We are going to install PHP. A server-side scripting language
joe@www-thegummibear:~$ sudo apt-cache search php | grep apache
libapache2-mod-php - server-side, HTML-embedded scripting language (Apache 2 module) (default)
libapache2-mod-php7.0 - server-side, HTML-embedded scripting language (Apache 2 module)
libapache2-mod-auth-memcookie - Apache2 authentication and authorization module.
libapache2-mod-auth-tkt - lightweight single-sign-on authentication module for Apache
libapache2-mod-authn-yubikey - Yubikey authentication provider for Apache
libapache2-mod-watchcat - Process monitoring Apache module
libapache2-mod-xsendfile - Serve large static files efficiently from web applications
joe@www-thegummibear:~$
joe@www-thegummibear:~$ sudo apt-get install libapache2-mod-php7.0
```
$ echo "Make sure you have added an A record or a CNAME for this new php site"
Make sure you have added an A record or a CNAME for this new php site
```

mail IN MX 10 mail

; A address records

ns1 IN A 144.38.199.162
ns2 IN A 144.38.199.163
mail IN A 144.38.199.164
www IN A 144.38.199.165
filesystem IN A 144.38.199.166
db IN A 144.38.199.167
resources IN A 144.38.199.168

; Some CNAME addresses
squishy IN CNAME www
iateat IN CNAME www
; I added bouncy for my php script demo
bouncy IN CNAME www
gooey IN A 144.38.199.170
sticky IN A 144.38.199.171

fs IN CNAME filesystem
blue IN CNAME www
red IN CNAME www
green IN CNAME www
orange IN CNAME www

"db.thegummibear.com" 56L, 1284C written
joe@ns1-thegummibear:/etc/bind$ echo "don't forget to increment serial and restart bind"
don't forget to increment serial and restart bind
joe@ns1-thegummibear:/etc/bind$ sudo service bind9 restart
joe@ns1-thegummibear:/etc/bind$
$ echo "test dns to make sure it worked"

test dns to make sure it worked

$
```
joe@www-thegummibear:~$ dig bouncy.thegeumibear.com

; <<>> DiG 9.10.3-P4-Ubuntu <<>> bouncy.thegeumibear.com
;; global options: +cmd
;; Got answer:
;; -->HEADER<!-- opcode: QUERY, status: NOERROR, id: 34446
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 2, ADDITIONAL: 3

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
bouncy.thegeumibear.com. IN A

;; ANSWER SECTION:
www.thegeumibear.com. 3600 IN A 144.38.199.165

;; AUTHORITY SECTION:

;; ADDITIONAL SECTION:
ns1.thegeumibear.com. 3600 IN A 144.38.199.162
ns2.thegeumibear.com. 3600 IN A 144.38.199.163

;; Query time: 0 msec
;; SERVER: 144.38.199.162#53(144.38.199.162)
;; WHEN: Tue Sep 27 15:27:09 MDT 2016
;; MSG SIZE  rcvd: 154

joe@www-thegummibear:~$
```
Create a virtual hosts file for the new php application
joe@www-thegummibear:~$ sudo vi /etc/apache2/sites-available/bouncy.thegummibear.com.conf
# I had to create this file from scratch
# I put the IP of this machine below
# It is a best practice
<VirtualHost 144.38.199.165:80>
    ServerName bouncy.thehumibear.com
    DocumentRoot /var/www/html/bouncy.thehumibear.com
</VirtualHost>
Actually create the document root on the filesystem

```bash
joe@www-thegummibear:~$ echo "Actually create the document root on the filesystem"
Actually create the document root on the filesystem
joe@www-thegummibear:~$ sudo mkdir /var/www/html/bouncy.thegummibear.com
joe@www-thegummibear:~$
```
joe@www-thegummibear:~$ echo "Enable the virtual host"
Enable the virtual host
joe@www-thegummibear:~$ sudo a2ensite bouncy.thegummibear.com.conf
Enabling site bouncy.thegummibear.com.
To activate the new configuration, you need to run:
service apache2 reload
joe@www-thegummibear:~$ sudo service apache2 reload
joe@www-thegummibear:~$
We must create some test content

```
we must create some test content
```

```
joe@www-thegummibear:~$ echo "We must create some test content"
joe@www-thegummibear:~$ cd /var/www/html/bouncy.thegummibear.com/
joe@www-thegummibear:~$  
```
<html>
  <body>
    <h1>BOUNCY</h1>
    <p>Gummi bears like to bounce</p>
  </body>
</html>
BOUNCY

