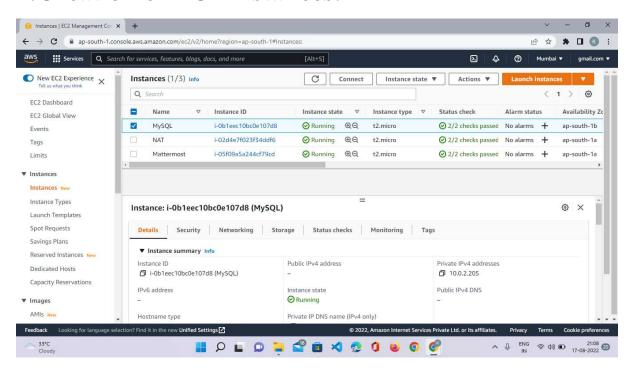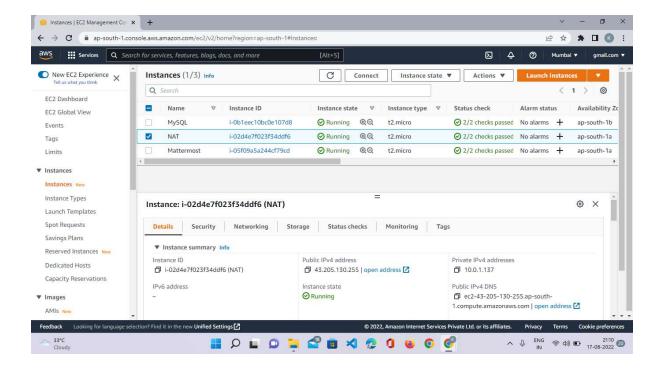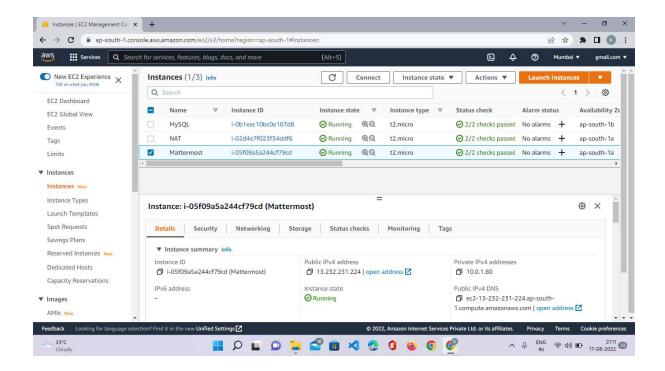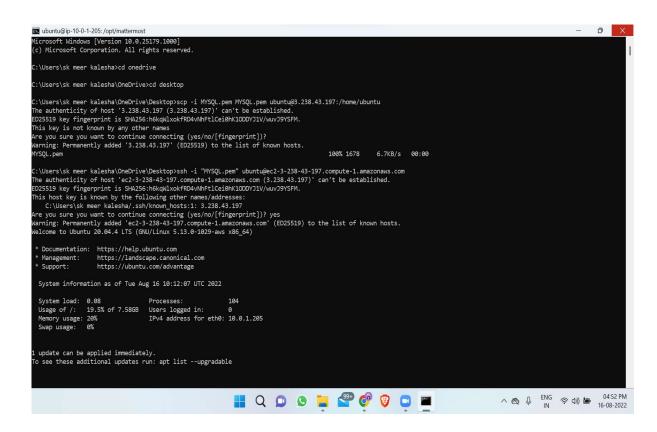# Week 13 Graded Project

Name: Kancharla Sri Lakshmi Ratna Bhavya

1.Creation of EC2 instances:

2. Installation of Database Server:

```
ubuntu@ip-10-0-1-205:~$ sudo apt update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe amd64 Packages [8628 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe Translation-en [5124 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe amd64 c-n-f Metadata [265 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [144 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse Translation-en [104 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse amd64 c-n-f Metadata [9136 B]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2036 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [364 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [15.6 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [1222 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/restricted Translation-en [174 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/restricted amd64 c-n-f Metadata [584 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [936 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [210 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [21.0 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [24.4 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/multiverse Translation-en [7336 B]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 c-n-f Metadata [588 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [45.6 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/main Translation-en [16.3 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/main amd64 c-n-f Metadata [1420 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/restricted amd64 c-n-f Metadata [116 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [24.0 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/universe Translation-en [16.0 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [860 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:31 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1672 kB]
Get:32 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [282 kB]
Get:33 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [10.8 kB]
Get:34 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [1138 kB]
Get:35 http://security.ubuntu.com/ubuntu focal-security/restricted Translation-en [162 kB]
Get:36 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 c-n-f Metadata [588 B]
Get:37 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [714 kB]
Get:38 http://security.ubuntu.com/ubuntu focal-security/universe Translation-en [130 kB]
```

```
52 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-10-0-1-205:~$ sudo apt upgrade -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following NEW packages will be installed:
  linux-aws-5.15-headers-5.15.0-1017 linux-headers-5.15.0-1017-aws linux-image-5.15.0-1017-aws
  linux-modules-5.15.0-1017-aws
The following packages will be upgraded:
  apt apt-utils cloud-init curl dirmngr git git-man gnupg gnupg-l10n gnupg-utils gpg gpg-agent gpg-wks-client
  gpg-wks-server gpgconf gpgsm gpgv intel-microcode isc-dhcp-client isc-dhcp-common libapt-pkg6.0 libcurl3-gnutls
  libcurl4 libfreetype6 libgnutls30 libgstreamer1.0-0 libmbim-glib4 libmbim-proxy libmm-glib0 libnetplan0 libnss3
  libpython3.8 libpython3.8-minimal libpython3.8-stdlib libqmi-glib5 libqmi-proxy libssl1.1 libxml2 linux-aws
  linux-headers-aws linux-image-aws modemmanager netplan.io open-vm-tools openssl python3-jwt python3.8
  python3.8-minimal snapd ubuntu-advantage-tools unattended-upgrades update-notifier-common
52 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
34 standard security updates
Need to get 113 MB of archives.
After this operation, 238 MB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libapt-pkg6.0 amd64 2.0.9 [839 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 apt amd64 2.0.9 [1294 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 apt-utils amd64 2.0.9 [213 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gpg-wks-client amd64 2.2.19-3ubuntu2.2 [97.4 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 dirmngr amd64 2.2.19-3ubuntu2.2 [330 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gpg-wks-server amd64 2.2.19-3ubuntu2.2 [90.2 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gnupg-utils amd64 2.2.19-3ubuntu2.2 [481 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gpg-agent amd64 2.2.19-3ubuntu2.2 [232 kB]Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu
 focal-updates/main amd64 gpg amd64 2.2.19-3ubuntu2.2 [482 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gpgconf amd64 2.2.19-3ubuntu2.2 [124 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gnupg-l10n all 2.2.19-3ubuntu2.2 [51.7 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gnupg all 2.2.19-3ubuntu2.2 [259 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gpgsm amd64 2.2.19-3ubuntu2.2 [217 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libgnutls30 amd64 3.6.13-2ubuntu1.7 [828 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 gpgv amd64 2.2.19-3ubuntu2.2 [200 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libpython3.8 amd64 3.8.10-0ubuntu1~20.04.5 [1625 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libssl1.1 amd64 1.1.1f-1ubuntu2.16 [1321 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 python3.8 amd64 3.8.10-0ubuntu1~20.04.5 [387 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libpython3.8-stdlib amd64 3.8.10-0ubuntu1~20.04.5 [1675 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 python3.8-minimal amd64 3.8.10-0ubuntu1~20.04.5 [1905 kB]
```

```
Found Ubuntu 20.04.4 LTS (20.04) on /dev/xvda1
done
ubuntu@ip-10-0-1-205:~$ chmod 400 MYSQL.pem
ubuntu@ip-10-0-1-205:~$ ssh -i "MYSQL.pem" ubuntu@10.0.2.230
The authenticity of host '10.0.2.230 (10.0.2.230)' can't be established.
ECDSA key fingerprint is SHA256:X5wcGnxmDPO6R7zvaoYOitqNGmVeWlndFdWx1bJPS7k.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.0.2.230' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 5.4.0-1038-aws x86_64)

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

  System information as of Tue Aug 16 10:22:30 UTC 2022

  System load:  0.0               Processes:             92
  Usage of /:   14.5% of 7.69GB   Users logged in:       0
  Memory usage: 19%               IP address for eth0:   10.0.2.230
  Swap usage:   0%

0 packages can be updated.
0 of these updates are security updates.


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>".
See "man sudo_root" for details.

ubuntu@ip-10-0-2-230:~$ sudo apt update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
```

```
Processing triggers for initramfs-tools (0.130ubuntu3.13) ...
update-initramfs: Generating /boot/initrd.img-5.4.0-1083-aws
ubuntu@ip-10-0-2-230:~$ wget https://d6opu47qoi4ee.cloudfront.net/install_mysql.sh
install_mysql.sh
sudo ./install_mysql.sh--2022-08-16 10:29:54--  https://d6opu47qoi4ee.cloudfront.net/install_mysql.sh
Resolving d6opu47qoi4ee.cloudfront.net (d6opu47qoi4ee.cloudfront.net)... 99.84.178.114, 99.84.178.161, 99.84.178.164, ...
Connecting to d6opu47qoi4ee.cloudfront.net (d6opu47qoi4ee.cloudfront.net)|99.84.178.114|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 759 [text/x-sh]
Saving to: 'install_mysql.sh'

install_mysql.sh              100%[===================================================================================================>]     759  --.-KB/s    in 0s

2022-08-16 10:29:54 (59.6 MB/s) - 'install_mysql.sh' saved [759/759]

ubuntu@ip-10-0-2-230:~$ chmod 700 install_mysql.sh
ubuntu@ip-10-0-2-230:~$ sudo ./install_mysql.sh
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu bionic InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu bionic-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu bionic-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu bionic-security InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl libevent-core-2.1-6 libfcgi-perl libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl
  libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libtimedate-perl liburi-perl mysql-client-5.7 mysql-client-core-5.7 mysql-common
  mysql-server-5.7 mysql-server-core-5.7
Suggested packages:
  libdata-dump-perl libipc-sharedcache-perl libwww-perl mailx tinyca
The following NEW packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl libevent-core-2.1-6 libfcgi-perl libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl
  libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libtimedate-perl liburi-perl mysql-client-5.7 mysql-client-core-5.7 mysql-common
  mysql-server mysql-server-5.7 mysql-server-core-5.7
0 upgraded, 21 newly installed, 0 to remove and 0 not upgraded.
Need to get 20.0 MB of archives.
```

