

SETTING UP INDEX.PHP IN NGINX SERVER

Step 1 – Create user with relevant privileges.

```
mysql> use student
Database changed
mysql> CREATE USER 'udula'@'localhost' IDENTIFIED BY 'udula123';
Query OK, 0 rows affected (0.03 sec)

mysql> GRANT ALL PRIVILEGES ON student.* TO 'udula'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.00 sec)

mysql>
```

Step 2 – Create relevant database tables.

```
mysql> create table register(username varchar(255),password varchar(255));
Query OK, 0 rows affected (0.03 sec)

mysql> show tables;
+-----+
| Tables_in_student |
+-----+
| register           |
| studentdetails     |
+-----+
2 rows in set (0.01 sec)

mysql> exit
Bye
```

Step 3 – Install php in NGINX server and restart the NGINX server. Then check the installed php version.

```
ubuntu@ip-172-31-37-124: /var/www/html$ php -v
PHP 8.1.2-1ubuntu2.14 (cli) (built: Aug 18 2023 11:41:11) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.1.2, Copyright (c) Zend Technologies
with Zend OPcache v8.1.2-1ubuntu2.14, Copyright (c), by Zend Technologies
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$ sudo systemctl restart nginx
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$
ubuntu@ip-172-31-37-124: /var/www/html$ sudo systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: enabled)
   Active: active (running) since Thu 2024-01-18 20:26:57 UTC; 9s ago
     Docs: man:nginx(8)
   Process: 12895 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
   Process: 12896 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
   Main PID: 12897 (nginx)
    Tasks: 3 (limit: 1091)
   Memory: 5.2M
      CPU: 33ms
   CGroup: /system.slice/nginx.service
           └─12897 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             └─12898 "nginx: worker process"
               └─12899 "nginx: worker process"

Jan 18 20:26:57 ip-172-31-37-124 systemd[1]: Starting A high performance web server and a reverse proxy server: nginx.
Jan 18 20:26:57 ip-172-31-37-124 systemd[1]: Started A high performance web server and a reverse proxy server: nginx.
lines 1-17/17 (END)
```

Step 4 – Edit db server configuration file with relevant details.

```
ubuntu@ip-172-31-37-124: /var/www/html$ nano /etc/nginx/sites-available/default
GNU nano 6.2 /etc/nginx/sites-available/default
#
server {
    listen 80 default_server;
    listen [::]:80 default_server;

    # SSL configuration
    #
    # listen 443 ssl default_server;
    # listen [::]:443 ssl default_server;
    #
    # Note: You should disable gzip for SSL traffic.
    # See: https://bugs.debian.org/773332
    #
    # Read up on ssl_ciphers to ensure a secure configuration.
    # See: https://bugs.debian.org/765782
    #
    # Self signed certs generated by the ssl-cert package
    # Don't use them in a production server!
    #
    # include snippets/snakeoil.conf;

    root /var/www/html;

    # Add index.php to the list if you are using PHP
    index index.html index.htm index.nginx-debian.html index.php;

    server_name _;

    location / {
        # First attempt to serve request as file, then
        # as directory, then fall back to displaying a 404.
        try_files $uri $uri/ =404;
    }

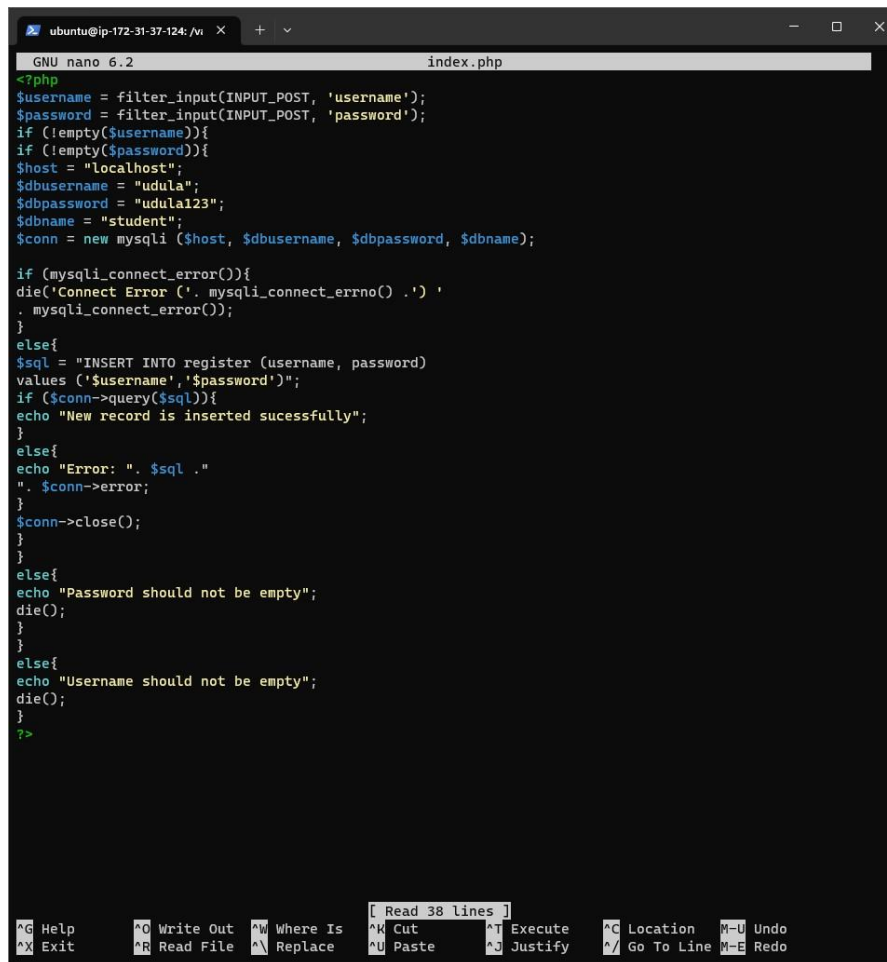
    # pass PHP scripts to FastCGI server
    #
    location ~ \.php$ {
        include snippets/fastcgi-php.conf;

        # With php-fpm (or other unix sockets):
        fastcgi_pass unix:/run/php/php8.1-fpm.sock;
        # With php-cgi (or other tcp sockets):
        fastcgi_pass 127.0.0.1:9000;
    }

    # deny access to .htaccess files, if Apache's document root
    # concurs with nginx's one
}

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute  ^C Location  M-U Undo
^X Exit      ^R Read File ^A Replace   ^U Paste     ^J Justify  ^_ Go To Line M-E Redo
```

