ASSIGNMENT-2

Cloud Project & Video Explainer

IP ADDRESS- 51.20.11.128

DNS- https://travel-madhav.online/

www.travel-madhav.online

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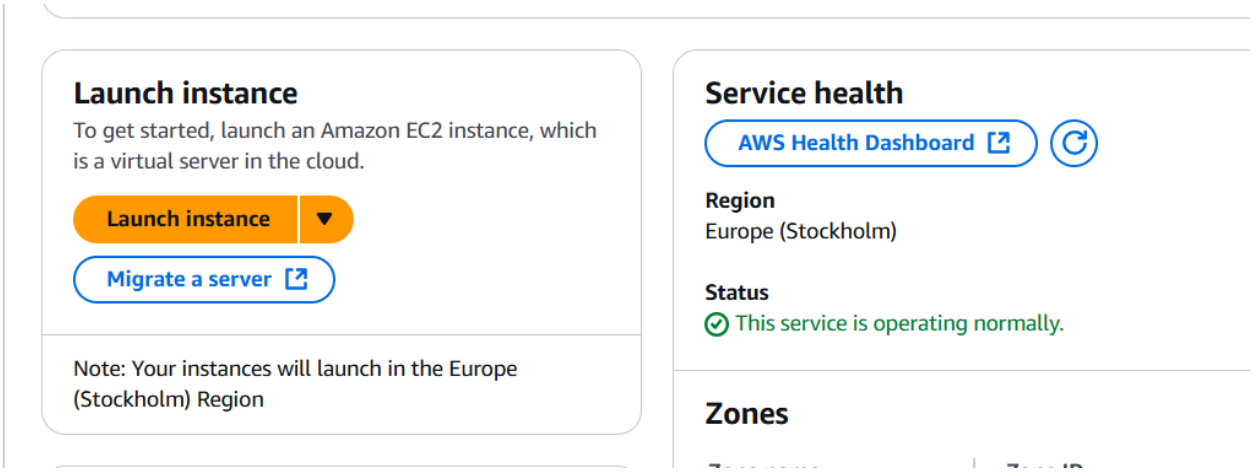
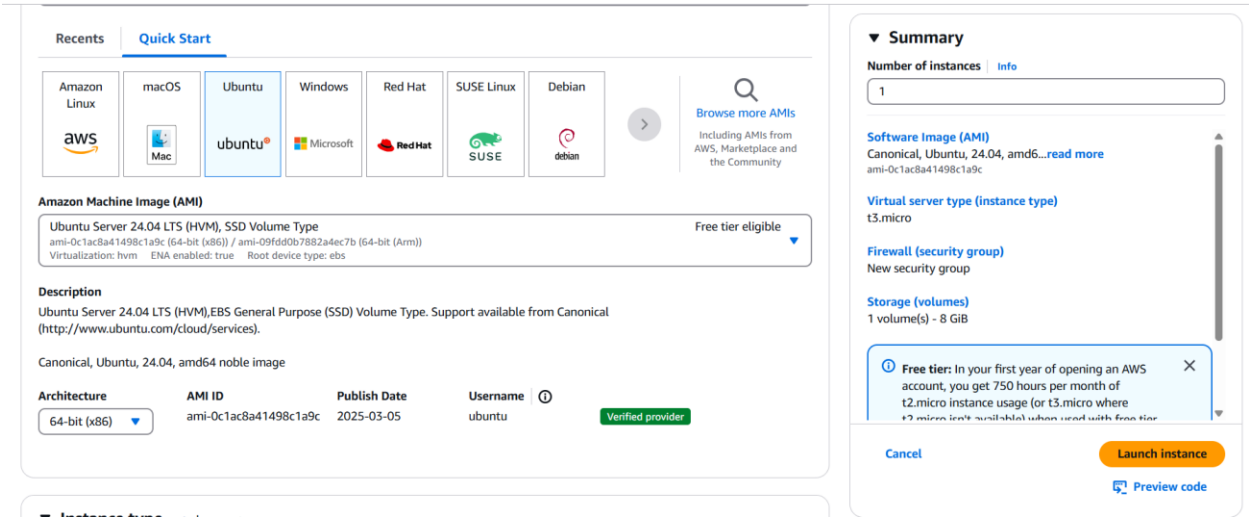
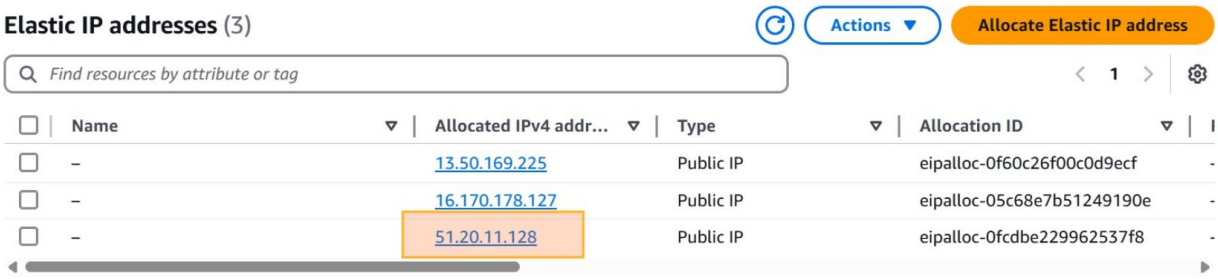
SETTING UP WEBSERVER-

