

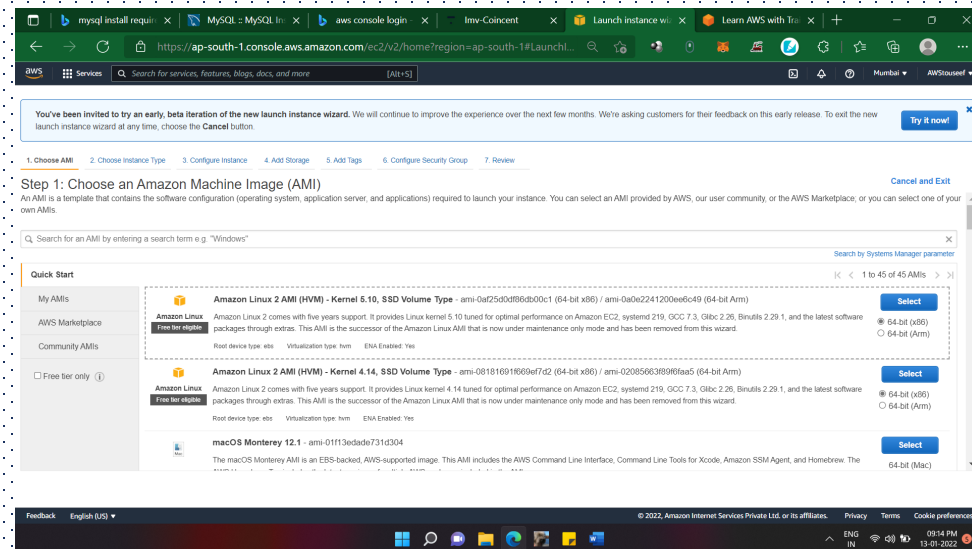


CLOUD COMPUTING PROJECT

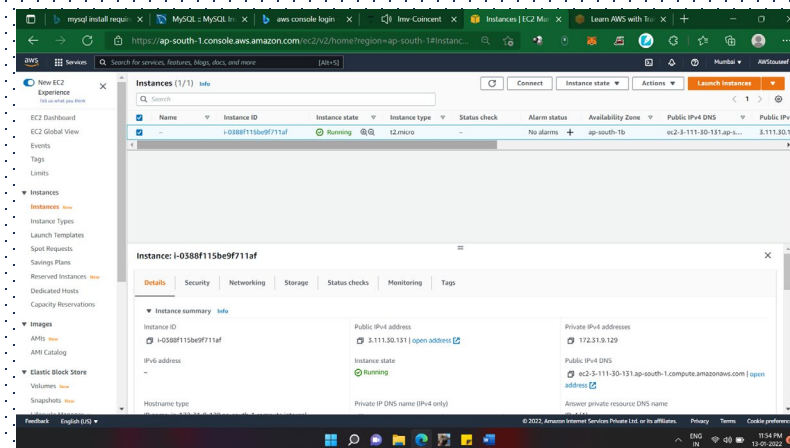
The background is a deep blue gradient. On the left side, there are white, stylized circuit lines and nodes. In the center, there is a faint, dark blue silhouette of a server rack. The text is white and centered within a dark blue rectangular box.