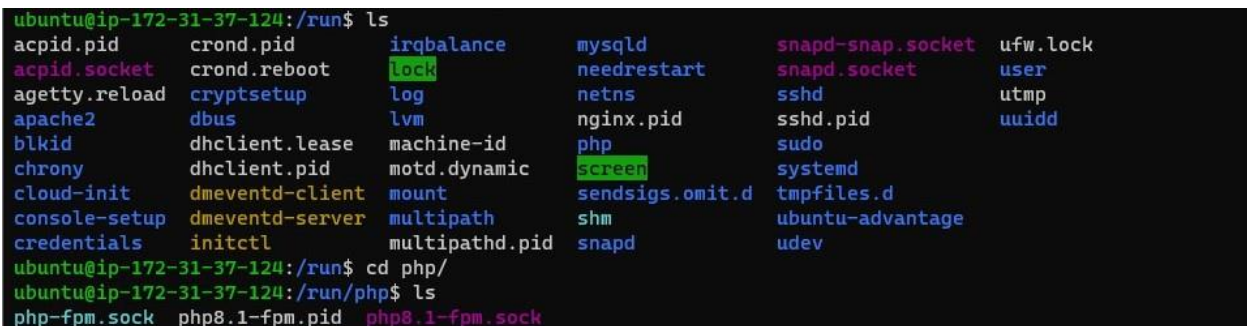
Step 5 - Edit index.php with relevant details.



```
GNU nano 6.2 index.php
<?php
$username = filter_input(INPUT_POST, 'username');
$password = filter_input(INPUT_POST, 'password');
if (!empty($username)){
if (!empty($password)){
    $host = "localhost";
    $dbusername = "udula";
    $dbpassword = "udula123";
    $dbname = "student";
    $conn = new mysqli ($host, $dbusername, $dbpassword, $dbname);

    if (mysqli_connect_error()){
        die('Connect Error ('. mysqli_connect_errno() .') '
        . mysqli_connect_error());
    }
    else{
        $sql = "INSERT INTO register (username, password)
        values ('$username','$password')";
        if ($conn->query($sql)){
            echo "New record is inserted sucessfully";
        }
        else{
            echo "Error: ". $sql ."
            ". $conn->error;
        }
        $conn->close();
    }
}
else{
    echo "Password should not be empty";
    die();
}
}
else{
    echo "Username should not be empty";
    die();
}
?>
```