Gummi bears like to bounce
• Here is line number 0
• Here is line number 1
• Here is line number 2
• Here is line number 3
• Here is line number 4
• Here is line number 5
• Here is line number 6
• Here is line number 7
• Here is line number 8
• Here is line number 9
Another simple php script

index.html  simple_app.php

sudo vi mid_app.php
<table>
<thead>
<tr>
<th>System</th>
<th>Linux www-thegummibear 4.0.0-36-generic #55-Ubuntu SMP Thu Aug 11 18:01:55 UTC 2016 x86_64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server API</td>
<td>Apache 2.0 Handler</td>
</tr>
<tr>
<td>Virtual Directory Support</td>
<td>disabled</td>
</tr>
<tr>
<td>Configuration File (php.ini) Path</td>
<td>/etc/php/7.0/apache2</td>
</tr>
<tr>
<td>Loaded Configuration File</td>
<td>/etc/php/7.0/apache2/conf.d/php.ini</td>
</tr>
<tr>
<td>Scan this dir for additional .ini files</td>
<td>/etc/php/7.0/apache2/conf.d/conf.d</td>
</tr>
<tr>
<td>PHP API</td>
<td>20151012</td>
</tr>
<tr>
<td>PHP Extension</td>
<td>20151012</td>
</tr>
<tr>
<td>Zend Extension</td>
<td>320151012</td>
</tr>
<tr>
<td>Zend Extension Build</td>
<td>API320151012,NTS</td>
</tr>
<tr>
<td>PHP Extension Build</td>
<td>API320151012-NTS</td>
</tr>
</tbody>
</table>
Another test application

$ sudo vi harder_app.php
<?php

print date("Y-m-d-H-i-s :: g:i:s::a l F j Y");

?>
Now to make all apps available from the index page.

```
$ echo "Now to make all apps available from the index page"
```

```
$ sudo vi index.html
```
<html>
<body>
<h1>BOUNCY</h1>
<p>Gummi bears like to bounce</p>
<ul>
  <li><a href=./simple_app.php>Simple</a></li>
  <li><a href=./mid_app.php>Mid</a></li>
  <li><a href=./harder_app.php>Hard</a></li>
</ul>
</body>
</html>
BOUNCY

Gummi bears like to bounce

- Simple
- Mid
- Hard
Now I am going to find some random PHP application on the internet and install it.
Tic Tac Toe in PHP [Single Page]

Posted on April 29, 2013 by yigoli 1 Comment

```php
session_start(); // First thing to do is the session start

This is a simple TicTacToe game single page implementation. Feel free to copy and modify the code.

/**
 * $win=-1;
 * if(isset($_POST['res'])) // This is for resetting
 * { session_destroy();
 *     print('<html>');
 * }
 */
```
<?php
session_start(); // First thing to do is the start the session...
/**
This is a simple TicTacToe game single page implementation with session variables.
Feel free to copy and modify the code
**/

$win=-1;

if(isset($_POST['res'])) // This is for resetting the game.
{
    session_destroy();
    print <<<HERE
    Session destroyed. Start <a href="">a new game</a>;
    HERE;
}

print <<<HERE
<form action="" method="post">
<table width="100"><tr>
    HERE;

if(isset($_SESSION['who']))
$who = $_SESSION['who']; // get who is playing right now

"tic.php" 197L, 3137C
X is playing

0  1  2
3  4  5
6  7  8

reset
O is playing

X 1 2
3 X O
6 7 8

reset
X is playing

X   1   O
3   X   O
6   X   O

0 wins
reset