



The image shows a terminal window with a title bar that reads "Desktop — joe@www-thegummibear: ~ — ssh • ssh yavin — 80x24". The window contains four tabs: "~/Desktop — ssh • ssh yavin", "joe@db-thegummibear: ~...", "joe@www-thegummibear:...", and "~/Desktop — -bash". The active tab is "joe@www-thegummibear:~". The terminal text is as follows:

```
joe@www-thegummibear:~$ echo "now for a remote application test"
now for a remote application test
joe@www-thegummibear:~$ █
```

```
Desktop — joe@www-thegummibear: ~ — ssh ◀ ssh yavin — 80x24
~/Desktop — ssh ◀ ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
joe@www-thegummibear:~$ echo "Need to enable the php-mysql module for connectivity to the db"
Need to enable the php-mysql module for connectivity to the db
joe@www-thegummibear:~$ █
```

```
Desktop — joe@www-thegummibear: ~ — ssh • ssh yavin — 80x24
~/Desktop — ssh • ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
joe@www-thegummibear:~$ sudo apt-cache search mysql | grep php
php-mysql - MySQL module for PHP [default]
php7.0-mysql - MySQL module for PHP
htcheck-php - Simple php interface to database generated by ht://Check
libphp-adodb - ADOdb is a PHP database abstraction layer library
php-db - PHP PEAR Database Abstraction Layer
php-mdb2-driver-mysql - PHP PEAR module to provide a MySQL driver for MDB2
php-zend-db - Zend Framework - Db component
phpmyadmin - MySQL web administration tool
joe@www-thegummibear:~$ █
```

```
Desktop — joe@www-thegummibear: ~ — ssh • ssh yavin — 80x24
~/Desktop — ssh • ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
joe@www-thegummibear:~$ sudo apt-get install php-mysql
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-4.4.0-31 linux-headers-4.4.0-31-generic
  linux-image-4.4.0-31-generic linux-image-extra-4.4.0-31-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  php7.0-mysql
The following NEW packages will be installed:
  php-mysql php7.0-mysql
0 upgraded, 2 newly installed, 0 to remove and 43 not upgraded.
Need to get 126 kB of archives.
After this operation, 484 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
```



The image shows a terminal window with a title bar that reads "Desktop — joe@www-thegummibear: ~ — ssh • ssh yavin — 80x24". The window contains four tabs: "~/Desktop — ssh • ssh yavin", "joe@db-thegummibear: ~...", "joe@www-thegummibear:...", and "~/Desktop — -bash". The main content of the terminal shows a prompt "joe@www-thegummibear:~\$" followed by the command "sudo service apache2 restart". The next line shows the prompt "joe@www-thegummibear:~\$" with a cursor, indicating the command has been executed.

```
joe@www-thegummibear:~$ sudo service apache2 restart
joe@www-thegummibear:~$
```

```
Desktop — joe@www-thegummibear: ~ — ssh • ssh yavin — 80x24
~/Desktop — ssh • ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
joe@www-thegummibear:~$ echo "Now to create a 'simple' PHP app to test the connections"
Now to create a 'simple' PHP app to test the connections
joe@www-thegummibear:~$ █
```

```
Desktop — joe@www-thegummibear: ~ — ssh • ssh yavin — 80x24
~/Desktop — ssh • ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
joe@www-thegummibear:~$ echo "You should use one of the document roots that you
have already set up in an earlier assignment. OR create a new virtual host"
You should use one of the document roots that you have already set up in an earl
ier assignment. OR create a new virtual host
joe@www-thegummibear:~$ █
```



The image shows a terminal window with a title bar that reads "Desktop — joe@www-thegummibear: ~ — ssh ◀ ssh yavin — 80x24". Below the title bar, there are four tabs: "~/Desktop — ssh ◀ ssh yavin", "joe@db-thegummibear: ~...", "joe@www-thegummibear:...", and "~/Desktop — -bash". The main content of the terminal is a single line of text: "joe@www-thegummibear:~\$ sudo vi /var/www/html/squishy.thegummibear.com/test.php". The prompt "joe@www-thegummibear:~\$" is in green, and the rest of the command is in black. A cursor is visible at the end of the command line.

```
joe@www-thegummibear:~$ sudo vi /var/www/html/squishy.thegummibear.com/test.php
```



```
Desktop — joe@www-thegummibear: /var/www/html/squishy.thegummibear.com — ssh ◀ ssh yavin — 80x24
~/Desktop — ssh ◀ ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
<?php
echo "connecting to the db.<br/>";
//mysqli(host, user, password, database)
$db_conn = new mysqli("db.thegummibear.com", "harry", "alohamora", "hogwarts");
if($db_conn->connect_errno){
    die("Cannot connect, see error number ".$db_conn->connect_errno);
}

echo "Choosing sql statement.<br/>";
$sql = "SELECT * FROM spells";

echo "Execute statement";
$result = $db_conn->query($sql);

echo "Here are the results.<br/>";
while($row = $result->fetch_assoc()){
    echo "x = " . $row['x'] . "<br/>";
}
echo "Done.<br/>";
~
~
~
<ww/html/squishy.thegummibear.com/test.php" 20L, 522C written 19,1  All
```



squishy.thegummibear.com/test

Joe



squishy.thegummibear.com/test.php



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connecting to the db.

Choosing sql statement.

Execute statementHere are the results.

x = 4

x = 55

x = 44

Done.

```
Desktop — joe@www-thegummibear: ~ — ssh ◀ ssh yavin — 80x24
~/Desktop — ssh ◀ ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
joe@www-thegummibear:~$ echo "For any errors you might have, check the log files"
"
For any errors you might have, check the log files
joe@www-thegummibear:~$ sudo less /var/log/apache2/error.log
```

```
Desktop — joe@www-thegummibear: ~ — ssh * ssh yavin — 80x24
~/Desktop — ssh * ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
[Fri Oct 07 12:35:06.179831 2016] [mpm_prefork:notice] [pid 7591] AH00163: Apache/2.4.18 (Ubuntu) configured -- resuming normal operations
[Fri Oct 07 12:35:06.179909 2016] [core:notice] [pid 7591] AH00094: Command line: '/usr/sbin/apache2'
[Fri Oct 07 12:39:51.766227 2016] [mpm_prefork:notice] [pid 7591] AH00169: caught SIGTERM, shutting down
[Fri Oct 07 12:39:52.946503 2016] [mpm_prefork:notice] [pid 7779] AH00163: Apache/2.4.18 (Ubuntu) configured -- resuming normal operations
[Fri Oct 07 12:39:52.946560 2016] [core:notice] [pid 7779] AH00094: Command line: '/usr/sbin/apache2'
[Fri Oct 07 20:46:52.366915 2016] [[:error] [pid 7786] [client 189.219.86.55:50787] script '/var/www/html/command.php' not found or unable to stat
[Fri Oct 07 20:46:52.591390 2016] [[:error] [pid 7782] [client 201.173.136.104:39876] script '/var/www/html/gooney/command.php' not found or unable to stat
[Fri Oct 07 21:12:37.508016 2016] [mpm_prefork:notice] [pid 7779] AH00169: caught SIGTERM, shutting down
[Fri Oct 07 21:12:38.433540 2016] [mpm_prefork:notice] [pid 10854] AH00163: Apache/2.4.18 (Ubuntu) configured -- resuming normal operations
[Fri Oct 07 21:12:38.433594 2016] [core:notice] [pid 10854] AH00094: Command line: '/usr/sbin/apache2'
[Fri Oct 07 21:20:18.501123 2016] [[:error] [pid 10857] [client 75.169.191.75:57883] PHP Parse error:  syntax error, unexpected 'x' (T_STRING), expecting ',' or ';' in /var/www/html/squishy.thegummibear.com/test.php on line 18
(END)
```

```
Desktop — joe@www-thegummibear: ~ — ssh • ssh yavin — 80x24
~/Desktop — ssh • ssh yavin  joe@db-thegummibear: ~...  joe@www-thegummibear:...  ~/Desktop — -bash  +
[joe@www-thegummibear:~$ echo "That was just an example error, hopefully you don't have that one ;-)"
That was just an example error, hopefully you don't have that one ;-)
[joe@www-thegummibear:~$ echo "Don't just give up if php doesn't load, take your time, review the slides, and CHECK THE LOGS"
Don't just give up if php doesn't load, take your time, review the slides, and CHECK THE LOGS
joe@www-thegummibear:~$ █
```