Connecting MySQL with PHP

Connection to a MySQL database can be attempted in PHP with a standard piece of script that describes four connection parameters of host, user name, password, and database name. Upon failure the script provides a descriptive message, whereas on success it specifies the character set to to be used when sending data to and from the database server:

```
$dbc = mysqli_connect ( 'host', 'user', 'password', 'database' )
  OR die ( mysqli_connect_error() ) ;
mysqli_set_charset( $dbc, 'charset' ) ;
```

You need not understand in detail how the script works at this stage but recognize that it contains sensitive information. For this reason it should not be placed in the web server's **/htdocs** directory like all other PHP scripts, where its contents may be accessible, but placed instead safely in **/htdocs** parent directory. For example in the **"C:/Abyss Web Server"** directory rather than in the **"C:/Abyss Web Server/htdocs"** directory.

Any PHP script can incorporate another PHP script by using a "require" statement to specify the other script's path. This feature can be used to good effect to incorporate the connection script without revealing its sensitive information.

connect_db.php

1 Launch a plain text editor and create a connection script describing the parameters from the previous pages

```php
<?php

# Connect  on 'localhost' for user 'mike'
# with password 'easysteps' to database 'site_db'.
$dbc = mysqli_connect
  ( 'localhost' , 'mike' , 'easysteps' , 'site_db' )
OR die
  ( mysqli_connect_error() ) ;

# Set encoding to match PHP script encoding.
mysqli_set_charset( $dbc , 'utf8' ) ;
```

2 Save the file in the parent directory of your web server's **/htdocs** directory folder as **connect_db.php**

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3 Now begin a second script that incorporates the connection script, stating its path in the parent directory
```
<?php
# Incorporate the MySQL connection script.
require ( '../connect_db.php' ) ;
```
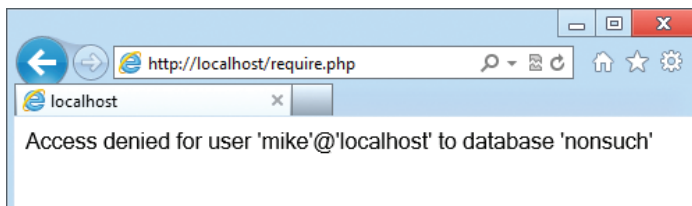

require.php

4 Next complete this script by adding instructions to display connection information if the attempt has succeeded
```
# Display MySQL version and host.
if( mysqli_ping( $dbc ) )
{ echo 'MySQL Server ' . mysqli_get_server_info( $dbc ).
                ' on ' . mysqli_get_host_info( $dbc ) ; }
```

5 Save the script in your web server's **/htdocs** directory as **require.php** then open it in your browser (via HTTP) to see the connection details on successful connection

http://localhost/require.php

localhost

MySQL Server 5.5.23 on localhost via TCP/IP
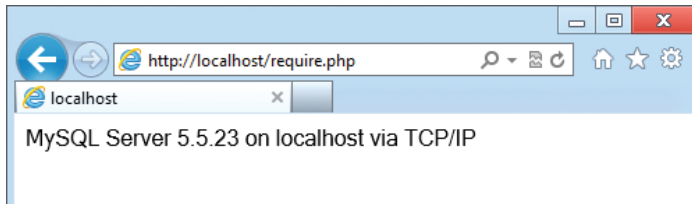
6 Temporarily edit **connect_db.php** by changing the database name to one that does not exist then save the file and reload the page in your browser to see the error

http://localhost/require.php

localhost

Access denied for user 'mike'@'localhost' to database 'nonsuch'

Don't forget

You do not need to understand how these scripts work just now – they merely ensure you can connect to MySQL with PHP. But you can usefully refer back to them later to see how your knowledge of PHP has progressed.

7 Finally correct the **connect_db.php** script by changing the database name back to **site_db** then save the file and reload the page to see the connection succeed once more.

Congratulations, you have now successfully configured the Abyss Web Server, PHP engine, and MySQL Server for development.