1. GO TO THE EC2 DASHBOARD AND THEN CLICK ON LAUNCH INSTANCE-



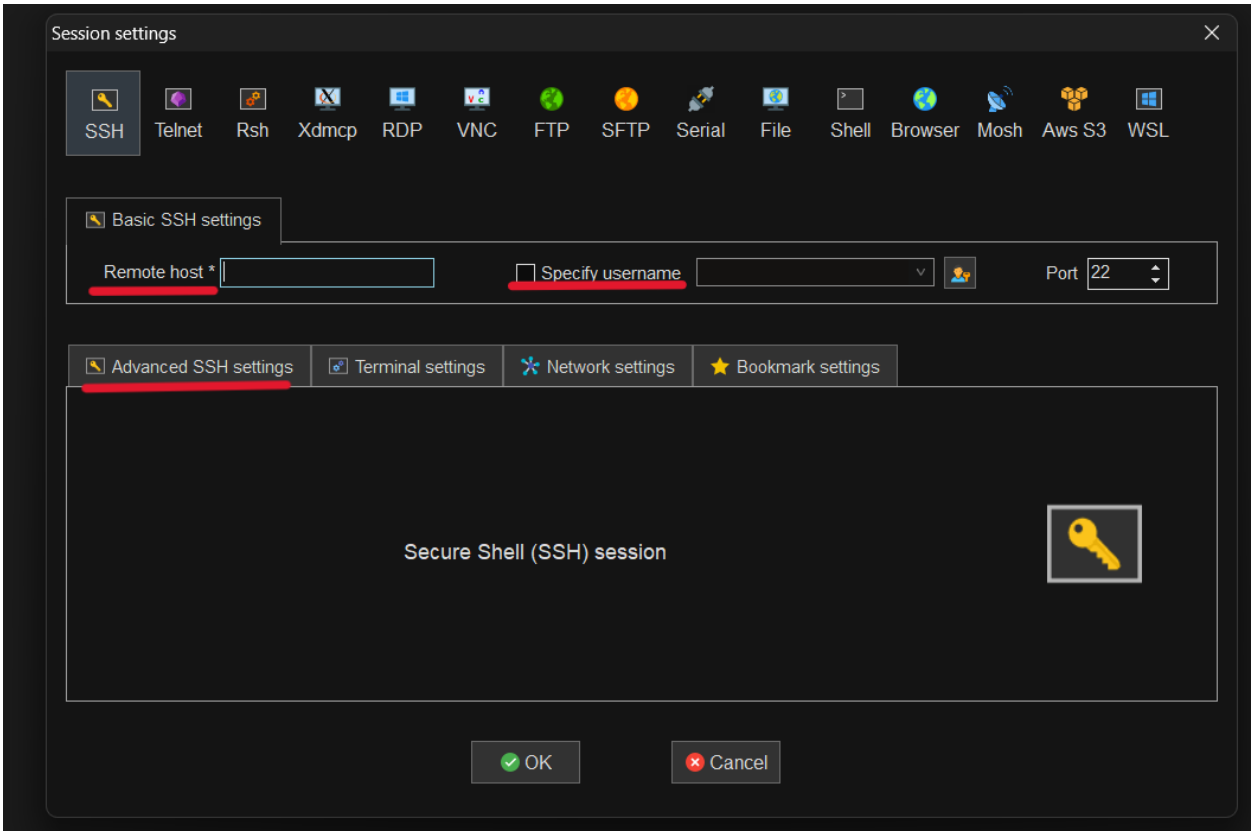
2. CHOOSE UBUNTU AS OPERATING SYSTEM, CREATE A NEW KEY PAIR AND CLICK ON LAUNCH INSTANCE AND THEN ASSOCIATE ELASTIC IP ADDRESS





- NOW TO CONNECT INSTANCE WITH SSH I AM USING AN SSH CLIENT NAMED AS MOBA XTREM-

3. CLICK ON SSH AND TYPE UR STATIC IP ADDRESS IN REMOTE HOST AND THE SPEICFY USERNAME IS UBUNTU AND THEN GO THE ADVANCED SSH SETTINGS AND USE THE PRIVATE KEY TO LOG IN-



4. Install Apache server on Ubuntu

```
sudo apt install apache2
```

5. Install php runtime and php mysql connector

```
sudo apt install php libapache2-mod-php php-mysql
```

6. Install MySQL server

```
sudo apt install mysql-server
```

7. Login to MySQL server

```
sudo mysql -u root
```

8. Change authentication plugin to mysql_native_password

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password by 'Testpassword@123';
```

9. Create a new database user for wordpress

```
CREATE USER 'wp_user'@localhost IDENTIFIED BY 'Testpassword@123';
```

10. Create a database for wordpress

```
CREATE DATABASE wp;
```

11. Grant all privilges on the database 'wp' to the newly created user

```
GRANT ALL PRIVILEGES ON wp.* TO 'wp_user'@localhost;
```

FOR EXIT PRESS CTRL+X

WORDPRESS SETUP PROCESS

12. Download wordpress IN tmp directory