3. Installation of Application Server:

{"level":"info","ts":1660646597.3357646,"caller":"utils/i18n.go:83","msg":"Loaded system translations","for locale":"en","from locale":"/opt/mattermost/i18n/en.json"}
{"level":"info","ts":1660646597.3361003,"caller":"app/server_app_adapters.go:58","msg":"Server is initializing..."}
{"level":"info","ts":1660646598.3454342,"caller":"sqlstore/supplier.go:212","msg":"Pinging SQL","database":"master"}
{"level":"info","ts":1660646598.158193,"caller":"sqlstore/upgrade.go:110","msg":"The database schema version has been set","version":"5.19.0"}
{"level":"error","ts":1660646601.794508,"caller":"app/server_app_adapters.go:125","msg":"SiteURL must be set. Some features will operate incorrectly if the SiteURL is not s et. See documentation for details: http://about.mattermost.com/default-site-url"}
{"level":"info","ts":1660646601.798087,"caller":"app/license.go:39","msg":"License key from https://mattermost.com required to unlock enterprise features."}
{"level":"info","ts":1660646601.7999713,"caller":"app/migrations.go:26","msg":"Migrating roles to database."}
{"level":"info","ts":1660646601.905587,"caller":"sqlstore/post_store.go:1351","msg":"Post.Message has size restrictions","max_characters":16383,"max_bytes":65535}
{"level":"info","ts":1660646601.913105,"caller":"app/migrations.go:102","msg":"Migrating emojis config to database."}
{"level":"info","ts":1660646602.4719296,"caller":"mlog/log.go:166","msg":"Starting up plugins"}
{"level":"info","ts":1660646602.4722807,"caller":"app/plugin.go:213","msg":"Syncing plugins from the file store"}
{"level":"info","ts":1660646606.5383844,"caller":"mlog/sugar.go:19","msg":"Ensuring Surveybot exists","plugin_id":"com.mattermost.nps"}
{"level":"info","ts":1660646606.576332,"caller":"mlog/sugar.go:19","msg":"Surveybot created","plugin_id":"com.mattermost.nps"}
{"level":"info","ts":1660646606.5949419,"caller":"mlog/sugar.go:19","msg":"Upgrade detected. Checking if a survey should be scheduled.","plugin_id":"com.mattermost.nps"}
{"level":"info","ts":1660646606.7928405,"caller":"mlog/sugar.go:19","msg":"Scheduling next survey for Sep 6, 2022","plugin_id":"com.mattermost.nps"}
{"level":"info","ts":1660646607.3954368,"caller":"app/server.go:217","msg":"Current version is 5.19.0 (5.19.0/Thu Jan 16 18:30:33 UTC 2020/90cf883f84000d6fdb025308ad14d56e6 ed53f05/1268390c0cde16f750b0b6fe62534b82586d595f)"}
{"level":"info","ts":1660646607.3956275,"caller":"app/server.go:218","msg":"Enterprise Enabled: true"}
{"level":"info","ts":1660646607.3957806,"caller":"app/server.go:221","msg":"Printing current working","directory":"/opt/mattermost"}
{"level":"info","ts":1660646607.3958988,"caller":"app/server.go:222","msg":"Loaded config","source":"file:/opt/mattermost/config/config.json"}
{"level":"error","ts":1660646607.4247048,"caller":"mlog/log.go:174","msg":"RPC call OnConfigurationChange to plugin failed.","plugin_id":"com.mattermost.nps","error":"conne ction is shut down"}
{"level":"error","ts":1660646607.482459,"caller":"mlog/log.go:174","msg":"RPC call OnConfigurationChange to plugin failed.","plugin_id":"com.mattermost.nps","error":"connec tion is shut down"}
{"level":"info","ts":1660646607.4939415,"caller":"jobs/workers.go:68","msg":"Starting workers"}
{"level":"info","ts":1660646607.502019,"caller":"jobs/schedulers.go:74","msg":"Starting schedulers."}

4. Front Page of Application: