

Lab Activity - 7

-Networking & System Administration Lab

Submitted by,

Anjali C Abraham

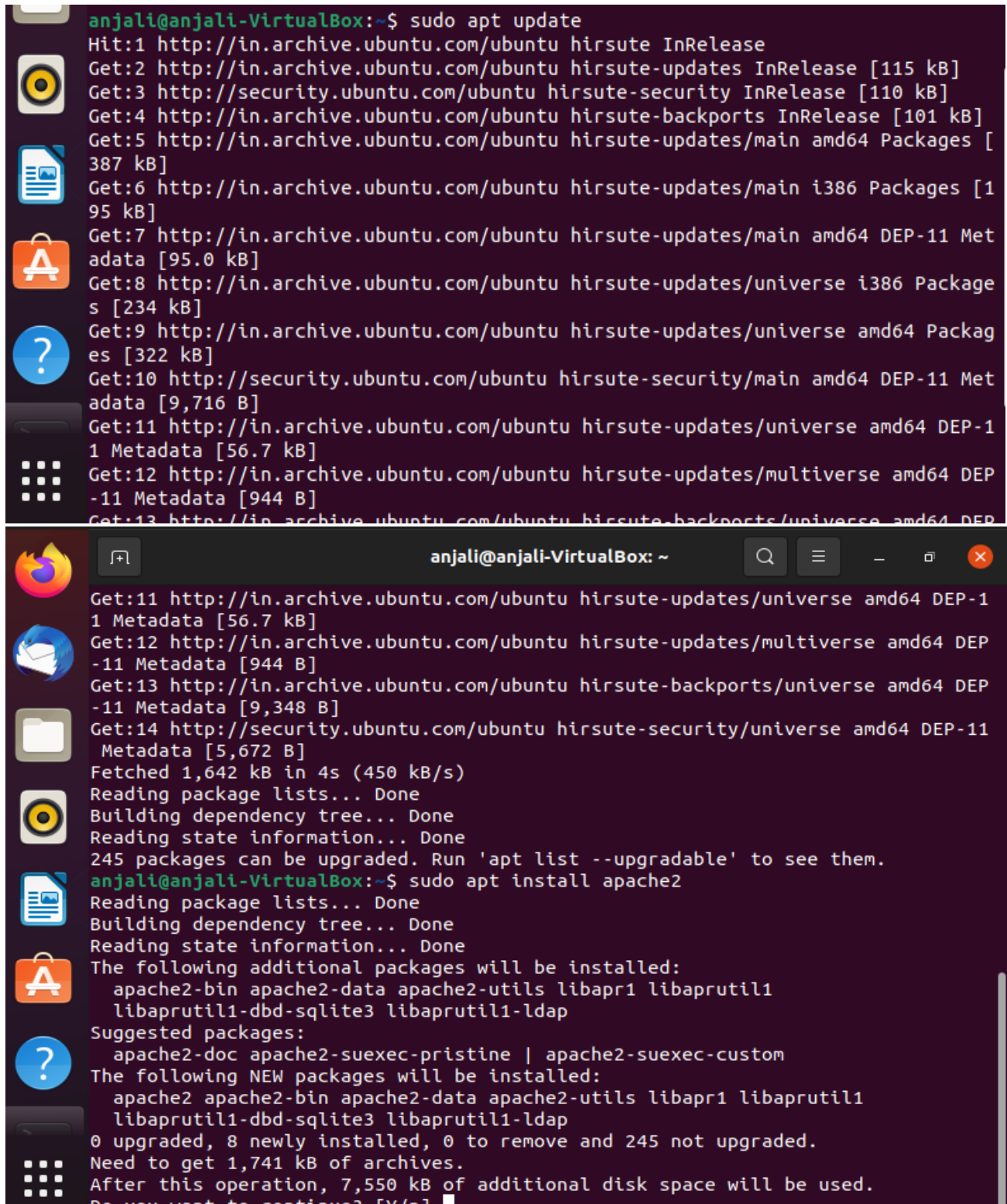
Roll No : 18

MCA Batch A

Submitted on :01-10-2021

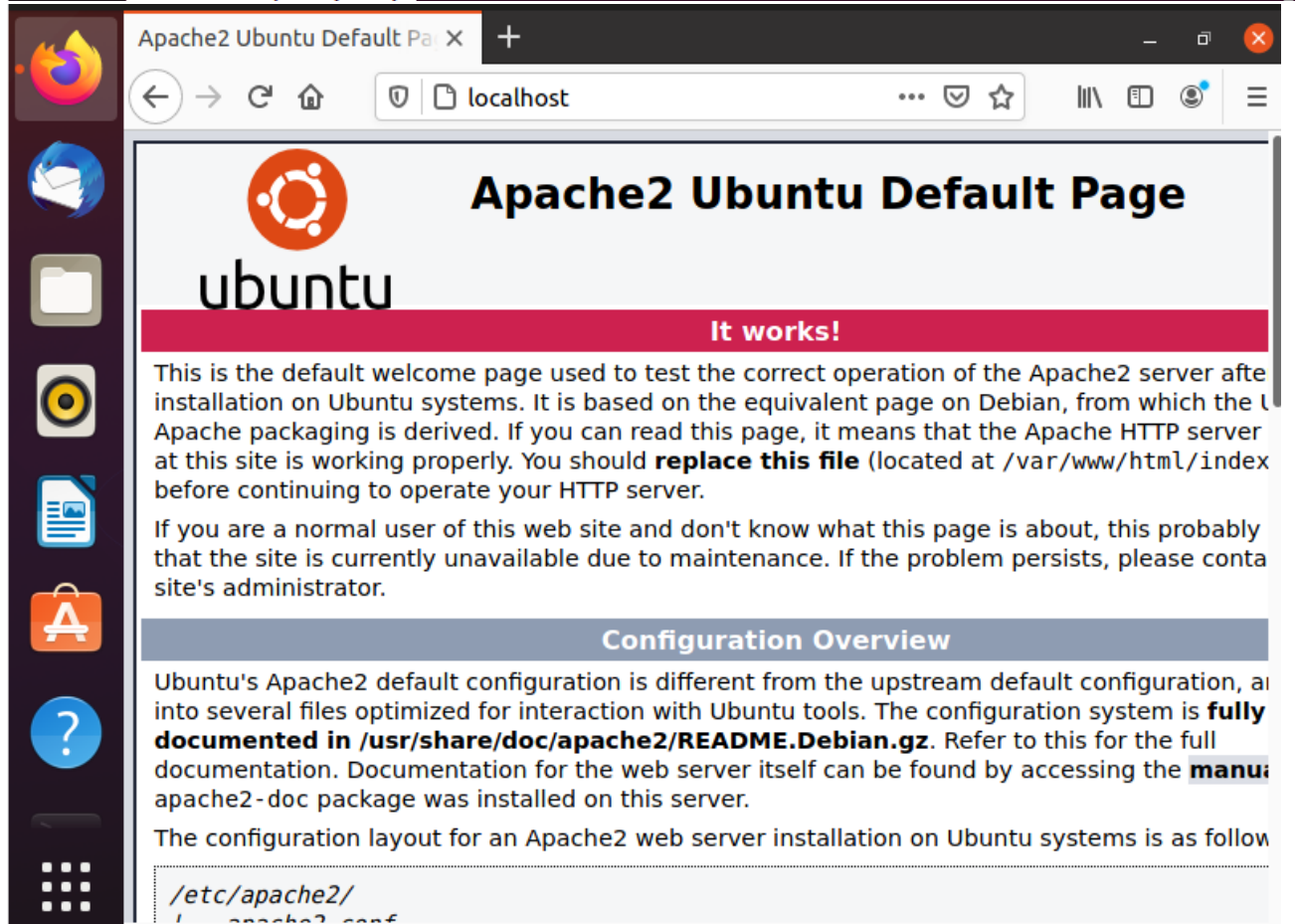
LAMP installation

- Install Apache



```
anjali@anjali-VirtualBox:~$ sudo apt update
Hit:1 http://in.archive.ubuntu.com/ubuntu hirsute InRelease
Get:2 http://in.archive.ubuntu.com/ubuntu hirsute-updates InRelease [115 kB]
Get:3 http://security.ubuntu.com/ubuntu hirsute-security InRelease [110 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu hirsute-backports InRelease [101 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu hirsute-updates/main amd64 Packages [387 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu hirsute-updates/main i386 Packages [195 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu hirsute-updates/main amd64 DEP-11 Metadata [95.0 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu hirsute-updates/universe i386 Packages [234 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu hirsute-updates/universe amd64 Packages [322 kB]
Get:10 http://security.ubuntu.com/ubuntu hirsute-security/main amd64 DEP-11 Metadata [9,716 B]
Get:11 http://in.archive.ubuntu.com/ubuntu hirsute-updates/universe amd64 DEP-11 Metadata [56.7 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu hirsute-updates/multiverse amd64 DEP-11 Metadata [944 B]
Get:13 http://in.archive.ubuntu.com/ubuntu hirsute-backports/universe amd64 DEP-11 Metadata [9,348 B]
Get:14 http://security.ubuntu.com/ubuntu hirsute-security/universe amd64 DEP-11 Metadata [5,672 B]
Fetched 1,642 kB in 4s (450 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
245 packages can be upgraded. Run 'apt list --upgradable' to see them.
anjali@anjali-VirtualBox:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap
0 upgraded, 8 newly installed, 0 to remove and 245 not upgraded.
Need to get 1,741 kB of archives.
After this operation, 7,550 kB of additional disk space will be used.
Do you want to continue? [Y/n]
```

```
anjali@anjali-VirtualBox: ~  
Enabling conf localized-error-pages.  
Enabling conf other-vhosts-access-log.  
Enabling conf security.  
Enabling conf serve-cgi-bin.  
Enabling site 000-default.  
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /  
lib/systemd/system/apache2.service.  
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean  
.service → /lib/systemd/system/apache-htcacheclean.service.  
Processing triggers for ufw (0.36-7.1) ...  
Processing triggers for man-db (2.9.4-2) ...  
Processing triggers for libc-bin (2.33-0ubuntu5) ...  
anjali@anjali-VirtualBox:~$ sudo systemctl status apache2  
● apache2.service - The Apache HTTP Server  
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor pres  
   Active: active (running) since Wed 2021-09-29 19:23:45 IST; 1min 42s ago  
     Docs: https://httpd.apache.org/docs/2.4/  
   Main PID: 3180 (apache2)  
     Tasks: 55 (limit: 2296)  
    Memory: 5.0M  
    CGroup: /system.slice/apache2.service  
            └─3180 /usr/sbin/apache2 -k start  
              └─3182 /usr/sbin/apache2 -k start  
                └─3183 /usr/sbin/apache2 -k start  
  
Sep 29 19:23:45 anjali-VirtualBox systemd[1]: Starting The Apache HTTP Server.  
Sep 29 19:23:45 anjali-VirtualBox apachectl[3179]: AH00558: apache2: Could not  
Sep 29 19:23:45 anjali-VirtualBox systemd[1]: Started The Apache HTTP Server.  
lines 1-15/15 (END)
```



• Install MariaDB

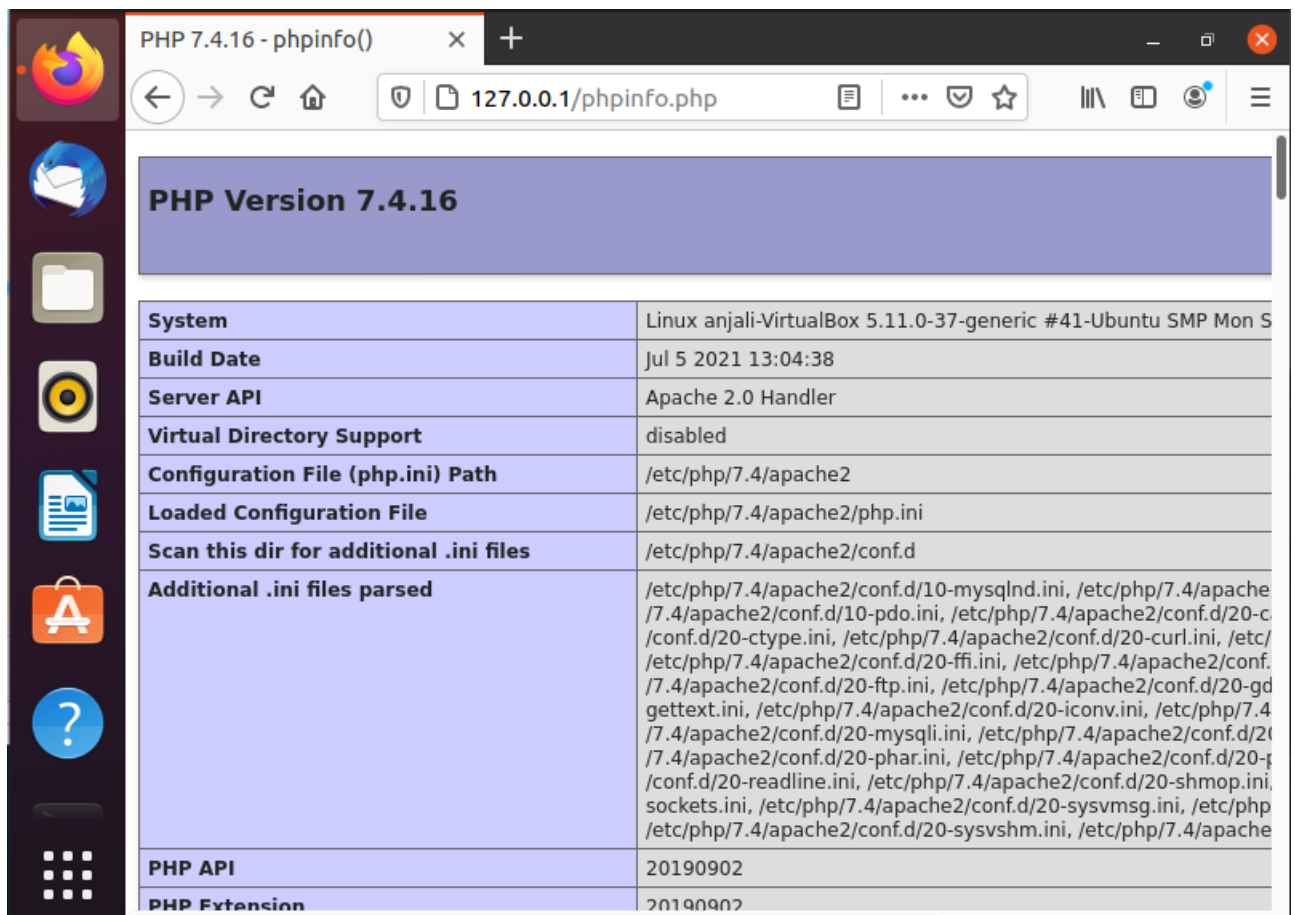
```
anjali@anjali-VirtualBox: ~  
Sep 29 19:23:45 anjali-VirtualBox systemd[1]: Starting The Apache HTTP Server.>  
Sep 29 19:23:45 anjali-VirtualBox apachectl[3179]: AH00558: apache2: Could not>  
Sep 29 19:23:45 anjali-VirtualBox systemd[1]: Started The Apache HTTP Server.>  
anjali@anjali-VirtualBox:~$ sudo apt install mariadb-server mariadb-client  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  galera-4 gawk libaio1 libcgi-fast-perl libcgi-pm-perl  
  libconfig-inifiles-perl libdbd-mariadb-perl libdbi-perl libfcgi-bin  
  libfcgi-perl libfcgi0ldbl libhtml-template-perl libmariadb3  
  libmysqlclient21 libsigsegv2 libsnappy1v5 libterm-readkey-perl  
  mariadb-client-10.5 mariadb-client-core-10.5 mariadb-common  
  mariadb-server-10.5 mariadb-server-core-10.5 mysql-common socat  
Suggested packages:  
  gawk-doc libmldbm-perl libnet-daemon-perl libsql-statement-perl  
  libipc-sharedcache-perl mailx mariadb-test  
The following NEW packages will be installed:  
  galera-4 gawk libaio1 libcgi-fast-perl libcgi-pm-perl  
  libconfig-inifiles-perl libdbd-mariadb-perl libdbi-perl libfcgi-bin  
  libfcgi-perl libfcgi0ldbl libhtml-template-perl libmariadb3  
  libmysqlclient21 libsigsegv2 libsnappy1v5 libterm-readkey-perl  
  mariadb-client mariadb-client-10.5 mariadb-client-core-10.5 mariadb-common  
  mariadb-server mariadb-server-10.5 mariadb-server-core-10.5 mysql-common  
  socat  
0 upgraded, 26 newly installed, 0 to remove and 245 not upgraded.  
Need to get 15.5 MB of archives.  
After this operation, 103 MB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
  
anjali@anjali-VirtualBox: ~  
anjali@anjali-VirtualBox:~$ sudo systemctl status mysql  
● mariadb.service - MariaDB 10.5.12 database server  
   Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; vendor pres>  
   Active: active (running) since Wed 2021-09-29 19:35:43 IST; 58s ago  
     Docs: man:mariadb(8)  
           https://mariadb.com/kb/en/library/systemd/  
  Process: 6423 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /va>  
  Process: 6424 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_S>  
  Process: 6426 ExecStartPre=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] &&>  
  Process: 6485 ExecStartPost=/bin/sh -c systemctl unset-environment _WSREP>  
  Process: 6487 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0>  
 Main PID: 6473 (mariabdd)  
   Status: "Taking your SQL requests now..."  
    Tasks: 12 (limit: 2296)  
  Memory: 72.7M  
   CGroup: /system.slice/mariadb.service  
           └─6473 /usr/sbin/mariabdd  
  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: information_s>  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: mysql  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: performance_s>  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: Phase 6/7: Ch>  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: Processing da>  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: information_s>  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: performance_s>  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: Phase 7/7: Ru>  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6492]: OK  
Sep 29 19:35:47 anjali-VirtualBox /etc/mysql/debian-start[6906]: Triggering my>  
lines 1-27/27 (END)
```



```
anjal@anjal-VirtualBox: ~  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: information_s  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: mysql  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: performance_s  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: Phase 6/7: Ch  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: Processing da  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: information_s  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: performance_s  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: Phase 7/7: Ru  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6492]: OK  
Sep 29 19:35:47 anjal-VirtualBox /etc/mysql/debian-start[6906]: Triggering my  
anjal@anjal-VirtualBox:~$ sudo mysql_secure_installation  
  
NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB  
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!  
  
In order to log into MariaDB to secure it, we'll need the current  
password for the root user. If you've just installed MariaDB, and  
haven't set the root password yet, you should just press enter here.  
  
Enter current password for root (enter for none):  
OK, successfully used password, moving on..  
  
Setting the root password or using the unix_socket ensures that nobody  
can log into the MariaDB root user without the proper authorisation.  
  
You already have your root account protected, so you can safely answer 'n'.  
  
Switch to unix socket authentication [Y/n] y
```

• Install PHP

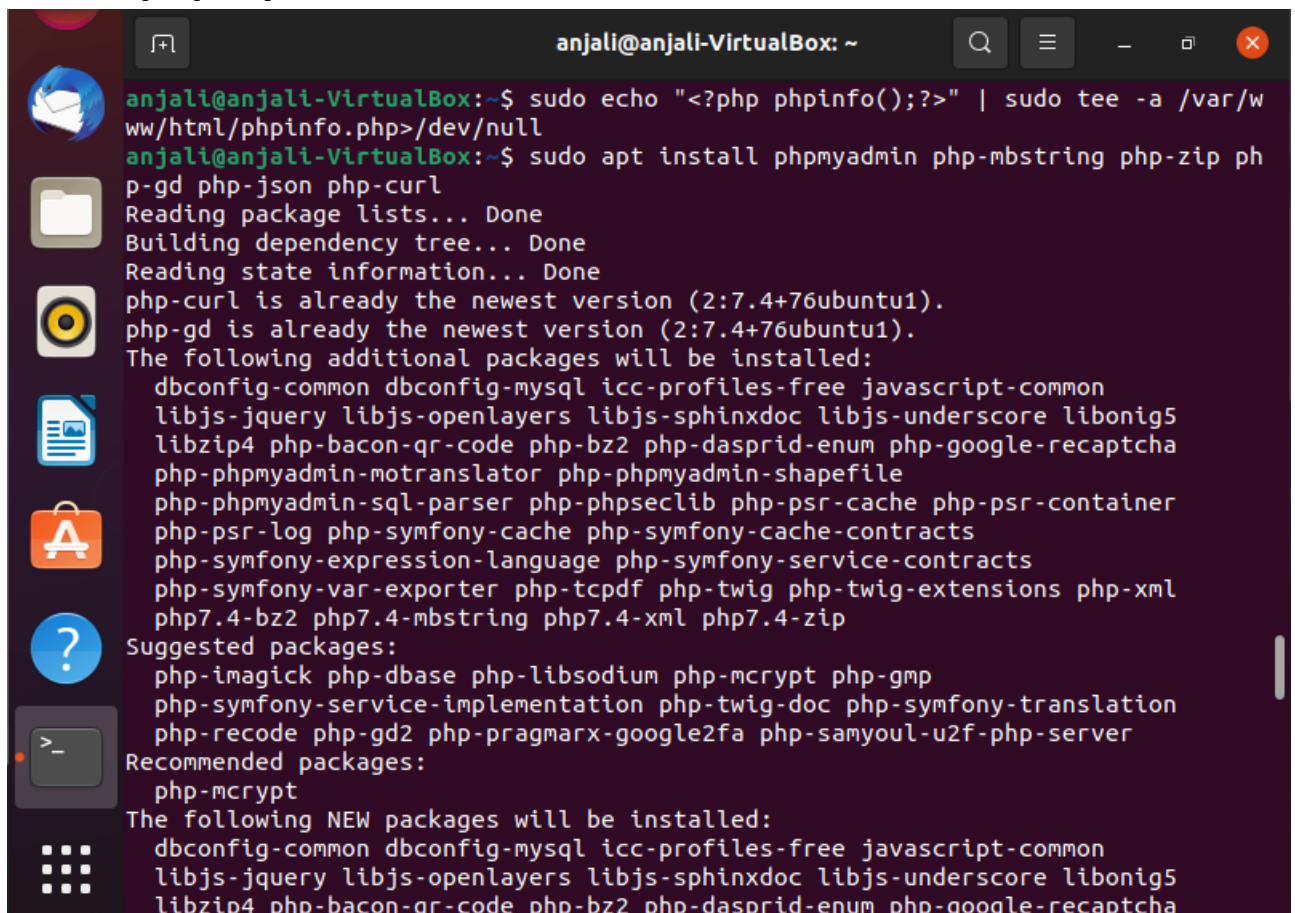
```
anjal@anjal-VirtualBox: ~  
anjal@anjal-VirtualBox:~$ sudo apt install php libapache2-mod-php php-openssl  
php-cli php-gd php-curl php-mysql  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Note, selecting 'php7.4-openssl' instead of 'php-openssl'  
The following additional packages will be installed:  
  libapache2-mod-php7.4 php-common php7.4 php7.4-cli php7.4-common  
  php7.4-curl php7.4-gd php7.4-json php7.4-mysql php7.4-readline  
Suggested packages:  
  php-pear  
The following NEW packages will be installed:  
  libapache2-mod-php libapache2-mod-php7.4 php php-cli php-common php-curl  
  php-gd php-mysql php7.4 php7.4-cli php7.4-common php7.4-curl php7.4-gd  
  php7.4-json php7.4-mysql php7.4-openssl php7.4-readline  
0 upgraded, 17 newly installed, 0 to remove and 245 not upgraded.  
Need to get 4,231 kB of archives.  
After this operation, 18.9 MB of additional disk space will be used.  
Do you want to continue? [Y/n] y  
Get:1 http://in.archive.ubuntu.com/ubuntu hirsute/main amd64 php-common all 2:7  
6ubuntu1 [12.2 kB]  
Get:2 http://in.archive.ubuntu.com/ubuntu hirsute-updates/main amd64 php7.4-com  
mon amd64 7.4.16-1ubuntu2.1 [985 kB]  
Get:3 http://in.archive.ubuntu.com/ubuntu hirsute-updates/main amd64 php7.4-jso  
n amd64 7.4.16-1ubuntu2.1 [19.4 kB]  
Get:4 http://in.archive.ubuntu.com/ubuntu hirsute-updates/main amd64 php7.4-opc  
ache amd64 7.4.16-1ubuntu2.1 [197 kB]  
Get:5 http://in.archive.ubuntu.com/ubuntu hirsute-updates/main amd64 php7.4-rea
```



PHP Version 7.4.16

System	Linux anjali-VirtualBox 5.11.0-37-generic #41-Ubuntu SMP Mon S
Build Date	Jul 5 2021 13:04:38
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.4/apache2
Loaded Configuration File	/etc/php/7.4/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/7.4/apache2/conf.d
Additional .ini files parsed	/etc/php/7.4/apache2/conf.d/10-mysqld.ini, /etc/php/7.4/apache2/conf.d/10-pdo.ini, /etc/php/7.4/apache2/conf.d/20-curl.ini, /etc/php/7.4/apache2/conf.d/20-ctype.ini, /etc/php/7.4/apache2/conf.d/20-ffi.ini, /etc/php/7.4/apache2/conf.d/20-ftp.ini, /etc/php/7.4/apache2/conf.d/20-gd.ini, /etc/php/7.4/apache2/conf.d/20-iconv.ini, /etc/php/7.4/apache2/conf.d/20-mysqli.ini, /etc/php/7.4/apache2/conf.d/20-phar.ini, /etc/php/7.4/apache2/conf.d/20-readline.ini, /etc/php/7.4/apache2/conf.d/20-shmop.ini, /etc/php/7.4/apache2/conf.d/20-sockets.ini, /etc/php/7.4/apache2/conf.d/20-sysvshm.ini, /etc/php/7.4/apache2/conf.d/20-sysvshm.ini, /etc/php/7.4/apache2/conf.d/20-sysvshm.ini
PHP API	20190902
PHP Extension	20190902

- Install phpMyAdmin



```


anjali@anjali-VirtualBox: ~$ sudo echo "<?php phpinfo();?>" | sudo tee -a /var/www/html/phpinfo.php>/dev/null
anjali@anjali-VirtualBox:~$ sudo apt install phpmyadmin php-mbstring php-zip php-gd php-json php-curl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
php-curl is already the newest version (2:7.4+76ubuntu1).
php-gd is already the newest version (2:7.4+76ubuntu1).
The following additional packages will be installed:
  dbconfig-common dbconfig-mysql icc-profiles-free javascript-common libjs-jquery libjs-openlayers libjs-sphinxdoc libjs-underscore libonig5 libzip4 php-bacon-qr-code php-bz2 php-dasprid-enum php-google-recaptcha php-phpmyadmin-motranslator php-phpmyadmin-shapefile php-phpmyadmin-sql-parser php-phpseclib php-psr-cache php-psr-container php-psr-log php-symfony-cache php-symfony-cache-contracts php-symfony-expression-language php-symfony-service-contracts php-symfony-var-exporter php-tcpdf php-twig php-twig-extensions php-xml php7.4-bz2 php7.4-mbstring php7.4-xml php7.4-zip
Suggested packages:
  php-imagick php-dbase php-libsodium php-mcrypt php-gmp php-symfony-service-implementation php-twig-doc php-symfony-translation php-recode php-gd2 php-pragmarx-google2fa php-samyoul-u2f-php-server
Recommended packages:
  php-mcrypt
The following NEW packages will be installed:
  dbconfig-common dbconfig-mysql icc-profiles-free javascript-common libjs-jquery libjs-openlayers libjs-sphinxdoc libjs-underscore libonig5 libzip4 php-bacon-qr-code php-bz2 php-dasprid-enum php-google-recaptcha

```

```
anjali@anjali-VirtualBox: ~  
checking privileges on database phpmyadmin for phpmyadmin@localhost: user creat  
ion needed.  
granting access to database phpmyadmin for phpmyadmin@localhost: success.  
verifying access for phpmyadmin@localhost: success.  
creating database phpmyadmin: success.  
verifying database phpmyadmin exists: success.  
populating database via sql... done.  
dbconfig-common: flushing administrative password  
Processing triggers for libapache2-mod-php7.4 (7.4.16-1ubuntu2.1) ...  
Processing triggers for hicolor-icon-theme (0.17-2) ...  
Processing triggers for libc-bin (2.33-0ubuntu5) ...  
Processing triggers for man-db (2.9.4-2) ...  
Processing triggers for php7.4-cli (7.4.16-1ubuntu2.1) ...  
anjali@anjali-VirtualBox:~$ install phpmyadmin  
install: missing destination file operand after 'phpmyadmin'  
Try 'install --help' for more information.  
anjali@anjali-VirtualBox:~$ sudo apt install phpmyadmin php-mbstring php-zip ph  
p-gd php-json php-curl  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
php-curl is already the newest version (2:7.4+76ubuntu1).  
php-gd is already the newest version (2:7.4+76ubuntu1).  
php-json is already the newest version (2:7.4+76ubuntu1).  
php-mbstring is already the newest version (2:7.4+76ubuntu1).  
php-zip is already the newest version (2:7.4+76ubuntu1).  
phpmyadmin is already the newest version (4:4.9.7+dfsg1-1).  
0 upgraded, 0 newly installed, 0 to remove and 245 not upgraded.  
anjali@anjali-VirtualBox:~$
```

phpMyAdmin

localhost/phpmyadmin/



Welcome to phpMyAdmin

Language

English

Log in

Username: root

Password:

Go