```
cd /tmp
wget https://wordpress.org/latest.tar.gz
```

13. Unzip

```
tar -xvf latest.tar.gz
```

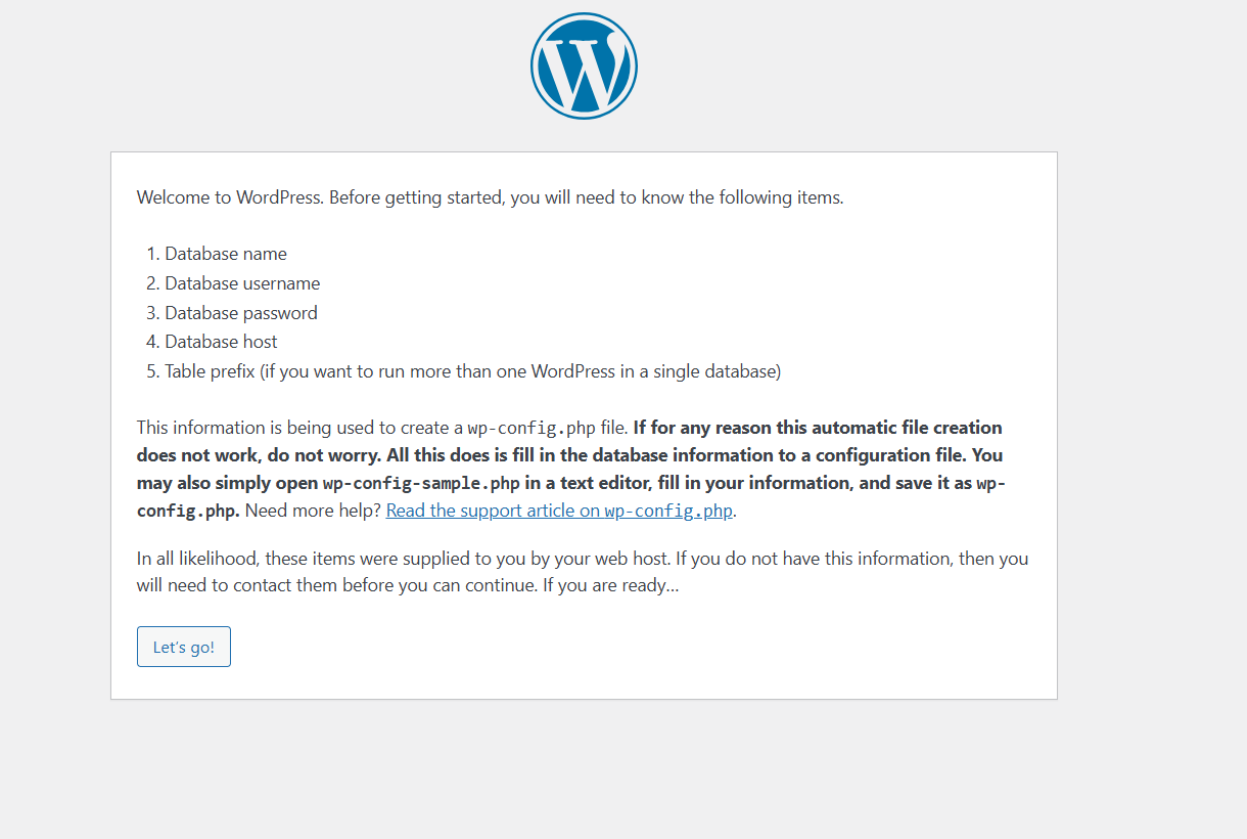
14. Move wordpress folder to apache document root

```
sudo mv wordpress/ /var/www/html
```

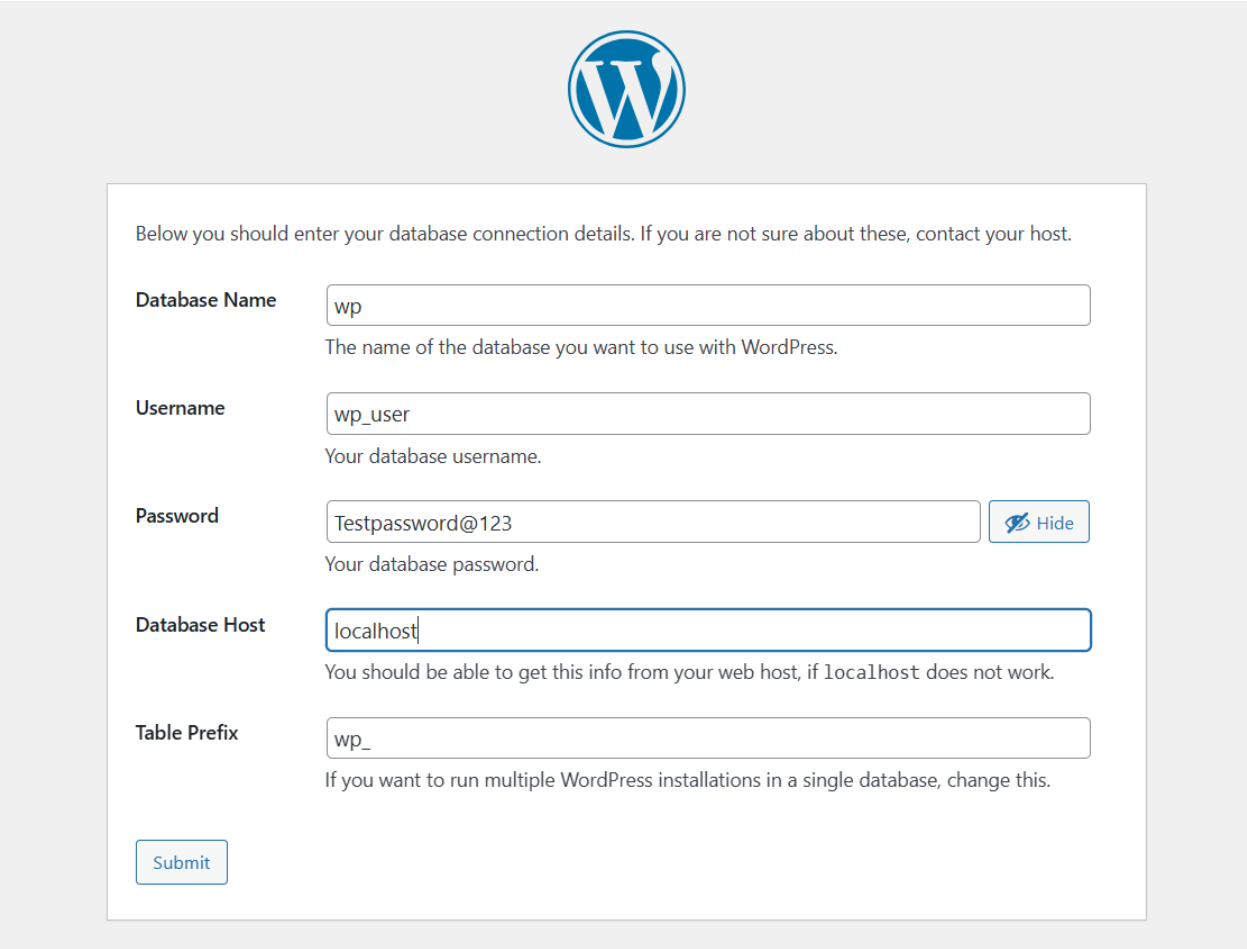
15. Command to restart/reload apache server

```
sudo systemctl reload apache2
```

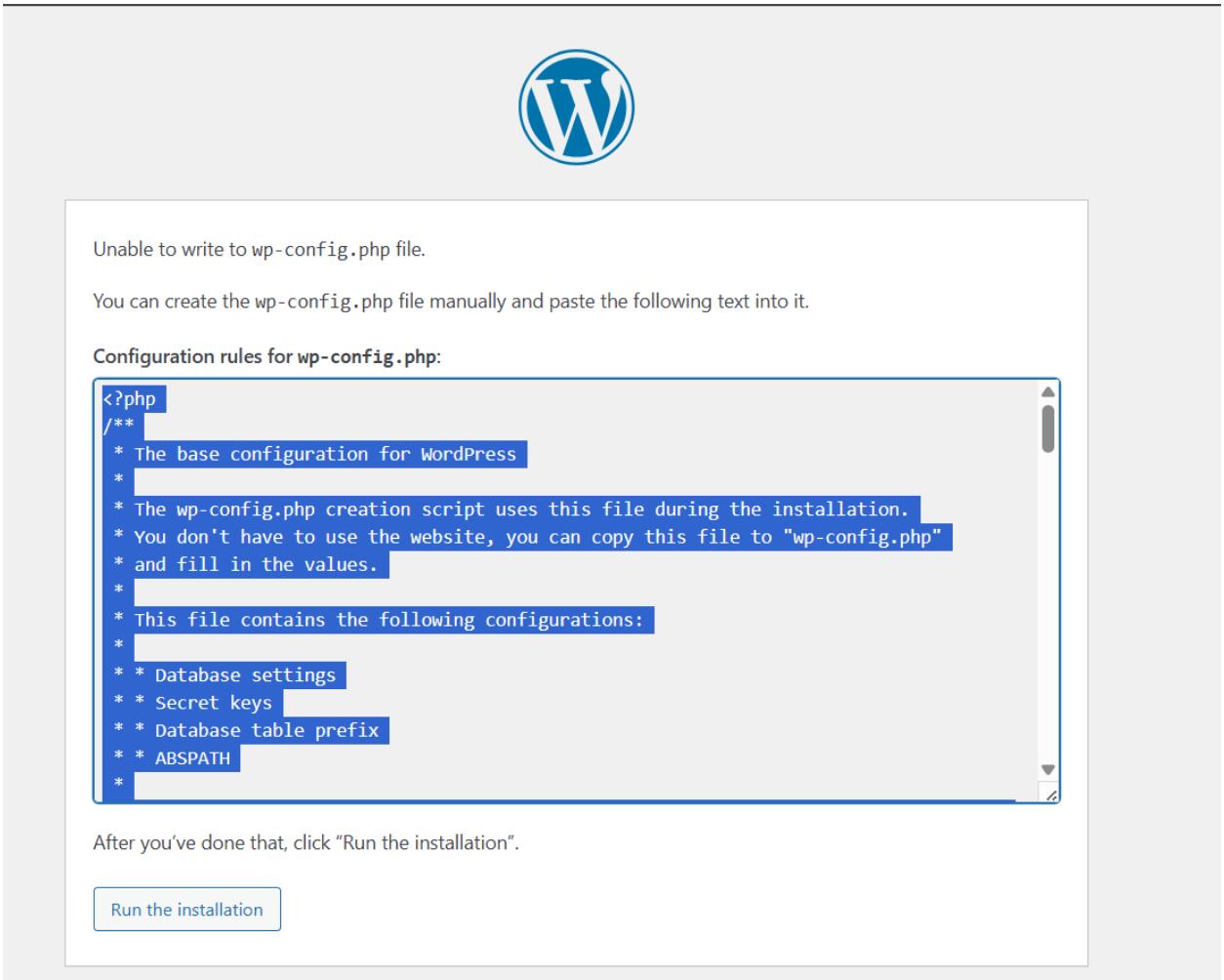
16. Now type public address followed by /wordpress, then it will display a wordpress welcome page



17. Then fill in the database details and click submit



18. Now after pressing the submission, it shows us UNABLE TO WRITE TO WP-CONFIG.PHP FILE
19. And below there is an instruction to create the wp-config.php file manually and paste the following text into it.

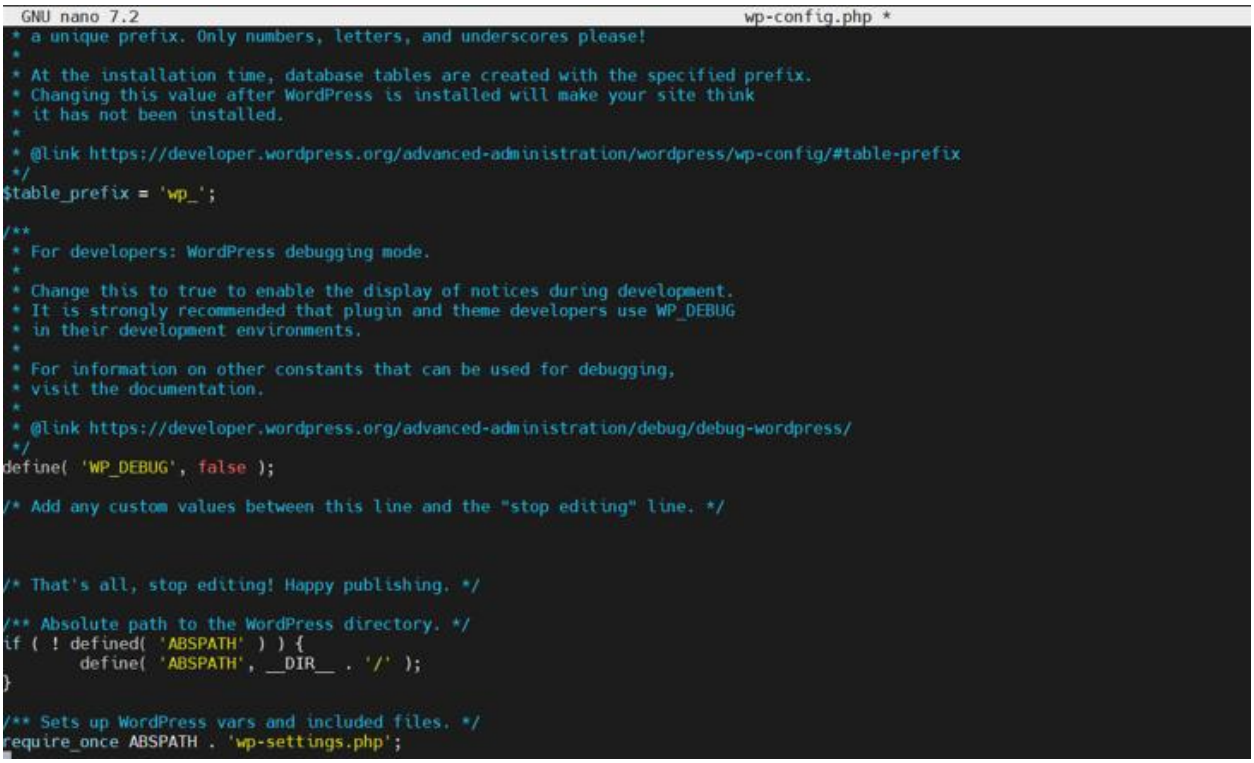


20. Now move directory and create and edit the file named as 'wp-config.php'

```
cd /var/www/html/wordpress
```

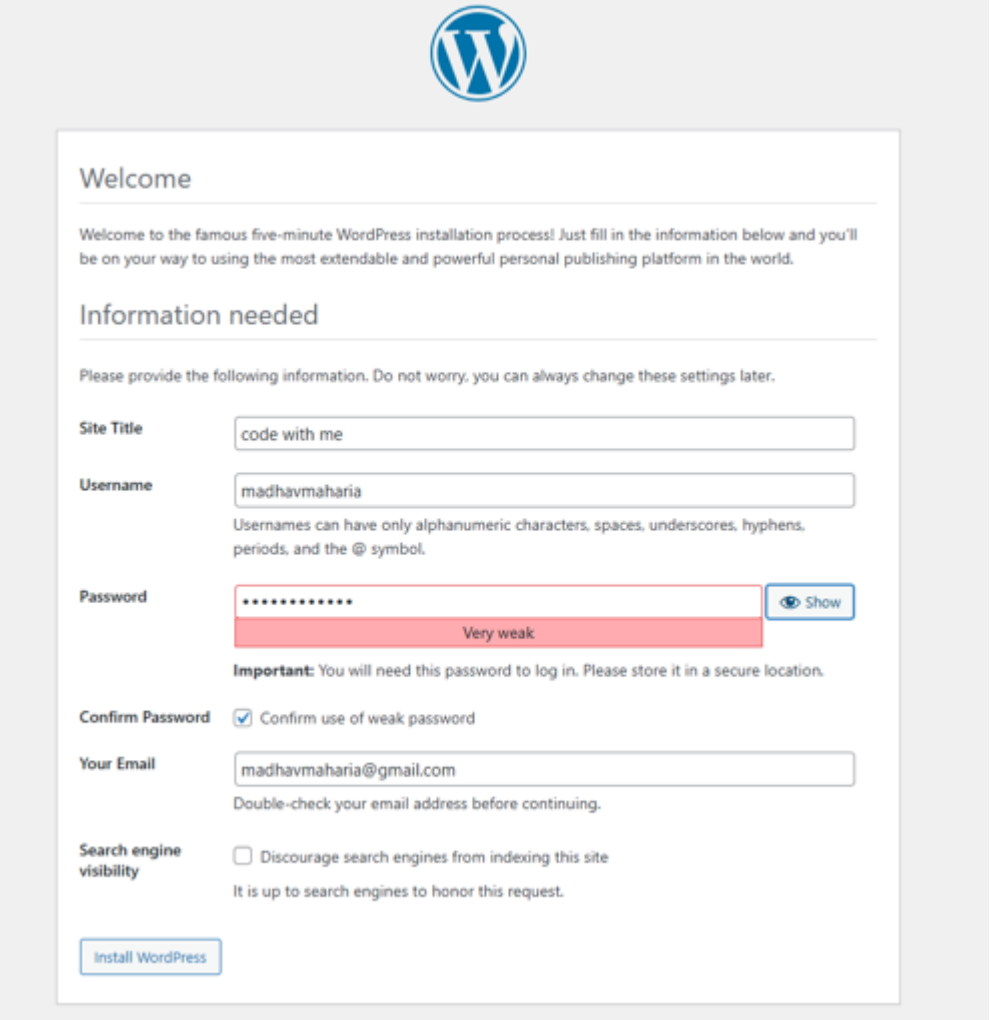
```
nano wp-config.php
```

21. Code that we pasted in wp-config.php

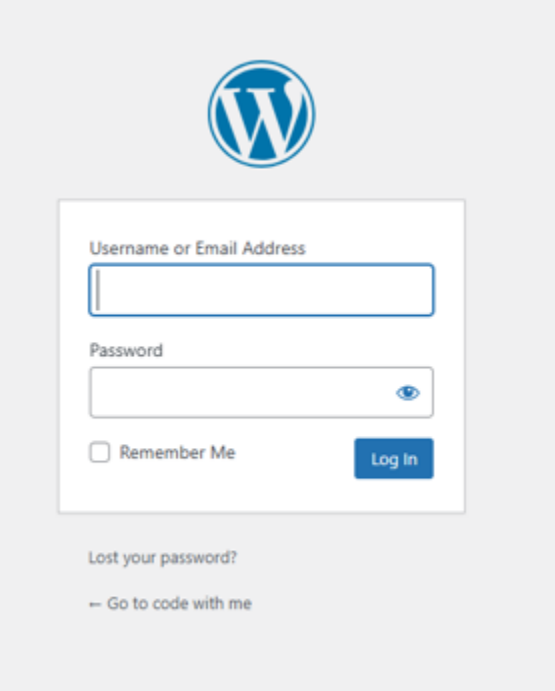


```
 GNU nano 7.2                                                    wp-config.php *
 * a unique prefix. Only numbers, letters, and underscores please!
 *
 * At the installation time, database tables are created with the specified prefix.
 * Changing this value after WordPress is installed will make your site think
 * it has not been installed.
 *
 * @link https://developer.wordpress.org/advanced-administration/wordpress/wp-config/#table-prefix
 */
$table_prefix = 'wp_';

/**
 * For developers: WordPress debugging mode.
 *
 * Change this to true to enable the display of notices during development.
 * It is strongly recommended that plugin and theme developers use WP_DEBUG
 * in their development environments.
 *
 * For information on other constants that can be used for debugging,
 * visit the documentation.
 *
 * @link https://developer.wordpress.org/advanced-administration/debug/debug-wordpress/
 */
define( 'WP_DEBUG', false );

/* Add any custom values between this line and the "stop editing" line. */



/* That's all, stop editing! Happy publishing. */

/** Absolute path to the WordPress directory. */
if ( ! defined( 'ABSPATH' ) ) {
        define( 'ABSPATH', __DIR__ . '/' );
}

/** Sets up WordPress vars and included files. */
require_once ABSPATH . 'wp-settings.php';
```

22. Fill in the information



23. login


Username or Email Address
Password
Remember Me
Log In
Lost your password?
← Go to code with me

CHANGING THE SUB PATH

24. CHANGING APACHE CONFIGRATION

```
cd /etc/apache2/sites-available/
```

```
ls
```

```
ubuntu@ip-172-31-33-59:/var/www/html$ cd /etc/apache2/sites-available
ubuntu@ip-172-31-33-59:/etc/apache2/sites-available$ ls
000-default.conf  default-ssl.conf
ubuntu@ip-172-31-33-59:/etc/apache2/sites-available$ sudo nano 000-default.conf
ubuntu@ip-172-31-33-59:/etc/apache2/sites-available$ sudo systemctl restart apache2
```

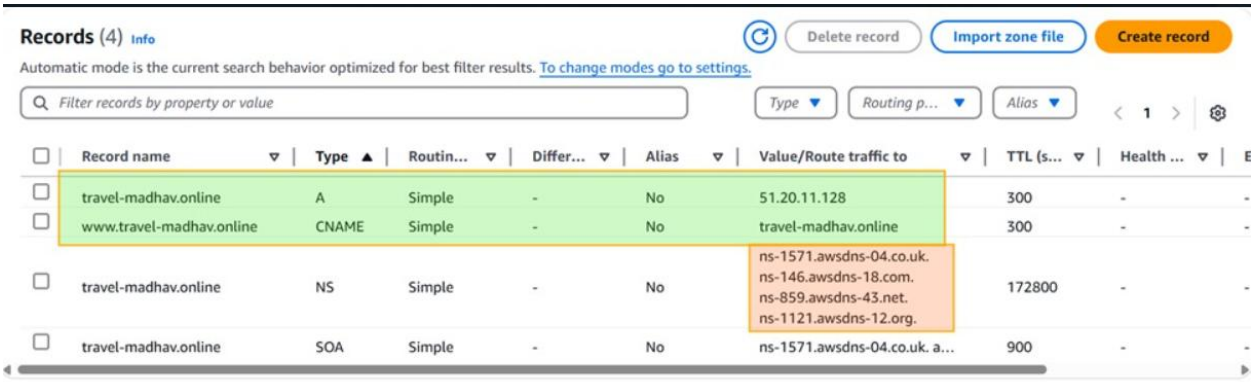
```
  GNU nano 7.2                                          000-default.conf
<VirtualHost *:80>
        # The ServerName directive sets the request scheme, hostname and port that
        # the server uses to identify itself. This is used when creating
        # redirection URLs. In the context of virtual hosts, the ServerName
        # specifies what hostname must appear in the request's Host: header to
        # match this virtual host. For the default virtual host (this file) this
        # value is not decisive as it is used as a last resort host regardless.
        # However, you must set it for any further virtual host explicitly.
        #ServerName www.example.com

        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/html/wordpress

        # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
        # error, crit, alert, emerg.
        # It is also possible to configure the loglevel for particular
        # modules, e.g.
        #LogLevel info ssl:warn