Step 6 – Check fpm folder whether the php8.1-fpm.sock is available.



```
ubuntu@ip-172-31-37-124:/run$ ls
acpid.pid      crond.pid      irqbalance     mysqld          snapd-snap.socket  ufw.lock
acpid.socket   crond.reboot   lock           needrestart     snapd.socket       user
agetty.reload  cryptsetup     log            netns           sshd               utmp
apache2        dbus           lvm            nginx.pid       sshd.pid           uuidd
blkid          dhclient.lease machine-id      php             sudo
chrony         dhclient.pid   motd.dynamic   screen          systemd
cloud-init     dmeventd-client mount          sendsigs.omit.d tmpfiles.d
console-setup  dmeventd-server multipath       shm             ubuntu-advantage
credentials    initctl        multipathd.pid snapd            udev

ubuntu@ip-172-31-37-124:/run$ cd php/
ubuntu@ip-172-31-37-124:/run/php$ ls
php-fpm.sock  php8.1-fpm.pid  php8.1-fpm.sock
```

Step 7 – Install MySQL packages in php.

```
ubuntu@ip-172-31-37-124: /vi X + - X
#0 {main}
  thrown in /var/www/html/index.php on line 10" while reading response header from upstream, client: 2
12.3.198.191, server: _, request: "POST /index.php HTTP/1.1", upstream: "fastcgi://unix:/run/php/php8.
1-fpm.sock:", host: "16.170.255.171", referer: "http://16.170.255.171/"
ubuntu@ip-172-31-37-124:/run/php$ sudo apt-get install php-mysqldb
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'php8.1-mysql' instead of 'php-mysqldb'
The following NEW packages will be installed:
  php8.1-mysql
0 upgraded, 1 newly installed, 0 to remove and 48 not upgraded.
Need to get 130 kB of archives.
After this operation, 462 kB of additional disk space will be used.
Get:1 http://eu-north-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-mysql amd64 8.1.
2-1ubuntu2.14 [130 kB]
Fetched 130 kB in 0s (2526 kB/s)
Selecting previously unselected package php8.1-mysql.
(Reading database ... 66610 files and directories currently installed.)
Preparing to unpack .../php8.1-mysql_8.1.2-1ubuntu2.14_amd64.deb ...
Unpacking php8.1-mysql (8.1.2-1ubuntu2.14) ...
Setting up php8.1-mysql (8.1.2-1ubuntu2.14) ...

Creating config file /etc/php/8.1/mods-available/mysqldb.ini with new version

Creating config file /etc/php/8.1/mods-available/mysqli.ini with new version

Creating config file /etc/php/8.1/mods-available/pdo_mysql.ini with new version
Processing triggers for php8.1-fpm (8.1.2-1ubuntu2.14) ...
NOTICE: Not enabling PHP 8.1 FPM by default.
NOTICE: To enable PHP 8.1 FPM in Apache2 do:
NOTICE: a2enmod proxy_fcgi setenvif
NOTICE: a2enconf php8.1-fpm
NOTICE: You are seeing this message because you have apache2 package installed.
Processing triggers for libapache2-mod-php8.1 (8.1.2-1ubuntu2.14) ...
Processing triggers for php8.1-cli (8.1.2-1ubuntu2.14) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

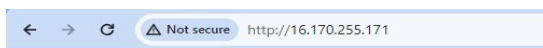
No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-37-124:/run/php$
ubuntu@ip-172-31-37-124:/run/php$
ubuntu@ip-172-31-37-124:/run/php$
```

Step 8 - Enter details to the page.



Username :

Password :



Step 9 – Check whether the data is retrieved.

```
ubuntu@ip-172-31-37-124:/var/www/html$ sudo mysql -u udula -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 21
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use student
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> select * from register;
+-----+-----+
| username | password |
+-----+-----+
| sdf      | sf       |
+-----+-----+
1 row in set (0.00 sec)

mysql> select * from register;
+-----+-----+
| username | password |
+-----+-----+
| sdf      | sf       |
| udula    | udula@123 |
+-----+-----+
2 rows in set (0.00 sec)
```