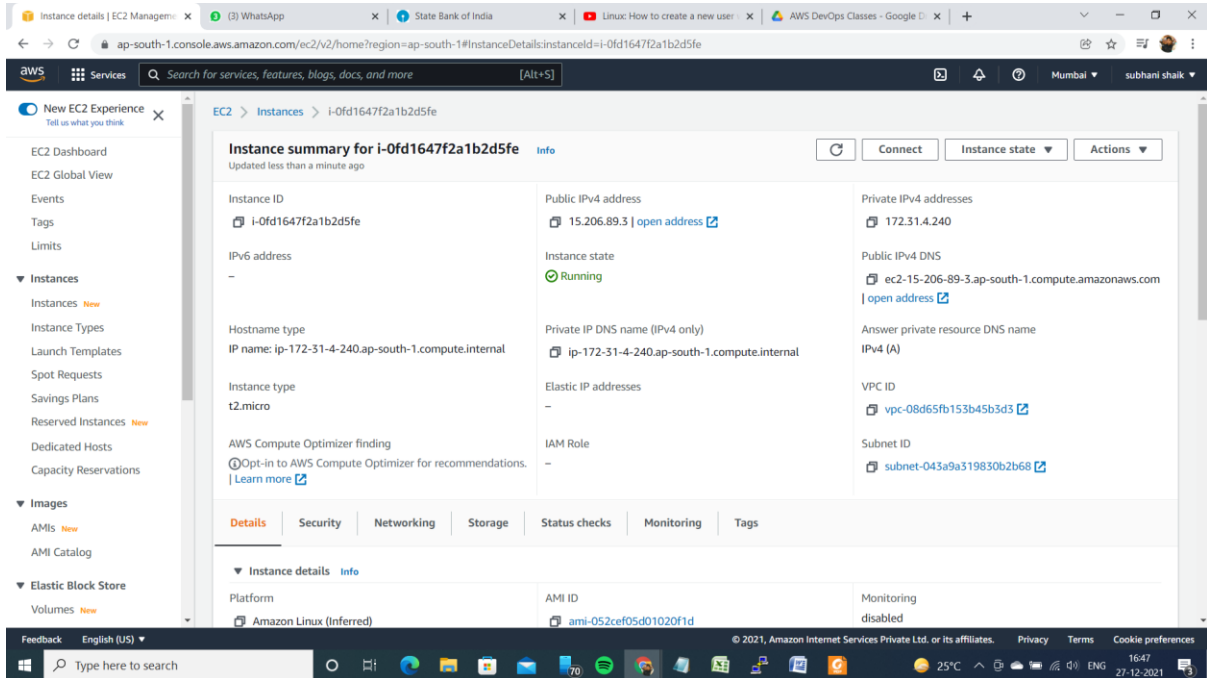
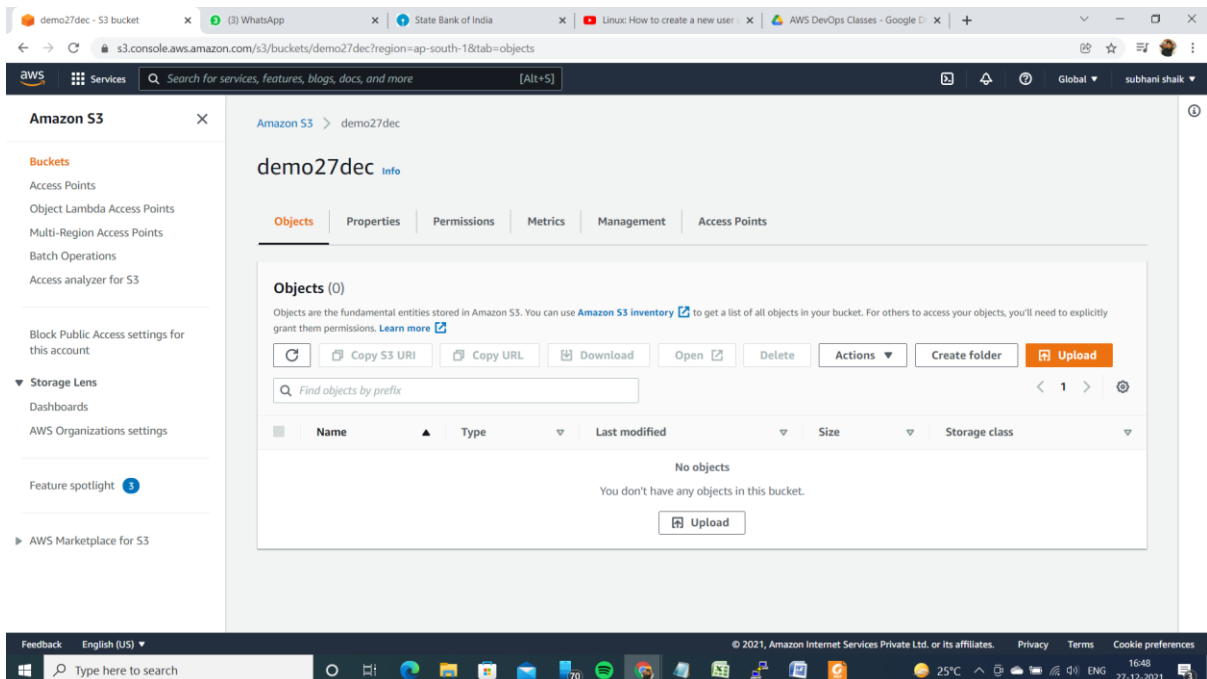