PROJECT- CREATING VIRTUAL PRIVATE SERVER AND HOSTING DYNAMIC WEB APPS ON AWS CLOUD

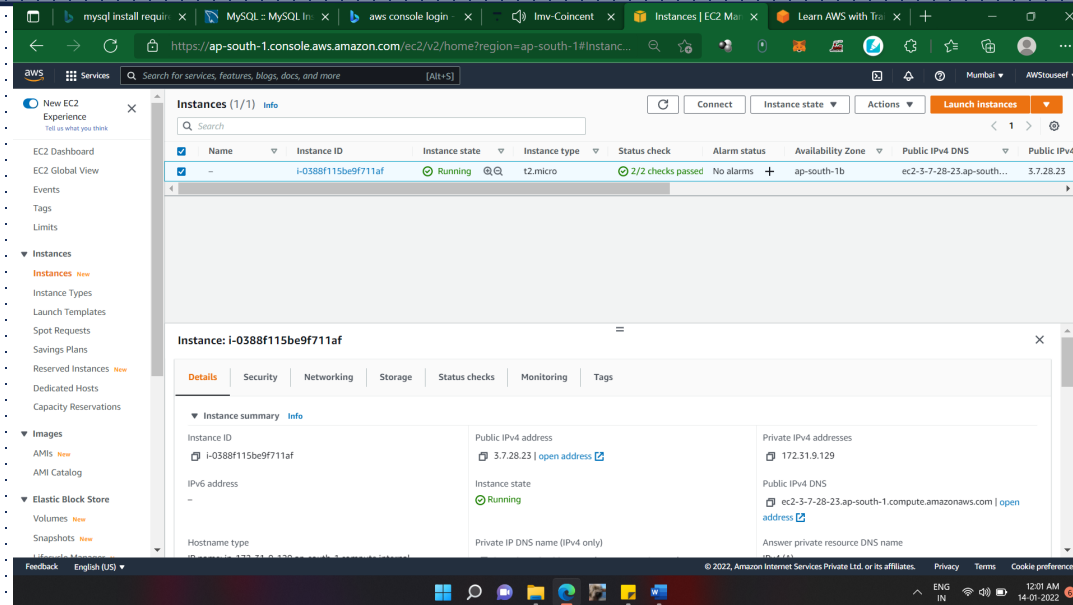
1. Launch the Instance Amazon Linux 2 as shown by clicking on select and after clicking here select t2 instance type (free tier eligible) under choose an instance tab and click review and launch.



After that we choose the instance type, added storage and selected the security group and launched.



Then we allocated the Elastic IP address.



Then we installed the php8.0 and httpd on the EC2 instance.

```
ec2-user@ip-172-31-9-129:~$ sudo yum install httpd
Installing : httpd-filesystem-2.4.51-1.amzn2.noarch 7/9
Installing : mod_http2-1.15.19-1.amzn2.0.1.x86_64 8/9
Installing : httpd-2.4.51-1.amzn2.x86_64 9/9
Verifying : apr-util-1.6.1-5.amzn2.0.2.x86_64 1/9
Verifying : httpd-2.4.51-1.amzn2.x86_64 2/9
Verifying : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 3/9
Verifying : httpd-filesystem-2.4.51-1.amzn2.noarch 4/9
Verifying : apr-1.7.0-9.amzn2.x86_64 5/9
Verifying : mailcap-2.1.41-2.amzn2.noarch 6/9
Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 7/9
Verifying : mod_http2-1.15.19-1.amzn2.0.1.x86_64 8/9
Verifying : httpd-tools-2.4.51-1.amzn2.x86_64 9/9

Installed:
  httpd.x86_64 0:2.4.51-1.amzn2

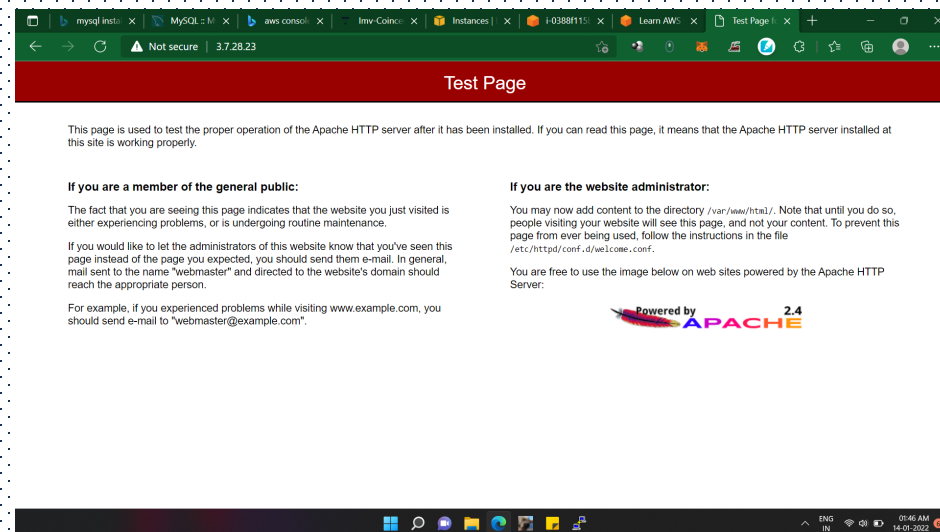
Dependency Installed:
  apr.x86_64 0:1.7.0-9.amzn2
  apr-util.x86_64 0:1.6.1-5.amzn2.0.2
  apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
  generic-logos-httpd.noarch 0:18.0.0-4.amzn2
  httpd-filesystem.noarch 0:2.4.51-1.amzn2
  httpd-tools.x86_64 0:2.4.51-1.amzn2
  mailcap.noarch 0:2.1.41-2.amzn2
  mod_http2.x86_64 0:1.15.19-1.amzn2.0.1

Complete!
ec2-user@ip-172-31-9-129 ~]$
```

