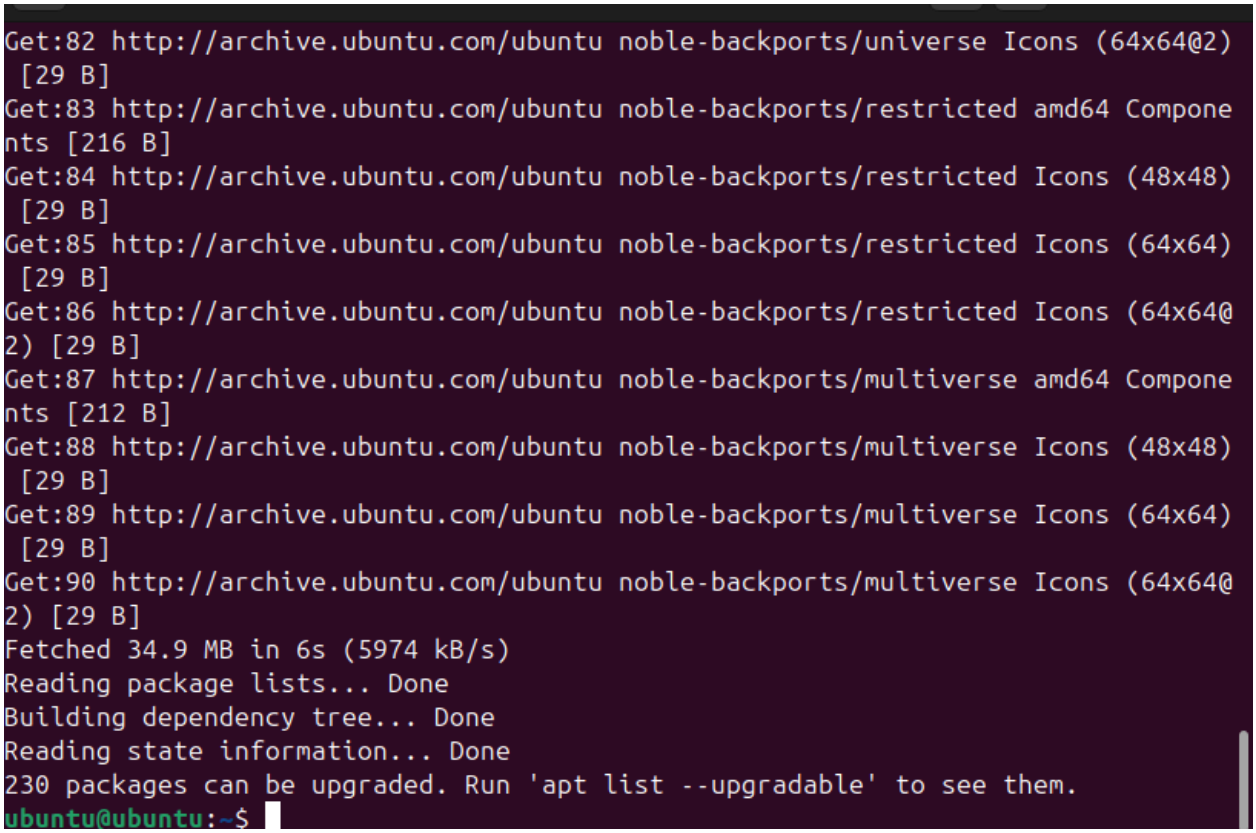
Going to configure a LAMP (Linux, Apache, MySQL, PHP) stack on Ubuntu.

Ran sudo apt update.