*****HOW TO MOUNT S3 BUCKET ON EC2-INSTANCE*****

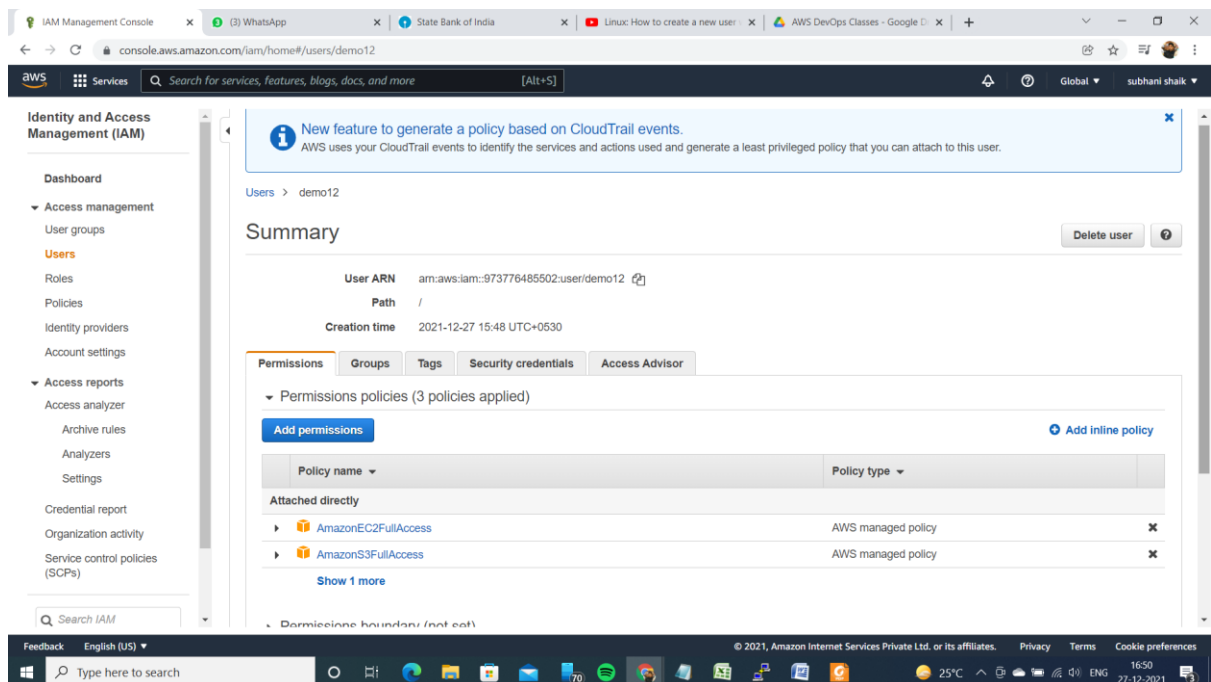
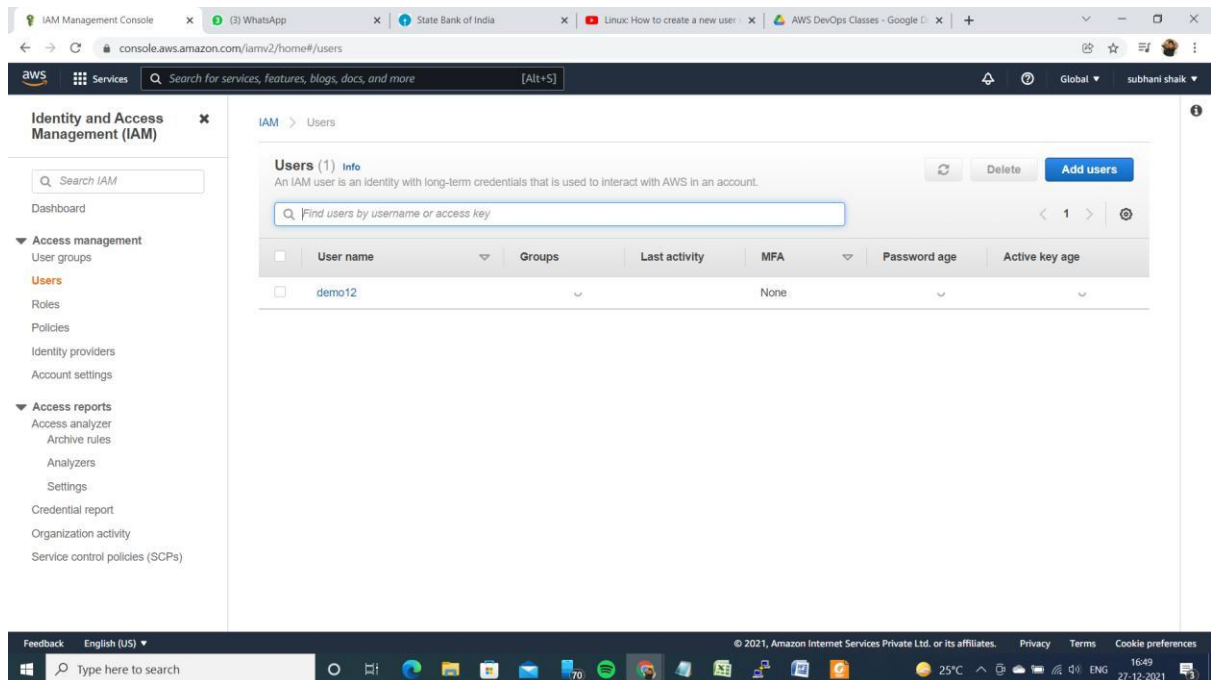
Step1: Login to AWS Console management and then navigate to **EC2 Dashboard** and Then Launch **New Instance**.



Step2: Now Move to **s3 Dashboard** and create a new **s3Bucket**.



Step3: Next move to **IAM Dashboard** and create a **USER** under that attach new permissions and click on **create user**.



Note: Give S3full access & Ec2 Full access-[here download CSV file means user credentials]

Step4: Login to server and Run the command **[YUM UPDATE]**

```
root@ip-172-31-4-240:/mys3bucket
login as: ec2-user
Authenticating with public key "imported-openssh-key"

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 16 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-4-240 ~]$ sudo -i
[root@ip-172-31-4-240 ~]# yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core | 3.7 kB 00:00
Resolving Dependencies
--> Running transaction check
--> Package curl.x86_64 0:7.76.1-7.amzn2.0.2 will be updated
--> Package curl.x86_64 0:7.79.1-1.amzn2.0.1 will be an update
--> Package kernel.x86_64 0:5.10.82-83.359.amzn2 will be installed
--> Package kernel-tools.x86_64 0:5.10.75-79.358.amzn2 will be updated
--> Package kernel-tools.x86_64 0:5.10.82-83.359.amzn2 will be an update
--> Package kpatch-runtime.noarch 0:0.9.4-2.amzn2.0.1 will be an update
--> Package kpatch-runtime.noarch 0:0.9.4-3.amzn2.0.1 will be an update
--> Package libcurl.x86_64 0:7.76.1-7.amzn2.0.2 will be updated
--> Package libcurl.x86_64 0:7.79.1-1.amzn2.0.1 will be an update
--> Package nspr.x86_64 0:4.32.0-1.amzn2.0.1 will be an update
--> Package nss.x86_64 0:3.67.0-4.amzn2.0.1 will be updated
--> Package nss.x86_64 0:3.67.0-4.amzn2.0.2 will be an update
--> Package nss-softokn.x86_64 0:3.67.0-3.amzn2.0.1 will be an update
--> Package nss-softokn-freel.x86_64 0:3.67.0-3.amzn2.0.1 will be an update
--> Package nss-softokn-freel.x86_64 0:3.67.0-3.amzn2.0.1 will be an update
--> Package nss-sysinit.x86_64 0:3.67.0-4.amzn2.0.1 will be updated
--> Package nss-sysinit.x86_64 0:3.67.0-4.amzn2.0.2 will be an update
--> Package nss-tools.x86_64 0:3.67.0-4.amzn2.0.2 will be an update
--> Package nss-util.x86_64 0:3.67.0-1.amzn2.0.1 will be updated
--> Package nss-util.x86_64 0:3.67.0-1.amzn2.0.1 will be an update
--> Package vim-common.x86_64 2:8.1.1602-1.amzn2.0.1 will be an update
--> Package vim-common.x86_64 2:8.2.3642-1.amzn2.0.1 will be an update
--> Package vim-enhanced.x86_64 2:8.1.1602-1.amzn2.0.1 will be updated
--> Package vim-enhanced.x86_64 2:8.2.3642-1.amzn2.0.1 will be an update
--> Package vim-filesystem.noarch 2:8.1.1602-1.amzn2.0.1 will be an update
--> Package vim-filesystem.noarch 2:8.2.3642-1.amzn2.0.1 will be an update
--> Package vim-minimal.x86_64 2:8.1.1602-1.amzn2.0.1 will be updated
--> Package vim-minimal.x86_64 2:8.2.3642-1.amzn2.0.1 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

Type here to search
```

