu:~# sudo su - stack
stack@ubuntu:~$
```

Step 17: Install the Git using the command “sudo apt install git -y”.

```
stack@ubuntu:~$ sudo apt install git -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk
  gitweb git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  git git-man liberror-perl
0 upgraded, 3 newly installed, 0 to remove and 14 not upgraded.
Need to get 5,525 kB of archives.
After this operation, 38.8 MB of additional disk space will be used.
0% [Working]
```

Step 18: Download OpenStack

Once Git is installed, download the DevStack from github by following command “git clone https://git.openstack.org/openstack-dev/devstack”.

```
stack@ubuntu:~$ git clone https://git.openstack.org/openstack-dev/devstack
Cloning into 'devstack'...
warning: redirecting to https://opendev.org/openstack/devstack/
remote: Enumerating objects: 51481, done.
remote: Counting objects: 100% (31304/31304), done.
remote: Compressing objects: 100% (10571/10571), done.
remote: Total 51481 (delta 30539), reused 20733 (delta 20733), pack-reused 20177
Receiving objects: 100% (51481/51481), 9.67 MiB | 175.00 KiB/s, done.
Resolving deltas: 100% (36543/36543), done.
stack@ubuntu:~$
```

Step 19: Go to DevStack directory and look for local.conf file.

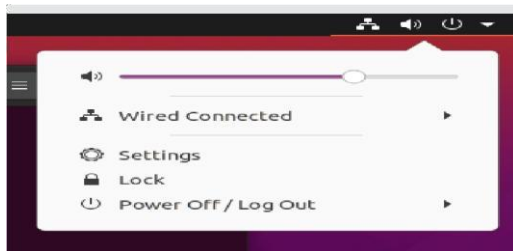
```
stack@ubuntu:~$ ls
devstack
stack@ubuntu:~$ cd devstack
stack@ubuntu:~/devstack$ ls
clean.sh      functions      lib            roles          tools
CONTRIBUTING.rst  functions-common  LICENSE       run_tests.sh  tox.ini
data          FUTURE.rst    Makefile      samples       unstack.sh
doc           gate          openrc        stackrc
extras.d      HACKING.rst   playbooks    stack.sh
files         inc           README.rst   tests
stack@ubuntu:~/devstack$ cd samples
stack@ubuntu:~/devstack/samples$ ls
local.conf  local.sh
stack@ubuntu:~/devstack/samples$ cp local.conf ../
stack@ubuntu:~/devstack/samples$ cd ..
stack@ubuntu:~/devstack$ ls
clean.sh      functions      lib            README.rst    tests
CONTRIBUTING.rst  functions-common  LICENSE       roles         tools
data          FUTURE.rst    local.conf   run_tests.sh  tox.ini
doc           gate          Makefile    samples       unstack.sh
extras.d      HACKING.rst   openrc      stackrc
files         inc           playbooks   stack.sh
stack@ubuntu:~/devstack$
```

Step 20: Install vim using the command “sudo apt-get install vim”.

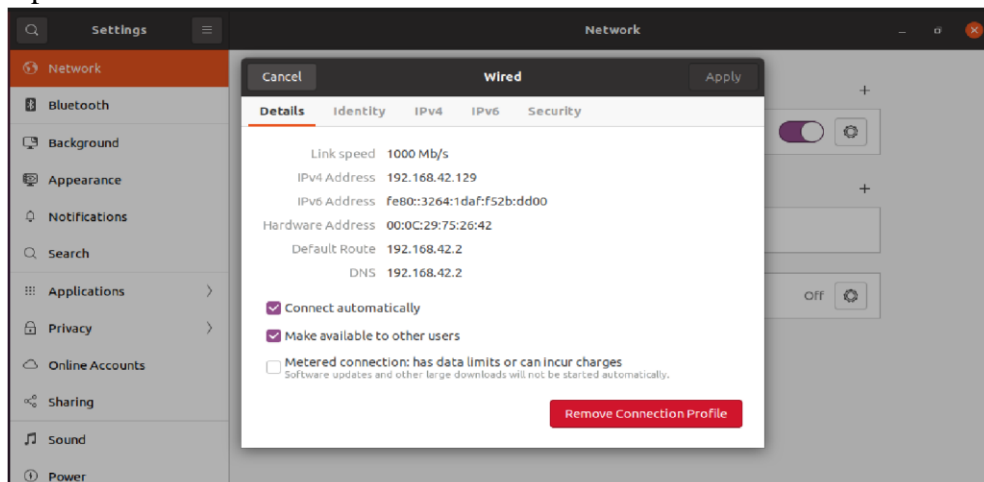
```
stack@ubuntu:~/devstack$ sudo apt-get install vim
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  vim-runtime
Suggested packages:
  ctags vim-doc vim-scripts
The following NEW packages will be installed:
  vim vim-runtime
0 upgraded, 2 newly installed, 0 to remove and 14 not upgraded.
Need to get 7,117 kB of archives.
After this operation, 34.6 MB of additional disk space will be used.
Do you want to continue? [Y/n]

Adding 'diversion of /usr/share/vim/vim81/doc/tags to /usr/share/vim/vim81/doc/t
ags.vim-tiny by vim-runtime'
Unpacking vim-runtime (2:8.1.2269-1ubuntu5.30) ...
Selecting previously unselected package vim.
Preparing to unpack .../vim_2%3a8.1.2269-1ubuntu5.30_amd64.deb ...
Unpacking vim (2:8.1.2269-1ubuntu5.30) ...
Setting up vim-runtime (2:8.1.2269-1ubuntu5.30) ...
Setting up vim (2:8.1.2269-1ubuntu5.30) ...
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/vim (vim) in a
uto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/vimdiff (vimd
iff) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/rvim (rvim) in
auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/rview (rview)
in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/vi (vi) in aut
o mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/view (view) in
auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/ex (ex) in aut
o mode
Processing triggers for man-db (2.9.1-1) ...
```

Step 21: For fetching IP address go to ‘Wired Connected’ option.



Step 22: Now note down the IPv4 Address. Here “192.168.42.129”



Step 23: Now open the local.conf file using command “vim local.conf”.

```
stack@ubuntu:~/devstack$ vim local.conf
```

Step 24: Once the file is opened go to insert mode and then after the device_password field write the system IP address that we copied from settings above “HOST_IP=192.168.42.129”

```
# Note that if ``localrc`` is present it will be used in favor of this section.
[[local|localrc]]

# Minimal Contents
# -----

# While ``stack.sh`` is happy to run without ``localrc``, devlife is better when
# there are a few minimal variables set:

# If the ``*_PASSWORD`` variables are not set here you will be prompted to enter
# values for them by ``stack.sh`` and they will be added to ``local.conf``.
ADMIN_PASSWORD=p1
DATABASE_PASSWORD=p1
RABBIT_PASSWORD=p1
SERVICE_PASSWORD=p1

# ``HOST_IP`` and ``HOST_IPV6`` should be set manually for best results if
# the NIC configuration of the host is unusual, i.e. ``eth1`` has the default
```

HOSTIP=192.168.42.129

```
# The ``localrc`` section replaces the old ``localrc`` configuration file.
# Note that if ``localrc`` is present it will be used in favor of this section.
[[local|localrc]]

# Minimal Contents
# -----

# While ``stack.sh`` is happy to run without ``localrc``, devlife is better when
# there are a few minimal variables set:

# If the ``*_PASSWORD`` variables are not set here you will be prompted to enter
# values for them by ``stack.sh`` and they will be added to ``local.conf``.
ADMIN_PASSWORD=p1
DATABASE_PASSWORD=p1
RABBIT_PASSWORD=p1
SERVICE_PASSWORD=p1
HOST_IP=192.168.56.1

# ``HOST_IP`` and ``HOST_IPV6`` should be set manually for best results if
# the NIC configuration of the host is unusual, i.e. ``eth1`` has the default
# route but ``eth0`` is the public interface. They are auto-detected in
# ``stack.sh`` but often is indeterminate on later runs due to the IP moving
# from an Ethernet interface to a bridge on the host. Setting it here also
-- INSERT --                                     32,21      19%
```

Step 26: To install and run the OpenStack, execute the following commands “./stack.sh”

```
stack@ubuntu:~/devstack$ ./stack.sh
+ unset GREP_OPTIONS
+ unset LANG
+ unset LANGUAGE
+ LC_ALL=en_US.utf8
+ export LC_ALL
++ env
++ grep -E '^OS_'
++ cut -d = -f 1
+ unset
+ umask 022
+ PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/usr/local/bin:/usr/local/sbin:/usr/sbin:/sbin
+++ dirname ./stack.sh
++ cd .
++ pwd
+ TOP_DIR=/home/stack/devstack
+ NOUNSET=
+ [[ -n '' ]]
++ date +%s
+ DEVSTACK_START_TIME=1739782880
+ [[ -r /home/stack/devstack/.stackenv ]]
+ FILES=/home/stack/devstack/files
+ '[' '' -d /home/stack/devstack/files ']'
```

BSCS602

Pratik Patil

Roll No:58

KERALEEYA SAMAJAM(REGD.) DOMBIVLI'S
MODEL COLLEGE
EMPOWERED AUTONOMOUS

Pratik Patil
Date:-

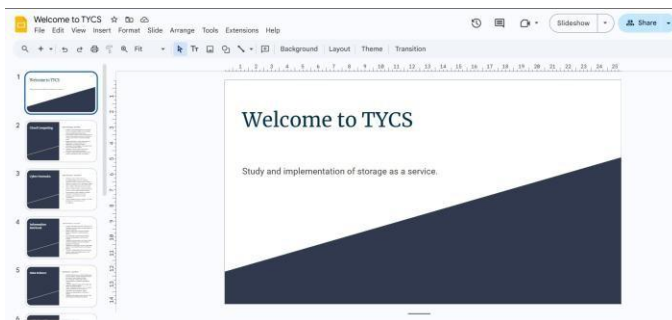
Roll No:58

Practical 8

Aim : Study and implementation of Storage as a Service.

On the google drive - create docs. - presentation 10 slides(style and animation) - google form 10 questions (different format) - spreadsheet (calculations) - share.

Presentation :



Cloud Computing

Cloud Computing - Key Points

1. Definition: Cloud computing provides on-demand access to computing resources over the Internet without requiring physical infrastructure.
2. Service Models: It includes IaaS (Infrastructure as a Service), PaaS (Platform as a Service), and SaaS (Software as a Service) for different computing needs.
3. Deployment Models: It can be Public (shared by multiple users), Private (exclusive to one organization), or Hybrid (mix of both).
4. Advantages: Offers scalability, cost savings, remote access, and automatic updates.
5. Challenges: Includes security risks, internet dependency, and regulatory compliance.
6. Examples: Popular cloud platforms include AWS, Google Cloud, Microsoft Azure, and Dropbox.

Data Science

Data Science – Key Points

1. Definition: Data Science is an interdisciplinary field that uses statistics, machine learning, and domain knowledge to extract insights from data.
2. Key Components: Includes data collection, cleaning, analysis, visualization, and predictive modeling.
3. Techniques: Machine learning, deep learning, data mining, and statistical analysis.
4. Tools & Technologies: Python, R, SQL, TensorFlow, Pandas, and Hadoop are commonly used.
5. Applications: Used in healthcare, finance, marketing, artificial intelligence, and business analytics.
6. Challenges: Data quality, privacy concerns, model interpretability, and handling large datasets.

Information Retrieval

Information Retrieval – Key Points

1. Definition: Information retrieval (IR) is the process of obtaining relevant information from large datasets or document collections.
2. Objective: Helps users find useful information quickly from structured or unstructured data sources.
3. Key Components: Includes query processing, indexing, ranking algorithms, and relevance feedback.
4. Techniques: Boolean search, vector space model, machine learning-based retrieval, and natural language processing (NLP).
5. Applications: Search engines (Google, Bing), library systems, recommendation systems, and big data analysis.
6. Challenges: Handling large-scale data, improving accuracy, dealing with ambiguous queries, and optimizing response time.

Cyber Forensics

Cyber Forensics – Key Points

1. Definition: Cyber forensics involves investigating digital crimes by collecting, analyzing, and preserving electronic evidence.
2. Objectives: Identify, recover, and analyze digital data to support legal cases and cybersecurity.
3. Types: Includes computer forensics, network forensics, mobile forensics, and cloud forensics.
4. Process: Involves data acquisition, analysis, documentation, and presentation of findings.
5. Challenges: Encryption, anti-forensic techniques, data volatility, and legal complexities.
6. Tools & Examples: EnCase, Autopsy, FTK, and Wireshark are commonly used for investigations.


Ethical Hacking

Ethical Hacking – Key Points

1. Definition: Ethical hacking involves legally testing and securing computer systems to identify and fix vulnerabilities.
2. Objective: Helps organizations strengthen cybersecurity by simulating real cyberattacks.
3. Types: Includes penetration testing, web application hacking, network security testing, and social engineering.
4. Techniques & Tools: Uses methods like password cracking, SQL injection, and tools like Metasploit, Nmap, and Wireshark.
5. Applications: Used in cybersecurity, risk assessment, compliance testing, and securing sensitive data.
6. Challenges: Legal and ethical boundaries, evolving threats, and staying updated with security trends.

Pratik Patil

Roll No:58

<h3>Assignment</h3>	<ul style="list-style-type: none"> • Cloud Computing • Cyber Forensics • Information Retrieval • Data Science • Ethical Hacking 	<h3>Project</h3>	<p>Sem V : Project Dissertation</p> <p>To develop understanding of software processes and helps the students to get deeper idea on how to develop a software application and their implementations.</p>
<h3>Project</h3>	<p>Sem VI : Project Implementation</p> <p>Learners will be able to describe the time needed to successfully complete a project, considering factors such as task dependencies and task lengths.</p>	<h3>Thank You</h3>	

Google Form :

← Preview mode Published [Copy responder link](#)

CC_Pr8 Form

The name, email address and photo associated with your Google Account will be recorded when you upload files and submit this form

What is your name?

Your answer

What is your DOB?

Date

dd-mm-yyyy

Select your gender

☐ Male

☐ Female

← Preview mode Published [Copy responder link](#)

what are your hobbies?

☐ Singing

☐ Dancing

☐ Drawing

☐ Reading

Tell me about yourself.

Your answer

Upload your identity proof.

Upload 1 supported file: PDF or image. Max 10 MB.

[Add File](#)

← Preview mode Published [Copy responder link](#)

Which social media platforms do you use for the following activities?

	Facebook	Instagram	Twitter	LinkedIn	WhatsApp
News	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Networking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buisness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What is your preferred mode of transportation?

Choose

← Preview mode Published [Copy responder link](#)

How satisfied are you with your current work-life balance?

1 2 3 4 5

Not satisfied ☐ ☐ ☐ ☐ ☐ Very satisfied

How often do you engage in following activities?

	Daily	Weekly	Rarely	Never
Exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read Books	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watch TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[Submit](#) [Clear form](#)

Never submit passwords through Google Forms.

This content is neither created nor endorsed by Google. [Terms of Service](#) [Privacy Policy](#)

Spreadsheet :

CC Pr8 File Edit View Insert Format Data Tools Extensions Help

100% 123 Default... 10 B I U A 🔍 🔍

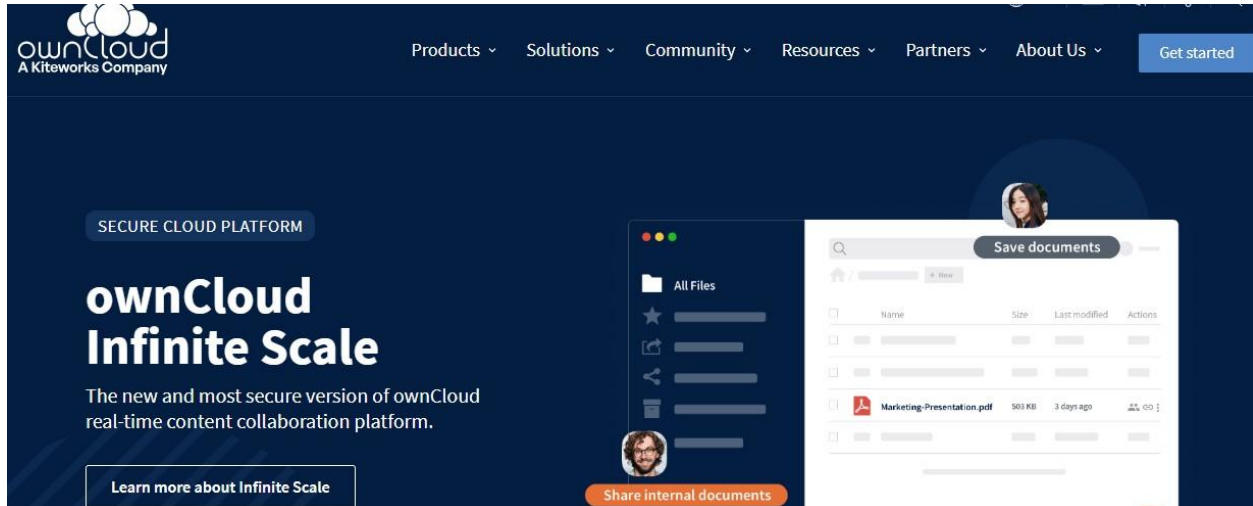
	A	B	C	D	E	F	G	H
1	Roll No	Name	Marks_1	Marks_2	Marks_3	Total	Average	
2	1	athulya	85	90	88	263	87.66666667	
3	2	siddhi	90	84	80	254	84.66666667	
4	3	sidhaarth	88	82	75	245	81.66666667	
5	4	abel	90	94	69	253	84.33333333	
6	5	ashwin	89	65	48	202	67.33333333	
7	6	abc	84	71	52	207	69	
8	7	pqr	78	61	49	188	62.66666667	
9	8	xyz	65	86	78	229	76.33333333	
10	9	mno	69	72	62	203	67.66666667	
11	10	def	72	80	82	234	78	
12								

KERALEEYA SAMAJAM(REGD.) DOMBIVLI'S
MODEL COLLEGE
EMPOWERED AUTONOMOUS

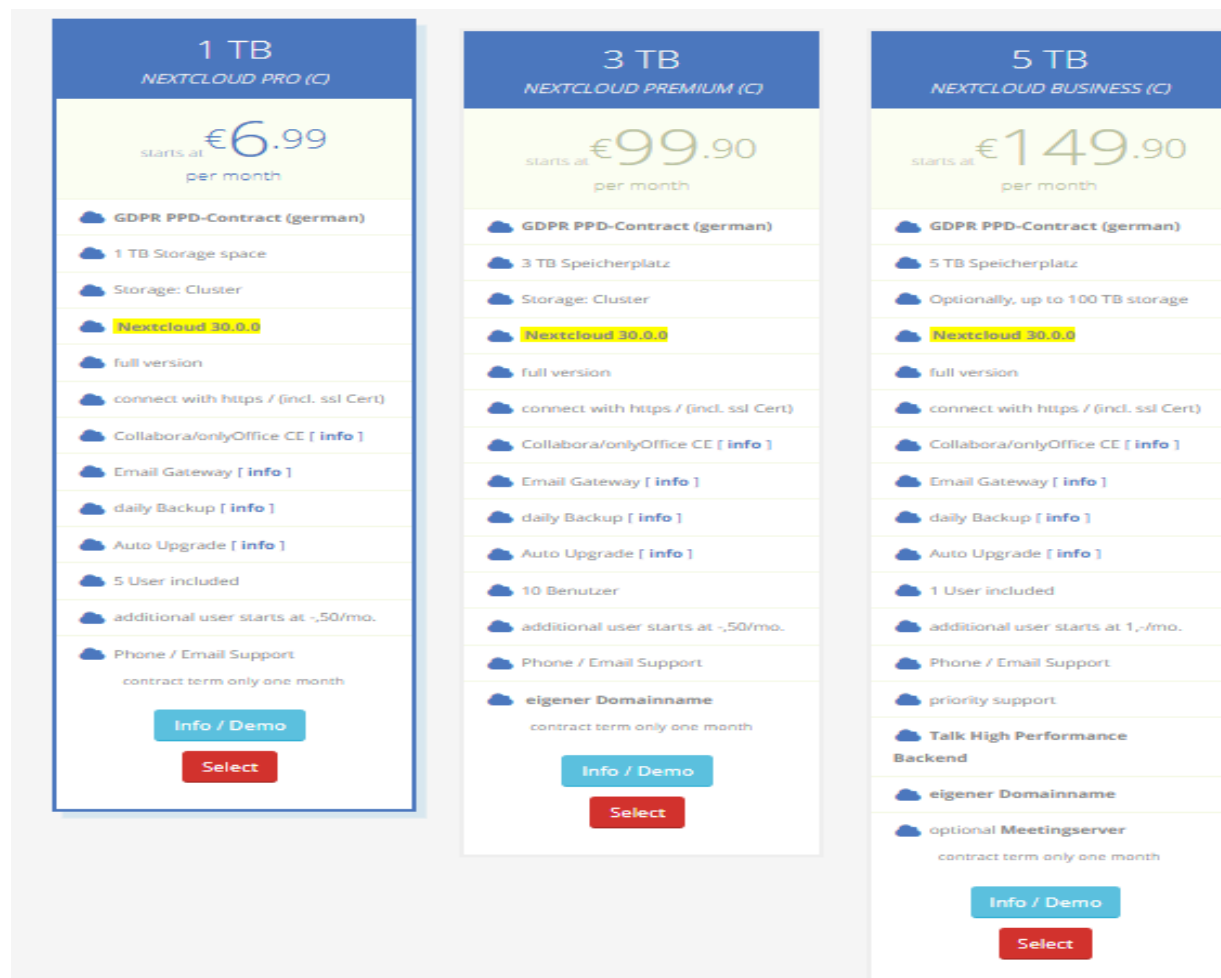
Practical 9

Study and implementation of Identity management

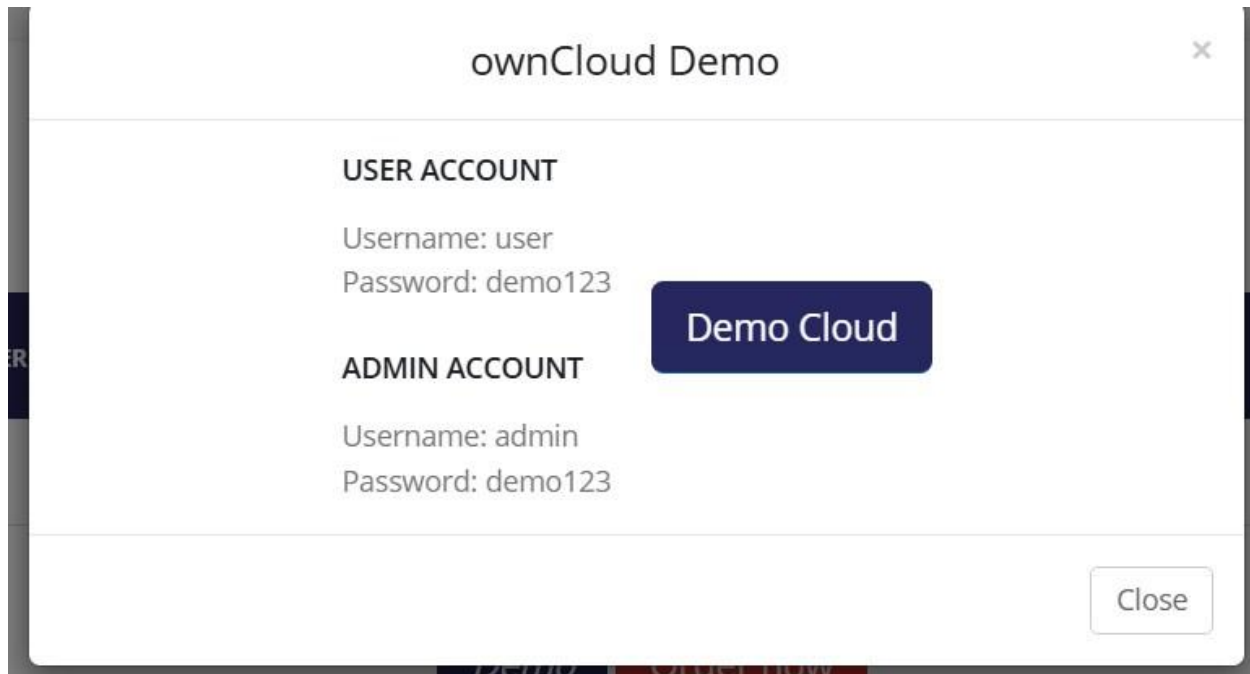
Step 1: Open owncloud



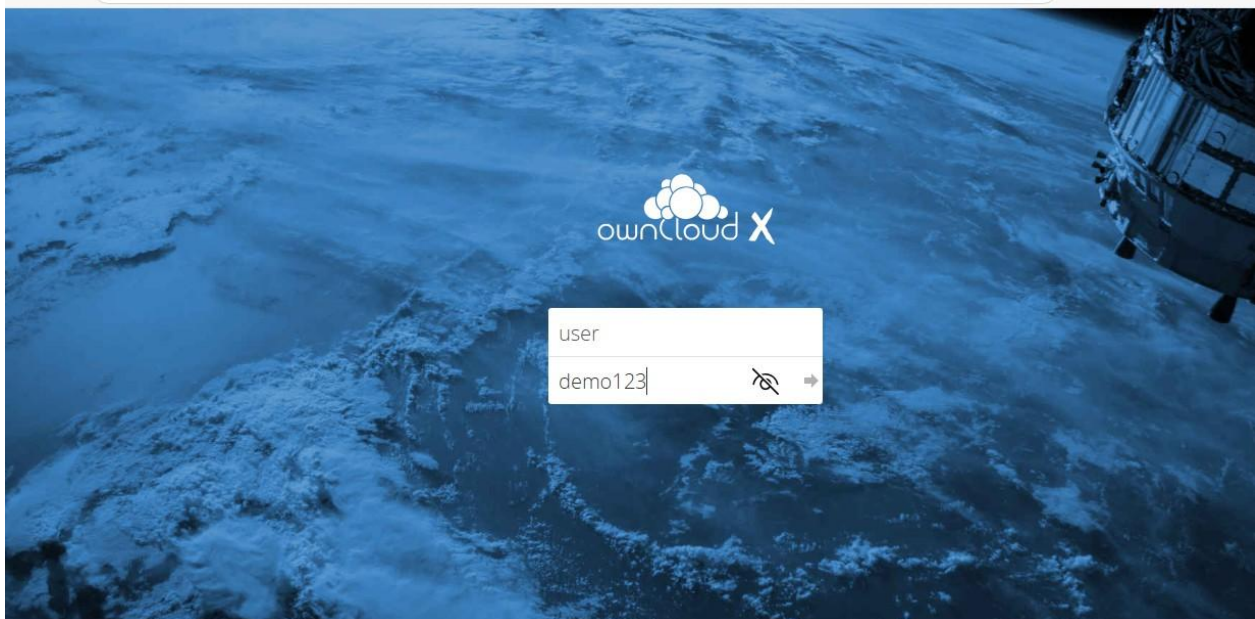
Step 2: Select the plan ,here we select the 1TB Free plan



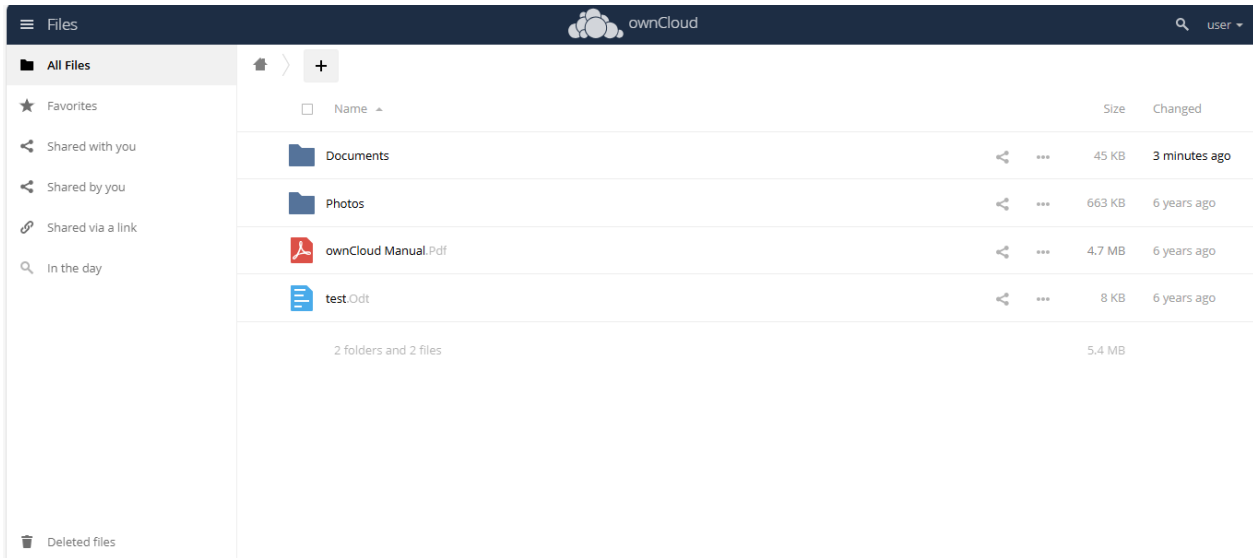
Step 3: Select The Info/Demo Option



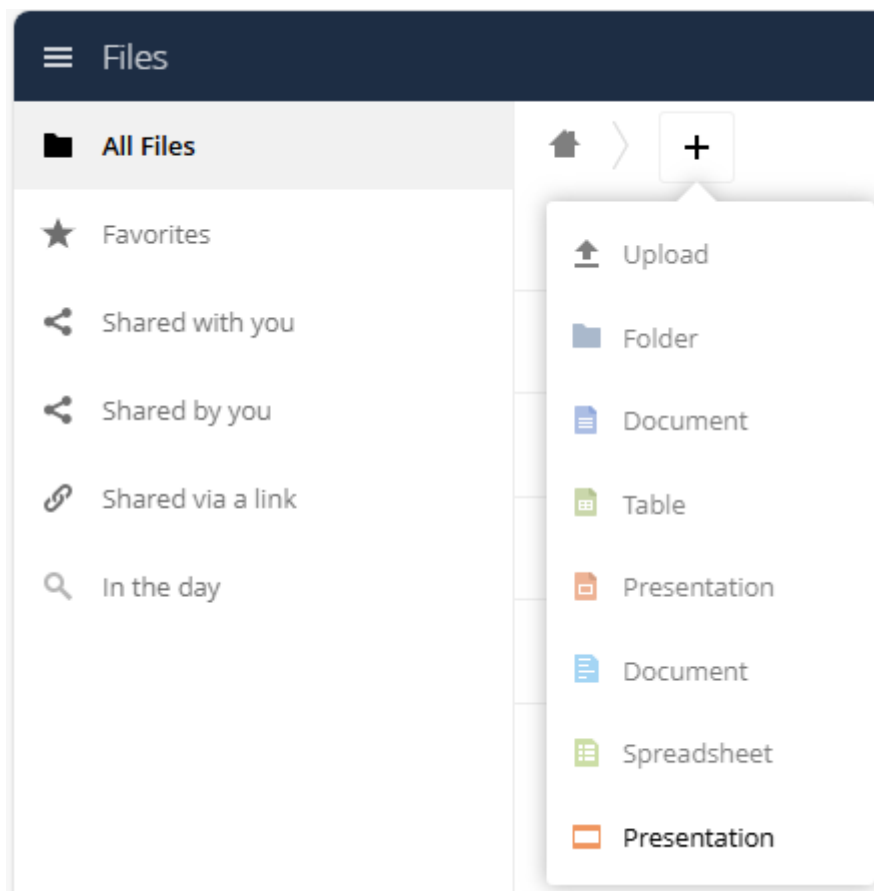
Step 4: Using The The Username and Password Provided login to the Owncloud user and Admin account



Step 5: Hence You are Logged into the user account



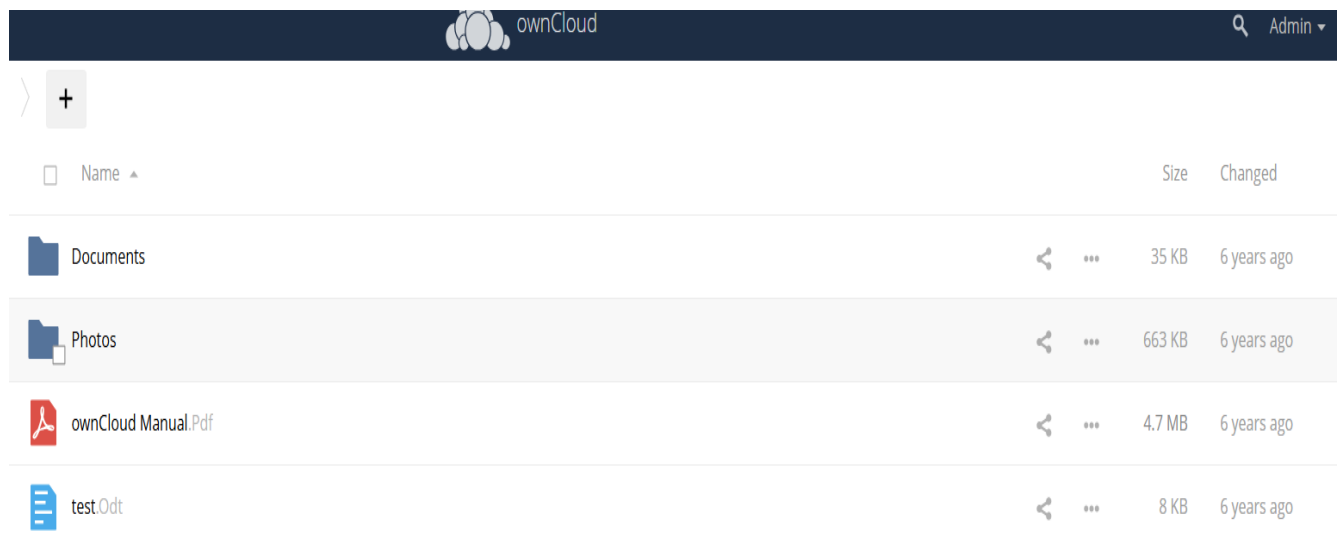
Step 6: Now try to upload any file



Step 7: Now log out of the user account and log into the admin account



Step 8: Here you are logged into the admin account whi



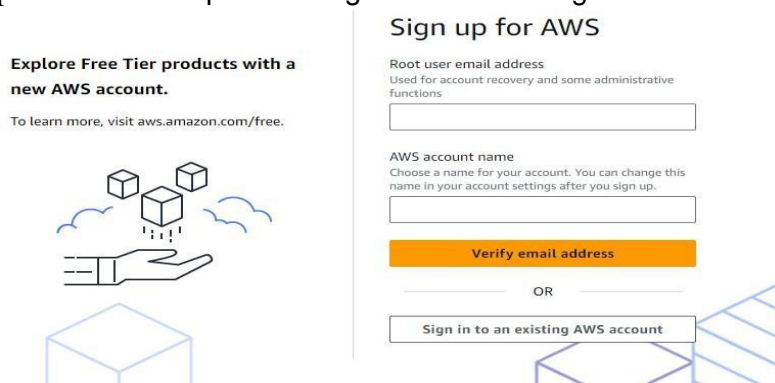
Date:-

Practical 10**Aim : Study Cloud Security management.**