1. **Install Apache.**

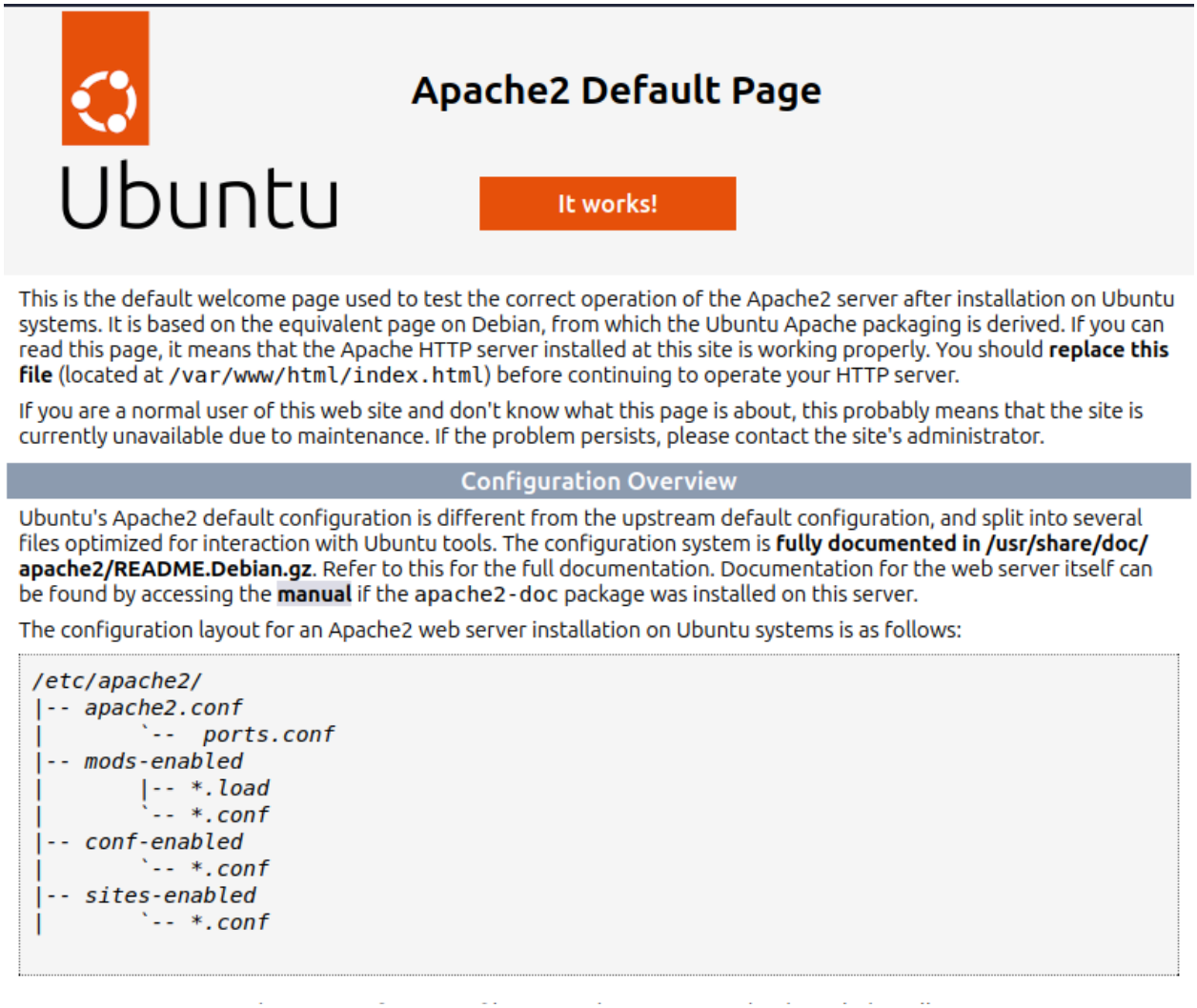
1a. Ran sudo apt install apache2

```
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
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 → /u
sr/lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.
service → /usr/lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.2-6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8) ...
ubuntu@ubuntu:~$
```

1b. Enabled apache service and set it to start on boot.

```
ubuntu@ubuntu:~$ sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /usr/lib/sy
stemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable apache2
ubuntu@ubuntu:~$ sudo systemctl start  apache2
ubuntu@ubuntu:~$ sudo systemctl start apache2
```

1c. Found the ip using hostname -I to view the page to make sure apache works and it does.



2. Install MySQL.

2a. Ran sudo apt install mysql-server to install the database server.

```
reading /usr/share/mecab/dic/ipadic/Suffix.csv ... 1393
reading /usr/share/mecab/dic/ipadic/Symbol.csv ... 208
reading /usr/share/mecab/dic/ipadic/Verb.csv ... 130750
emitting double-array: 100% |###########################################|
reading /usr/share/mecab/dic/ipadic/matrix.def ... 1316x1316
emitting matrix      : 100% |###########################################|

done!
update-alternatives: using /var/lib/mecab/dic/ipadic-utf8 to provide /var/lib/me
cab/dic/debian (mecab-dictionary) in auto mode
Setting up mysql-server-8.0 (8.0.37-0ubuntu0.24.04.1) ...
update-alternatives: using /etc/mysql/mysql.cnf to provide /etc/mysql/my.cnf (my
.cnf) in auto mode
Renaming removed key_buffer and myisam-recover options (if present)
mysqld will log errors to /var/log/mysql/error.log
mysqld is running as pid 10003
Created symlink /etc/systemd/system/multi-user.target.wants/mysql.service → /usr
/lib/systemd/system/mysql.service.
Setting up mysql-server (8.0.37-0ubuntu0.24.04.1) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8) ...
ubuntu@ubuntu:~$
```

2b. Securing the installation - sudo mysql_secure_installation

Set low password validation policy.
Removed anonymous user capability.
Disallowed root login remotely.
Removed test database and access to it.
Reloaded privilege tables.

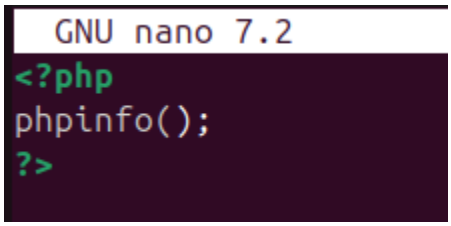
```
Remove anonymous users? (Press y|Y for Yes, any other key for No) : y
Success.


Normally, root should only be allowed to connect from
'localhost'. This ensures that someone cannot guess at
the root password from the network.

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : y
Success.

By default, MySQL comes with a database named 'test' that
anyone can access. This is also intended only for testing,
and should be removed before moving into a production
environment.


Remove test database and access to it? (Press y|Y for Yes, any other key for No) : y
 - Dropping test database...
Success.

 - Removing privileges on test database...
Success.

Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y
Success.

All done!
ubuntu@ubuntu:~$
```

3. Install PHP with common modules.

3a. Ran sudo apt install php libapache2-mod-php php-mysql

3b. Testing PHP. Ran sudo nano /var/www/html/info.php

3c. Entered the following code to test:
<?php
phpinfo();
?>



3d. Saved the file and went to”ip address”/info.php

3e. Page displayed!

PHP Version 8.3.6

System	Linux ubuntu 6.8.0-31-generic #31-Ubuntu SMP PREEMPT_DYNAMIC Sat Apr 20 00:40:06 UTC 2024 x86_64
Build Date	Jun 13 2024 15:23:20
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.3/apache2
Loaded Configuration File	/etc/php/8.3/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.3/apache2/conf.d
Additional .ini files parsed	/etc/php/8.3/apache2/conf.d/10-mysqlnd.ini, /etc/php/8.3/apache2/conf.d/10-opcache.ini, /etc/php/8.3/apache2/conf.d/10-pdo.ini, /etc/php/8.3/apache2/conf.d/20-calendar.ini, /etc/php/8.3/apache2/conf.d/20-ctype.ini, /etc/php/8.3/apache2/conf.d/20-exif.ini, /etc/php/8.3/apache2/conf.d/20-ffi.ini, /etc/php/8.3/apache2/conf.d/20-fileinfo.ini, /etc/php/8.3/apache2/conf.d/20-ftp.ini, /etc/php/8.3/apache2/conf.d/20-gettext.ini, /etc/php/8.3/apache2/conf.d/20-iconv.ini, /etc/php/8.3/apache2/conf.d/20-mysqli.ini, /etc/php/8.3/apache2/conf.d/20-pdo_mysql.ini, /etc/php/8.3/apache2/conf.d/20-phar.ini, /etc/php/8.3/apache2/conf.d/20-posix.ini, /etc/php/8.3/apache2/conf.d/20-readline.ini, /etc/php/8.3/apache2/conf.d/20-shmop.ini, /etc/php/8.3/apache2/conf.d/20-sockets.ini, /etc/php/8.3/apache2/conf.d/20-sysvmsg.ini, /etc/php/8.3/apache2/conf.d/20-sysvsem.ini, /etc/php/8.3/apache2/conf.d/20-sysvshm.ini, /etc/php/8.3/apache2/conf.d/20-tokenizer.ini
PHP API	20230831
PHP Extension	20230831
Zend Extension	420230831
Zend Extension Build	API420230831,NTS
PHP Extension Build	API20230831,NTS
Debug Build	no
Thread Safety	disabled

4. Adjusting directory index to prioritize .php instead of .html.

4a. Moving index.php after the DirectoryIndex directive to be prioritized first.

```
  GNU nano 7.2                                /etc/apache2/mods-enabled/dir.conf
<IfModule mod_dir.c>
DirectoryIndex index.php index.html index.cgi index.pl index.xhtml index.htm
</IfModule>
```

4b. Saving, closing and restarting Apache - sudo systemctl restart apache2

5. Remove the test php file.

sudo rm /var/www/html/info.php