Step5: **[Next install all dependencies]** by run this command

[sudo yum install automake fuse fuse-devel gcc-c++ git libcurl-devel libxml2-devel make openssl-devel]

```
root@ip-172-31-4-240:/mys3bucket
Verifying : libmpc-1.0.1-3.amzn2.0.2.x86_64 7/42
Verifying : glibc-devel-2.26-56.amzn2.x86_64 8/42
Verifying : libnl-devel-2.9.1-6.amzn2.5.4.x86_64 9/42
Verifying : libquadmath-7.3.1-13.amzn2.x86_64 10/42
Verifying : libkadm5-1.15.1-37.amzn2.2.2.x86_64 11/42
Verifying : libmake-3.82-24.amzn2.x86_64 12/42
Verifying : libatomic-7.3.1-13.amzn2.x86_64 13/42
Verifying : libsepol-devel-2.5-8.1.amzn2.0.2.x86_64 14/42
Verifying : perl-Test-Harness-3.20-1.amzn2.noarch 15/42
Verifying : autoconf-2.69-11.amzn2.noarch 16/42
Verifying : libverto-devel-0.2.5-4.amzn2.0.2.x86_64 17/42
Verifying : git-core-2.32.0-1.amzn2.0.1.x86_64 18/42
Verifying : libopenssl-devel-1.0.2k-19.amzn2.0.10.x86_64 19/42
Verifying : zlib-devel-1.2.7-10.amzn2.x86_64 20/42
Verifying : libitm-7.3.1-13.amzn2.x86_64 21/42
Verifying : mpfr-3.1.1-4.amzn2.0.2.x86_64 22/42
Verifying : xz-devel-5.2.2-1.amzn2.0.2.x86_64 23/42
Verifying : libcurl-devel-7.79.1-1.amzn2.x86_64 24/42
Verifying : fuse-2.9.2-11.amzn2.x86_64 25/42
Verifying : perl-TermReadKey-2.30-20.amzn2.0.2.x86_64 26/42
Verifying : automake-1.13.4-3.1.amzn2.noarch 27/42
Verifying : git-core-doc-2.32.0-1.amzn2.0.1.noarch 28/42
Verifying : perl-Git-2.32.0-1.amzn2.0.1.noarch 29/42
Verifying : glibc-headers-2.26-56.amzn2.x86_64 30/42
Verifying : perl-Data-Dumper-2.145-3.amzn2.0.2.x86_64 31/42
Verifying : libmpc-7.3.1-13.amzn2.x86_64 32/42
Verifying : krb5-devel-1.15.1-37.amzn2.2.2.x86_64 33/42
Verifying : libperl-Error-0.17020-2.amzn2.noarch 34/42
Verifying : fuse-devel-2.9.2-11.amzn2.x86_64 35/42
Verifying : libatomic-7.3.1-13.amzn2.x86_64 36/42
Verifying : perl-devel-8.32-17.amzn2.0.2.x86_64 37/42
Verifying : gcc-7.3.1-13.amzn2.x86_64 38/42
Verifying : keyutils-libs-devel-1.5.8-3.amzn2.0.2.x86_64 39/42
Verifying : git-2.32.0-1.amzn2.0.1.x86_64 40/42
Verifying : libselinux-devel-2.5-12.amzn2.0.2.x86_64 41/42
Verifying : m4-1.4.16-10.amzn2.0.2.x86_64 42/42

Installed:
automake.noarch 0:1.13.4-3.1.amzn2 fuse.x86_64 0:2.9.2-11.amzn2 fuse-devel.x86_64 0:2.9.2-11.amzn2 gcc-c++.x86_64 0:7.3.1-13.amzn2