Step 1: Search AWS in Google and open the following page. Proceed to click on “Create AWS Account”.



Step 2: Select the option of “Sign in to an existing AWS account”.



Step 3: Select the option of “Sign in using root user email”.



Step 4: Provide the email id in the given field and click on Next.

Sign in

☒ **Root user**
Account owner that performs tasks requiring unrestricted access. [Learn more](#)

☐ **IAM user**
User within an account that performs daily tasks. [Learn more](#)

Root user email address

Next

By continuing, you agree to the [AWS Customer Agreement](#) or other agreement for AWS services, and the [Privacy Notice](#). This site uses essential cookies. See our [Cookie Notice](#) for more information.

[New to AWS?](#)

Create a new AWS account

Step 5: Enter the password of the root user and sign in to the account.

Root user sign in

Email: sidb.modelcollege@gmail.com

Password [Forgot password?](#)

Sign in[Sign in to a different account](#)[Create a new AWS account](#)

Step 6: The following window will appear after the login to the account is successful.

aws

Search

[Alt+S]

United States (N. Virginia)

Console Home [Info](#)

Recently visited [Info](#)

IAM

IAM Identity Center

Billing and Cost Management

Applications (0) [Info](#)

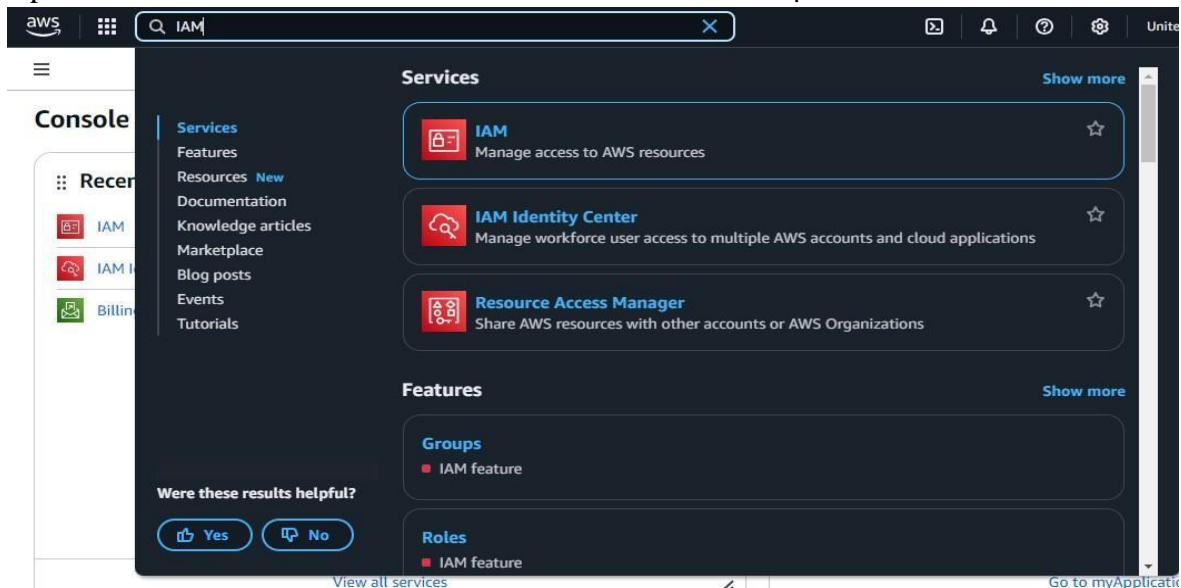
Region: US East (N. Virginia)

us-east-1 (Current Region) [Find applications](#)

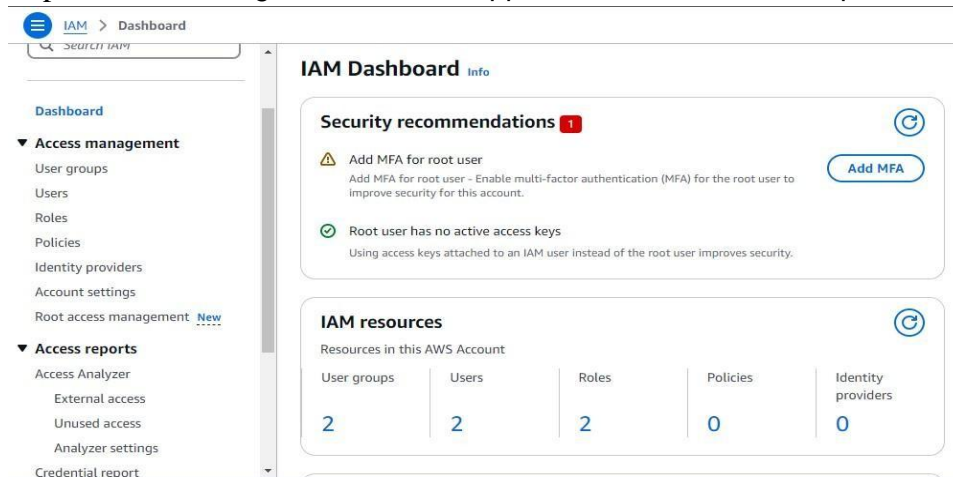
Name	Description	Region
No applications		
Get started by creating an application.		

[Create application](#)

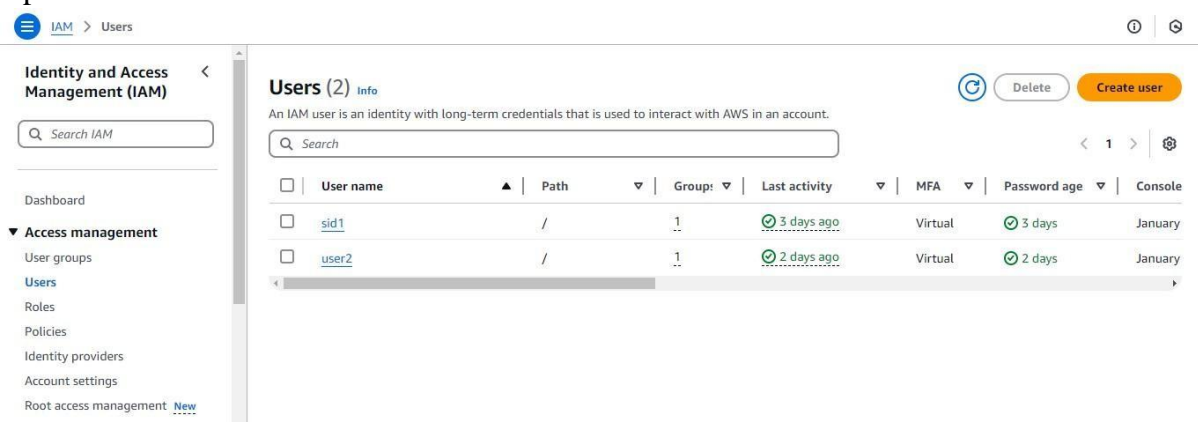
Step 7: Search for “IAM” in the search bar and select the first option.



Step 8: The following dashboard will appear from this select the option of “Users”.



Step 9: Click on “Create User” to create a new user into the account.



Step 10: Provide the name of the user and then tick the checkbox. Following dropdown will appear from that select “I want to create an IAM user.”

Specify user details

User details

User name

Batch1

The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and +, =, @, _ - (hyphen)