        ServerName travel-madhav.online
        ServerAlias www.travel-madhav.online

        ErrorLog ${APACHE_LOG_DIR}/error.log
        CustomLog ${APACHE_LOG_DIR}/access.log combined
```

RESTART APACH SERVER.

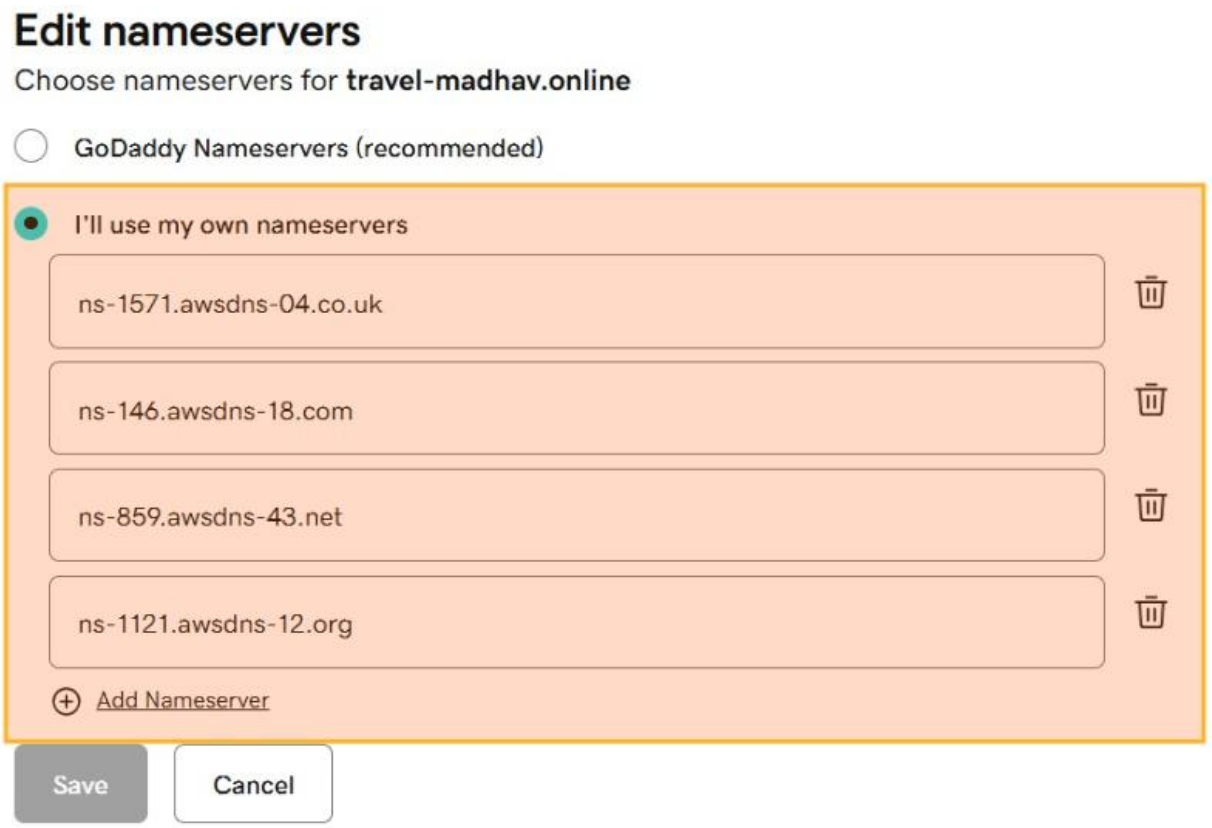
```
sudo systemctl restart apache2
```

LINKING WITH DNS

25. CREATE HOSTED ZONE USING ROUTER53 AND THEN CREATE A RECORD OF A TYPE



COPY THE ROUTE TRAFFIC TO YOUR NAMERSERVER FOR DNS AND CHANGE NAMESERVER ON GODADDY(OR WHERE U HAVE BOUGHT THE DNS).



SSL/TLS DOCUMENTATION

ENABLING HTTPS WITH CETRABOT ON UBUNTU 20.04 USING APACHE

26. INSTALLING CETRABOT

```
sudo apt-get update
sudo apt install certbot python3-certbot-apache
```

27. RUN CETRABOT WITH APACHE PLUGIN TO ATTAIN AND INSTALL SSL CERTIFICATE

```
sudo certbot --apache
```

```
ubuntu@ip-172-31-33-59:~$ sudo certbot --apache
Saving debug log to /var/log/letsencrypt/letsencrypt.log
Enter email address (used for urgent renewal and security notices)
 (Enter 'c' to cancel): madhavmaharia@gmail.com

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Please read the Terms of Service at
https://letsencrypt.org/documents/LE-SA-v1.5-February-24-2025.pdf. You must
agree in order to register with the ACME server. Do you agree?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
(Y)es/(N)o: Y

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Would you be willing, once your first certificate is successfully issued, to
share your email address with the Electronic Frontier Foundation, a founding
partner of the Let's Encrypt project and the non-profit organization that
develops Certbot? We'd like to send you email about our work encrypting the web,
EFF news, campaigns, and ways to support digital freedom.
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
(Y)es/(N)o: Y
Account registered.
```

```
(Y)es/(N)o: Y
Account registered.

Which names would you like to activate HTTPS for?
We recommend selecting either all domains, or all domains in a VirtualHost/server block.
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
1: travel-madhav.online
2: www.travel-madhav.online
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Select the appropriate numbers separated by commas and/or spaces, or leave input
blank to select all options shown (Enter 'c' to cancel):
Requesting a certificate for travel-madhav.online and www.travel-madhav.online

Successfully received certificate.
Certificate is saved at: /etc/letsencrypt/live/travel-madhav.online/fullchain.pem
Key is saved at:         /etc/letsencrypt/live/travel-madhav.online/privkey.pem
This certificate expires on 2025-07-07.
These files will be updated when the certificate renews.
Certbot has set up a scheduled task to automatically renew this certificate in the background.

Deploying certificate
Successfully deployed certificate for travel-madhav.online to /etc/apache2/sites-available/000-default-le-ssl.conf
Successfully deployed certificate for www.travel-madhav.online to /etc/apache2/sites-available/000-default-le-ssl.conf
Congratulations! You have successfully enabled HTTPS on https://travel-madhav.online and https://www.travel-madhav.online

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
If you like Certbot, please consider supporting our work by:
 * Donating to ISRG / Let's Encrypt:   https://letsencrypt.org/donate
 * Donating to EFF:                    https://eff.org/donate-le
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
ubuntu@ip-172-31-33-59:~$
```

REFERENCE

The commands and steps used for deploying a WordPress website on an AWS EC2 instance were guided by Swaroop (2022), who provides a comprehensive Gist detailing the necessary configuration and deployment commands.

Swaroop, T. (2022, June 22). *Commands for deploying WordPress website on AWS EC2*. Gist. https://gist.github.com/teja156/8c35a05f43635da4cbd06b47c0d91e93

Video explanation

https://drive.google.com/file/d/1x8Awugs7gpk6PXjozEqtJwhxHEDcPf_9/view?usp=drive_link