git.x86_64 0:2.32.0-1.amzn2.0.1 libcurl-devel.x86_64 0:7.79.1-1.amzn2.0.1 libxml2-devel.x86_64 0:2.9.1-6.amzn2.5.4 openssl-devel.x86_64 1:1.0.2k-19.amzn2.0.10

Dependency Installed:
autoconf.noarch 0:2.69-11.amzn2 cpp.x86_64 0:7.3.1-13.amzn2 emacs-filesystem.noarch 1:27.2-4.amzn2.0.1 gcc.x86_64 0:7.3.1-13.amzn2
git-core.x86_64 0:2.32.0-1.amzn2.0.1 git-core-doc.noarch 0:2.32.0-1.amzn2.0.1 glibc-devel.x86_64 0:2.26-56.amzn2 glibc-headers.x86_64 0:2.26-56.amzn2
kernel-headers.x86_64 0:5.10.82-83.359.amzn2 keyutils-libs-devel.x86_64 0:1.5.8-3.amzn2.0.2 krb5-devel.x86_64 0:1.15.1-37.amzn2.2.2 libatomic.x86_64 0:7.3.1-13.amzn2
libclkrts.x86_64 0:7.3.1-13.amzn2 libcom_err-devel.x86_64 0:1.42.9-19.amzn2 libcurl-devel.x86_64 0:7.79.1-1.amzn2.0.1 libkadm5.x86_64 0:1.15.1-37.amzn2.2.2
libmpc.x86_64 0:1.0.1-3.amzn2.0.2 libmpx.x86_64 0:7.3.1-13.amzn2 libquadmath.x86_64 0:7.3.1-13.amzn2 libsanitizer.x86_64 0:7.3.1-13.amzn2
libselinux-devel.x86_64 0:2.5-12.amzn2.0.2 libsepol-devel.x86_64 0:2.5-8.1.amzn2.0.2 libverto-devel.x86_64 0:0.2.5-4.amzn2.0.2 m4.x86_64 0:1.4.16-10.amzn2.0.2
mpfr.x86_64 0:3.1.1-4.amzn2.0.2 perl-Data-Dumper.x86_64 0:2.145-3.amzn2.0.2 perl-Error.noarch 1:0.17020-2.amzn2 perl-TermReadKey.x86_64 0:2.30-20.amzn2.0.2
perl-Test-Harness.noarch 0:3.20-1.amzn2 perl-Thread-Queue.noarch 0:3.02-2.amzn2
```

```
[root@ip-10-0-0-79 ~]# sudo yum install automake fuse fuse-devel gcc-c++ git libcurl-devel libxml2-devel make openssl-devel
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Package automake-1.13.4-3.1.amzn2.noarch already installed and latest version
Package fuse-2.9.2-11.amzn2.x86_64 already installed and latest version
Package fuse-devel-2.9.2-11.amzn2.x86_64 already installed and latest version
Package gcc-c++-7.3.1-13.amzn2.x86_64 already installed and latest version
Package git-2.32.0-1.amzn2.0.1.x86_64 already installed and latest version
Package libcurl-devel-7.79.1-1.amzn2.0.1.x86_64 already installed and latest version
Package libxml2-devel-2.9.1-6.amzn2.5.4.x86_64 already installed and latest version
Package make-3.82-24.amzn2.x86_64 already installed and latest version
Package openssl-devel-1.0.2k-19.amzn2.0.10.x86_64 already installed and latest version
Nothing to do
```

Step6: Download s3fs code from git (or) clone s3fs source code from git.

By git clone <https://github.com/s3fs-fuse/s3fs-fuse.git>

```
[root@ip-172-31-4-240 ~]# git clone https://github.com/s3fs-fuse/s3fs-fuse.git
Cloning into 's3fs-fuse'...
remote: Enumerating objects: 7933, done.
remote: Counting objects: 100% (720/720), done.
remote: Compressing objects: 100% (369/369), done.
remote: Total 7933 (delta 502), reused 493 (delta 346), pack-reused 7213
Receiving objects: 100% (7933/7933), 5.07 MiB | 21.11 MiB/s, done.
Resolving deltas: 100% (5572/5572), done.
[root@ip-172-31-4-240 ~]# ls
s3fs-fuse
```

Step7: Now Change the source code directory and Compilie, install the code using below commands

Run this command `cd s3fs-fuse` & Next run this command `./autogen.sh`

```
[root@ip-172-31-4-240 ~]# cd s3fs-fuse
[root@ip-172-31-4-240 s3fs-fuse]# ./autogen.sh
--- Make commit hash file -----
--- Finished commit hash file ---
--- Start autotools -----
configure.ac:26: installing './config.guess'
configure.ac:26: installing './config.sub'
configure.ac:27: installing './install-sh'
configure.ac:27: installing './missing'
src/Makefile.am: installing './depcomp'
parallel-tests: installing './test-driver'
--- Finished autotools -----
```

Next run this command `./configure --prefix=/usr --with-openssl`

```
[root@ip-172-31-4-240 s3fs-fuse]# ./configure --prefix=/usr --with-opensslmake
configure: WARNING: unrecognized options: --with-opensslmake
checking build system type... x86_64-unknown-linux-gnu
checking host system type... x86_64-unknown-linux-gnu
checking target system type... x86_64-unknown-linux-gnu
checking for a BSD-compatible install... /bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /bin/mkdir -p
```

Next run this command `sudo make install`

```
checking for DEPS... yes
checking for malloc_trim... yes
checking for library containing clock_gettime... none required
checking for clock_gettime... yes
checking pthread_mutex_recursive... PTHREAD_MUTEX_RECURSIVE
checking checking CURLOPT_TCP_KEEPALIVE... yes
checking checking CURLOPT_SSL_ENABLE_ALPN... yes
checking checking CURLOPT_KEEP_SENDING_ON_ERROR... yes
checking for git... yes
checking github short commit hash... 5de92e9
checking that generated files are newer than configure... done
configure: creating ./config.status
config.status: creating Makefile
config.status: creating src/Makefile
config.status: creating test/Makefile
config.status: creating doc/Makefile
config.status: creating config.h
config.status: executing depfiles commands
configure: WARNING: unrecognized options: --with-opensslmake
```

Step8: To check where s3 command is placed in O.S Run this command `[which s3]`

```
[root@ip-10-0-0-79 s3fs-fuse]# which s3fs
/bin/s3fs
```

Step9: next run this command `[vim /etc/passwd-s3fs]`

```
[root@ip-172-31-4-240 s3fs-fuse]# vim /etc/passwd-s3fs
[root@ip-172-31-4-240 s3fs-fuse]# sudo chmod 640 /etc/passwd-s3fs
[root@ip-172-31-4-240 s3fs-fuse]# mkdir /mys3bucket
```

*In that edit means add user credentials [Accesses key: & secret Key:]-[copy user credentials from IAM CSV download file permissions make paste it in Vim and save it after paste like this press escape shift+:wq!]