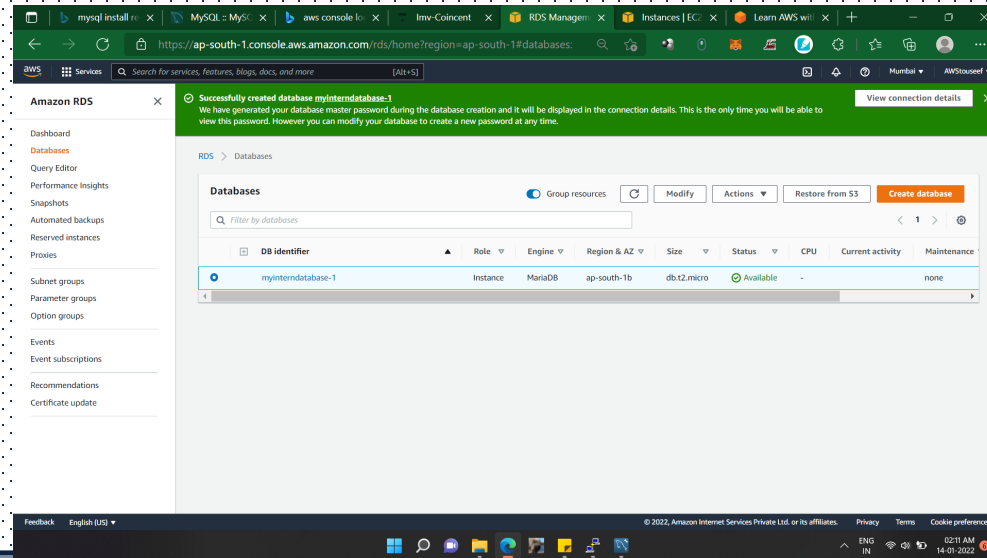
Started the Apache server

```
ec2-user@ip-172-31-9-129:~  
Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)  
Drop-In: /usr/lib/systemd/system/httpd.service.d  
└─php-fpm.conf  
Active: active (running) since Thu 2022-01-13 19:10:22 UTC; 14s ago  
Docs: man:httpd.service(8)  
Main PID: 4281 (httpd)  
Status: "Total requests: 0; Idle/Busy workers 100/0; Requests/sec: 0; Bytes served/sec: 0 B/sec"  
CGroup: /system.slice/httpd.service  
└─4281 /usr/sbin/httpd -DFOREGROUND  
└─4287 /usr/sbin/httpd -DFOREGROUND  
└─4288 /usr/sbin/httpd -DFOREGROUND  
└─4289 /usr/sbin/httpd -DFOREGROUND  
└─4290 /usr/sbin/httpd -DFOREGROUND  
└─4291 /usr/sbin/httpd -DFOREGROUND  
  
Jan 13 19:10:21 ip-172-31-9-129.ap-south-1.compute.internal systemd[1]: Starting The Apache HTTP Server:  
Jan 13 19:10:22 ip-172-31-9-129.ap-south-1.compute.internal systemd[1]: Started The Apache HTTP Server:  
Hint: Some lines were ellipsized, use -l to show in full.  
[ec2-user@ip-172-31-9-129 ~]$ sudo systemctl enable httpd  
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.  
[ec2-user@ip-172-31-9-129 ~]$ sudo systemctl is-enabled httpd  
enabled  
[ec2-user@ip-172-31-9-129 ~]$ echo hello  
hello  
[ec2-user@ip-172-31-9-129 ~]$ sudo usermod -a -G apache ec2-user;
```

After configuring the server, we can see this page.



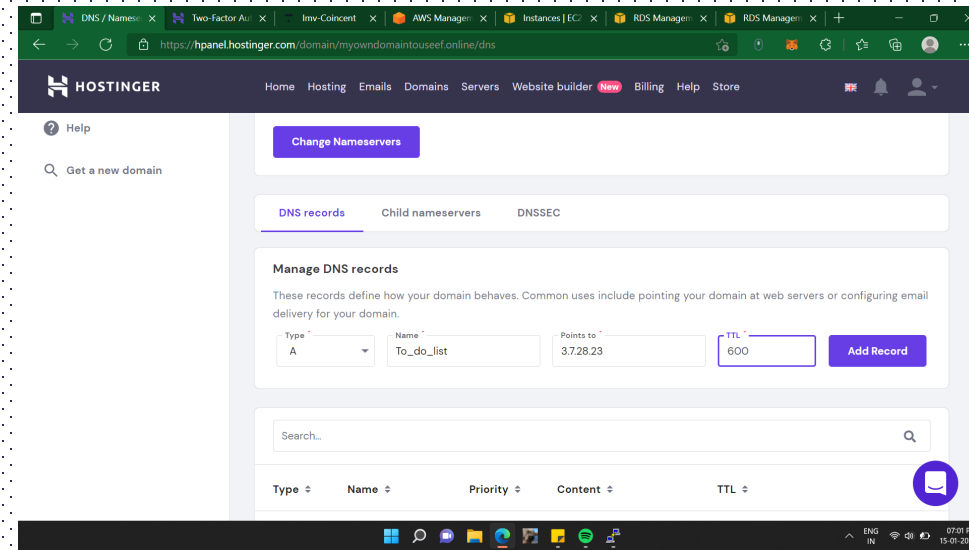
Then we launched the MariaDB instance



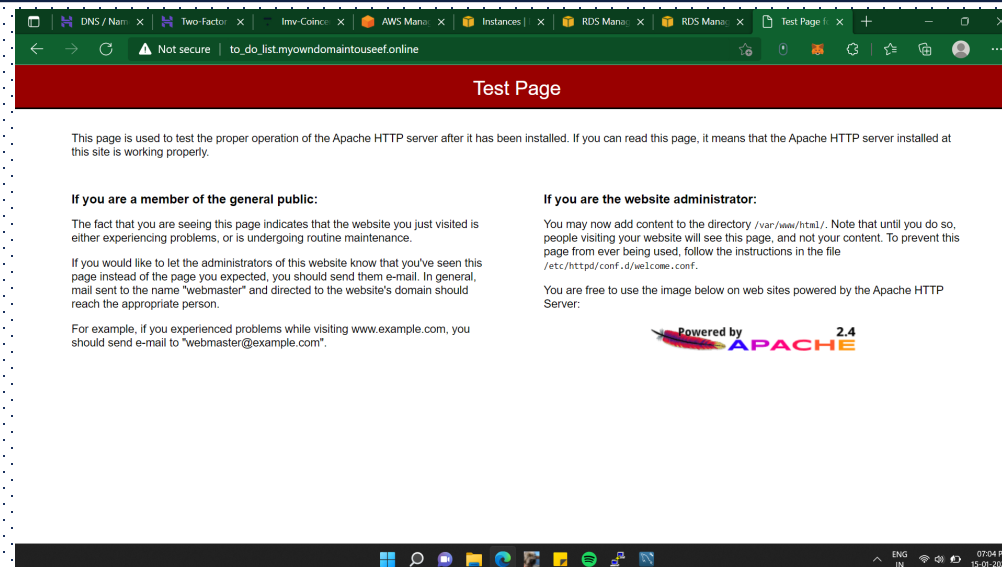
Next, we cloned the git repo inside var/www folder

```
ec2-user@ip-172-31-9-129/var/www
[ec2-user@ip-172-31-9-129 ~]$ cd /var/www
[ec2-user@ip-172-31-9-129 www]$ ls
cgi-bin  html
[ec2-user@ip-172-31-9-129 www]$ git clone https://github.com/Coder-1002/Cloud_internproject_1
```

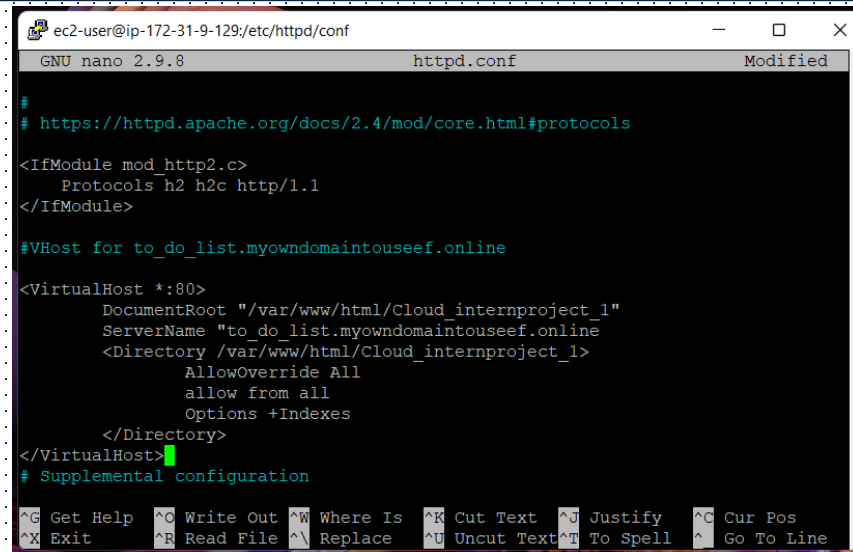
We setup the DNS record of the domain.



After that this webpage is visible on our domain



Then we configured the httpd.conf file after that restarted the httpd service.



```
ec2-user@ip-172-31-9-129/etc/httpd/conf
GNU nano 2.9.8 httpd.conf Modified

#
# https://httpd.apache.org/docs/2.4/mod/core.html#protocols

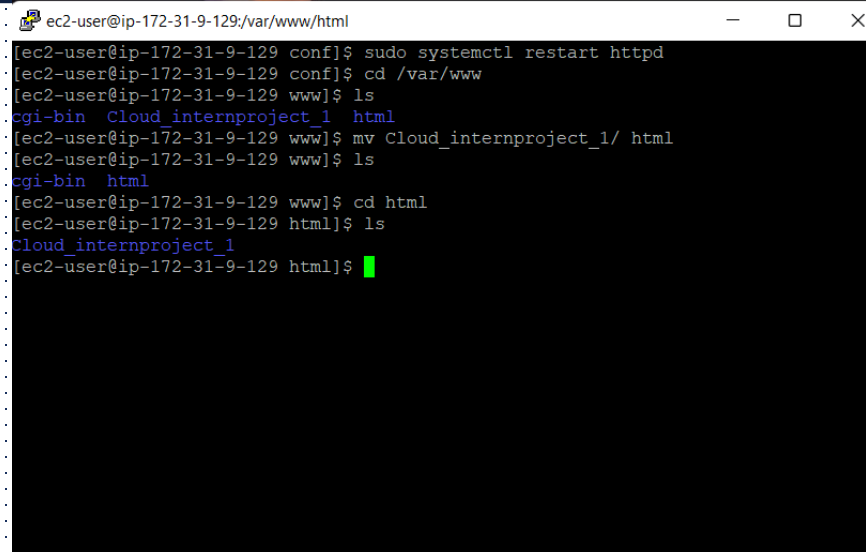
<IfModule mod_http2.c>
    Protocols h2 h2c http/1.1
</IfModule>

#VHost for to_do_list.myowndomainouseef.online

<VirtualHost *:80>
    DocumentRoot "/var/www/html/Cloud_internproject_1"
    ServerName "to_do_list.myowndomainouseef.online"
    <Directory /var/www/html/Cloud_internproject_1>
        AllowOverride All
        allow from all
        Options +Indexes
    </Directory>
</VirtualHost>
# Supplemental configuration

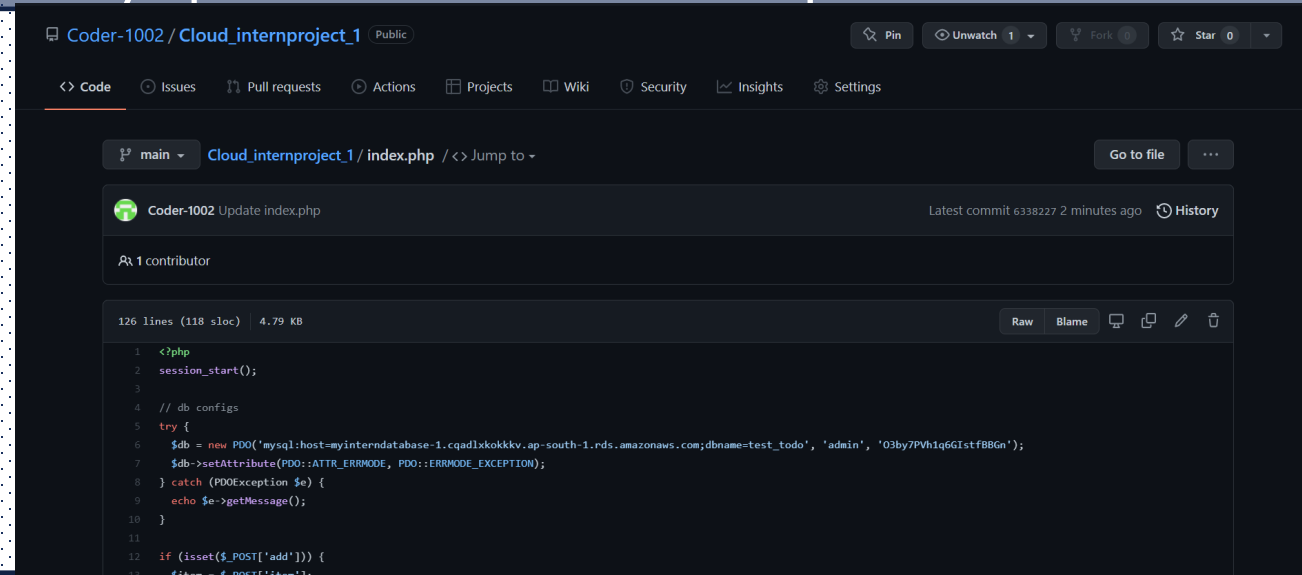
^G Get Help  ^O Write Out ^W Where Is  ^K Cut Text  ^J Justify   ^C Cur Pos
^X Exit      ^R Read File ^_ Replace   ^U Uncut Text ^T To Spell  ^_ Go To Line
```

After that we moved the Cloud_internproject_1 file inside html



```
ec2-user@ip-172-31-9-129/var/www/html
[ec2-user@ip-172-31-9-129 conf]$ sudo systemctl restart httpd
[ec2-user@ip-172-31-9-129 conf]$ cd /var/www
[ec2-user@ip-172-31-9-129 www]$ ls
cgi-bin  Cloud_internproject_1  html
[ec2-user@ip-172-31-9-129 www]$ mv Cloud_internproject_1/ html
[ec2-user@ip-172-31-9-129 www]$ ls
cgi-bin  html
[ec2-user@ip-172-31-9-129 www]$ cd html
[ec2-user@ip-172-31-9-129 html]$ ls
Cloud_internproject_1
[ec2-user@ip-172-31-9-129 html]$
```

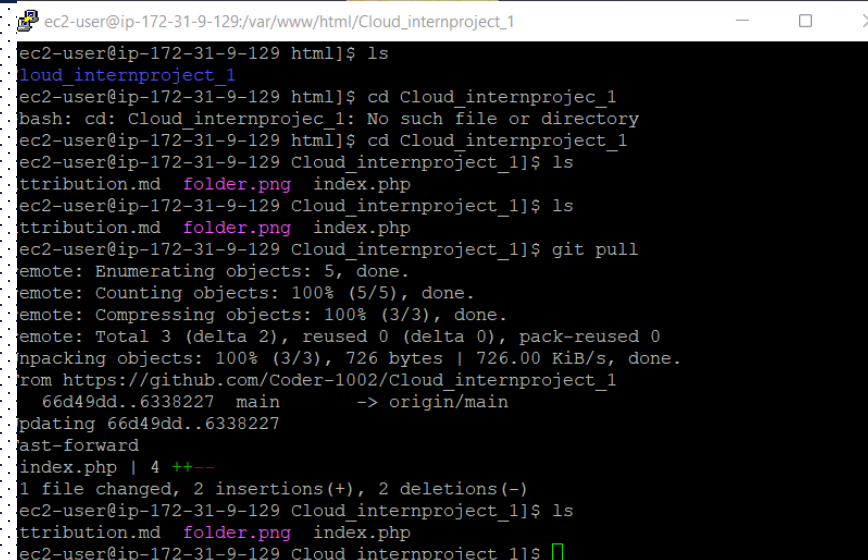

Then we configured the mysql host ,username and the password



The screenshot shows the GitHub interface for the repository 'Coder-1002 / Cloud_internproject_1'. The file 'index.php' is selected, showing its contents. The code is a PHP script that initializes a session and connects to a MySQL database. The database configuration is as follows:

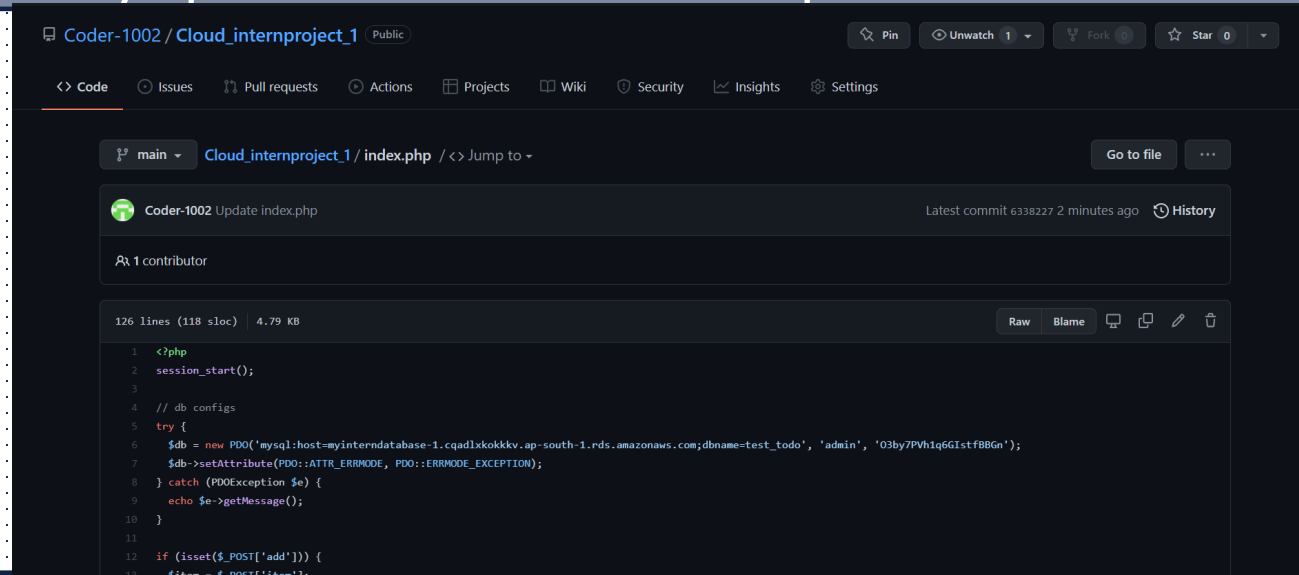
```
1 <?php
2 session_start();
3
4 // db configs
5 try {
6     $db = new PDO('mysql:host=myinterdatabase-1.cqadlxkxkvv.ap-south-1.rds.amazonaws.com;dbname=test_todo', 'admin', '03by7PVh1q6G1stfBBGn');
7     $db->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
8 } catch (PDOException $e) {
9     echo $e->getMessage();
10 }
11
12 if (isset($_POST['add'])) {
13     $item = $_POST['item'];
```

Then we used git pull



```
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
Cloud_internproject_1
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ cd Cloud_internproject_1
bash: cd: Cloud_internproject_1: No such file or directory
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ cd Cloud_internproject_1
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
tribution.md  folder.png  index.php
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
tribution.md  folder.png  index.php
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ git pull
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 726 bytes | 726.00 KiB/s, done.
From https://github.com/Coder-1002/Cloud_internproject_1
   66d49dd..6338227  main    -> origin/main
Updating 66d49dd..6338227
Fast-forward
 index.php | 4 ++--
1 file changed, 2 insertions(+), 2 deletions(-)
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
tribution.md  folder.png  index.php
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$
```