☒ Provide user access to the AWS Management Console - *optional*

If you're providing console access to a person, it's a [best practice](#) to manage their access in IAM Identity Center.

Are you providing console access to a person?

User type

☐ Specify a user in Identity Center - Recommended

We recommend that you use Identity Center to provide console access to a person. With Identity Center, you can centrally manage user access to their AWS accounts and cloud applications.

☒ I want to create an IAM user

We recommend that you create IAM users only if you need to enable programmatic access through access keys, service-specific credentials for AWS CodeCommit or Amazon Keyspaces, or a backup credential for emergency account access.

Step 11: Click on “Custom password” and enter the password you want to provide then tick the checkbox seen below and proceed to click on next.

Console password

☐ Autogenerated password

You can view the password after you create the user.

☒ Custom password

Enter a custom password for the user.

Batch@1

- Must be at least 8 characters long
- Must include at least three of the following mix of character types: uppercase letters (A-Z), lowercase letters (a-z), numbers (0-9), and symbols ! @ # \$ % ^ & * () _ + = (hyphen) [] { }

☒ Show password

☒ Users must create a new password at next sign-in - Recommended

Users automatically get the [IAMUserChangePassword](#) policy to allow them to change their own password.

If you are creating programmatic access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keyspaces, you can generate them after you create this IAM user. [Learn more](#)

Cancel Next

Console password

☐ Autogenerated password

You can view the password after you create the user.

☒ Custom password

Enter a custom password for the user.

☐ Show password

☒ Users must create a new password at next sign-in - Recommended

Users automatically get the [IAMUserChangePassword](#) policy to allow them to change their own password.

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