*change permissions of user by run command `[sudo chmod 640 /etc/passwd-s3fs]` *create a directory what you want as of now my requirement purpose make mys3bucket

Step10: `Mount the bucket s3fs` by using the below command

`s3fs demo27dec -o use_cache=/tmp -o allow_other -o uid=1001 -o mp_umask=002 -o multireq_max=5 /mys3bucket`

*after mounting run the command to check the file system mount or not `[df -h]`

```
[root@ip-172-31-4-240 s3fs-fuse]# s3fs demo27dec -o use_cache=temp -o allow_other -o uid=1001 -o mp_umask=002 -o multireq_max=5 /mys3bucket
[root@ip-172-31-4-240 s3fs-fuse]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M   0   474M   0% /dev
tmpfs           483M   0   483M   0% /dev/shm
tmpfs           483M 408K   483M   1% /run
tmpfs           483M   0   483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.9G   6.2G  24% /
tmpfs           97M   0    97M   0% /run/user/1000
s3fs            16E   0    16E   0% /mys3bucket
```

Step11: Now switch to that directory by using this command `[cd /mys3bucket]`

*create a file and add data to that file it will be create in s3bucket do like below and after run that go to aws s3 bucket and click on your s3 bucket it show the file what you create in Linux .

*if you want create use command `[touch filename]`

* if you want to create and add data to that file `[cat > filename]`

*if you want to delete that s3 bucket file from linux you can run this command `[rm filename]`

```
[root@ip-172-31-4-240 s3fs-fuse]# cd /mys3bucket
[root@ip-172-31-4-240 mys3bucket]# ls
[root@ip-172-31-4-240 mys3bucket]# ls -l
total 0
[root@ip-172-31-4-240 mys3bucket]# cat > test.txt
hello welcome to my workd
[root@ip-172-31-4-240 mys3bucket]# rm file.txt
rm: cannot remove 'file.txt': No such file or directory
[root@ip-172-31-4-240 mys3bucket]# rm test.txt
rm: remove regular file 'test.txt'? y
[root@ip-172-31-4-240 mys3bucket]# touch esawr
[root@ip-172-31-4-240 mys3bucket]# rm eswar
rm: cannot remove 'eswar': No such file or directory
[root@ip-172-31-4-240 mys3bucket]# rm esawr
rm: remove regular empty file 'esawr'? y
[root@ip-172-31-4-240 mys3bucket]# touch Eswar
[root@ip-172-31-4-240 mys3bucket]# rm eswar
rm: cannot remove 'eswar': No such file or directory
```

*For until now what you done is `temporary mounting` only means in the next reboot it will erase data and you must create all processes again so you want to make it permanent.

Step12: by using this command you make it file system permanent `[vim /etc/rc.local]`

*Note: here paste which s3 details-[/usr/bin] & mounting file details-[s3fs demo27dec -o use_cache=temp -o allow_other -o uid=1001 -o mp_umask=002 -o multireq_max=5 /mys3bucket]

*Next run this command to check **permanent mount** or not and **reboot instance** also **[df -h]**

```
[root@ip-172-31-4-240 s3fs-fuse]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M   0  474M   0% /dev
tmpfs           483M   0  483M   0% /dev/shm
tmpfs           483M 408K  483M   1% /run
tmpfs           483M   0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.9G  6.2G  24% /
tmpfs           97M   0   97M   0% /run/user/1000
s3fs            16E    0   16E   0% /mys3bucket
```

Step13: if you want **unmount** then just run this command on “root directorie”

run this command and **[umount /mys3bucket]** & next run this to check unmount or not **[df -h]**

```
[root@ip-172-31-4-240 s3fs-fuse]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M   0  474M   0% /dev
tmpfs           483M   0  483M   0% /dev/shm
tmpfs           483M 408K  483M   1% /run
tmpfs           483M   0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.9G  6.2G  24% /
tmpfs           97M   0   97M   0% /run/user/1000
```