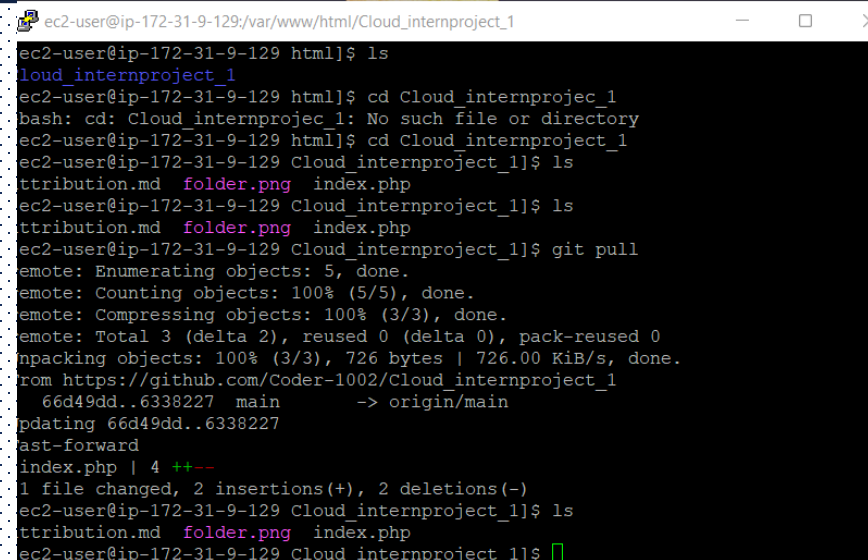
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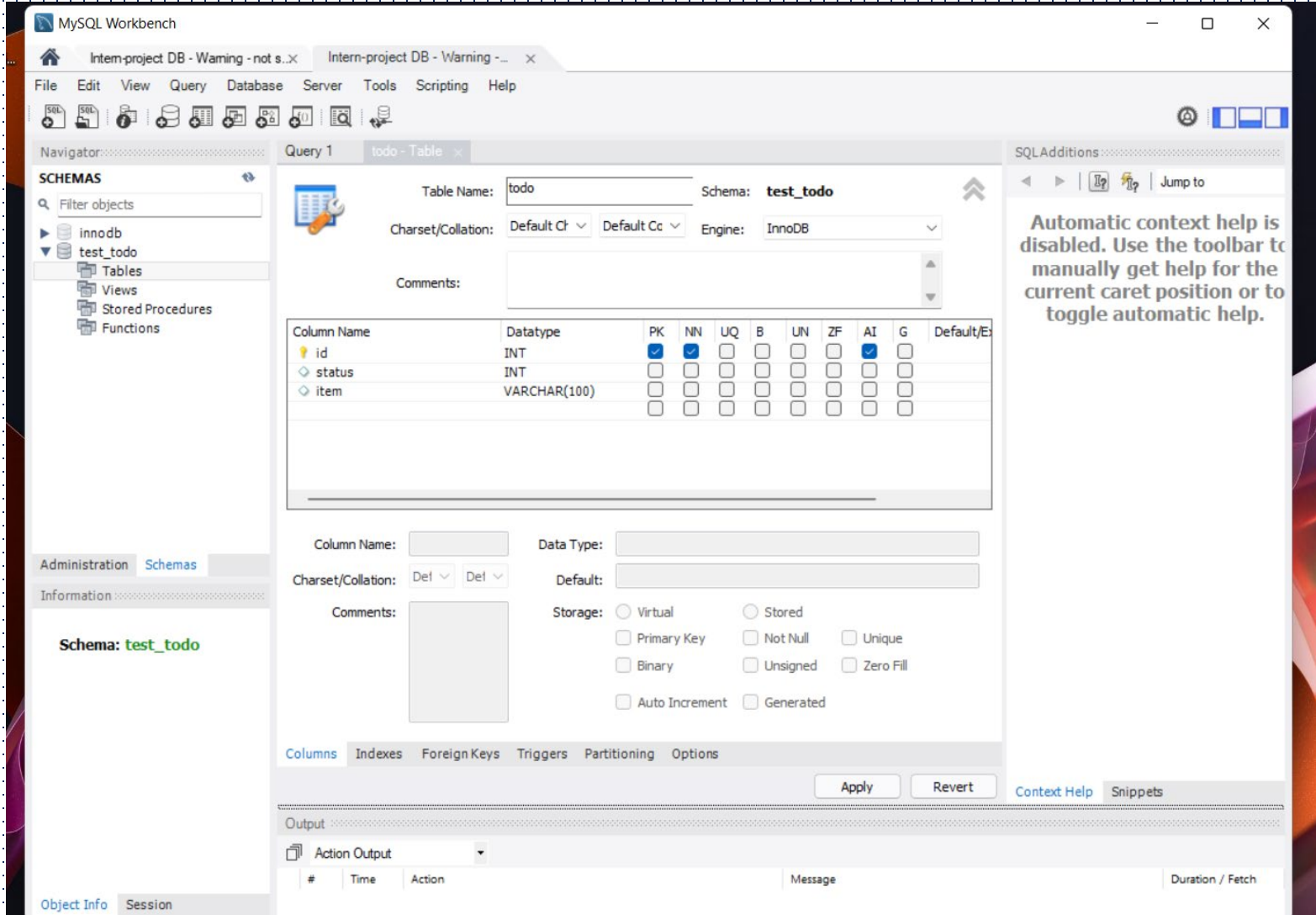
```
1 <?php
2 session_start();
3
4 // db configs
5 try {
6     $db = new PDO('mysql:host=myinterdatabase-1.cqadlxkxkvv.ap-south-1.rds.amazonaws.com;dbname=test_todo', 'admin', '03by7PVh1q6G1stfBBGn');
7     $db->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
8 } catch (PDOException $e) {
9     echo $e->getMessage();
10 }
11
12 if (isset($_POST['add'])) {
13     $item = $_POST['item'];
```

Then we used git pull

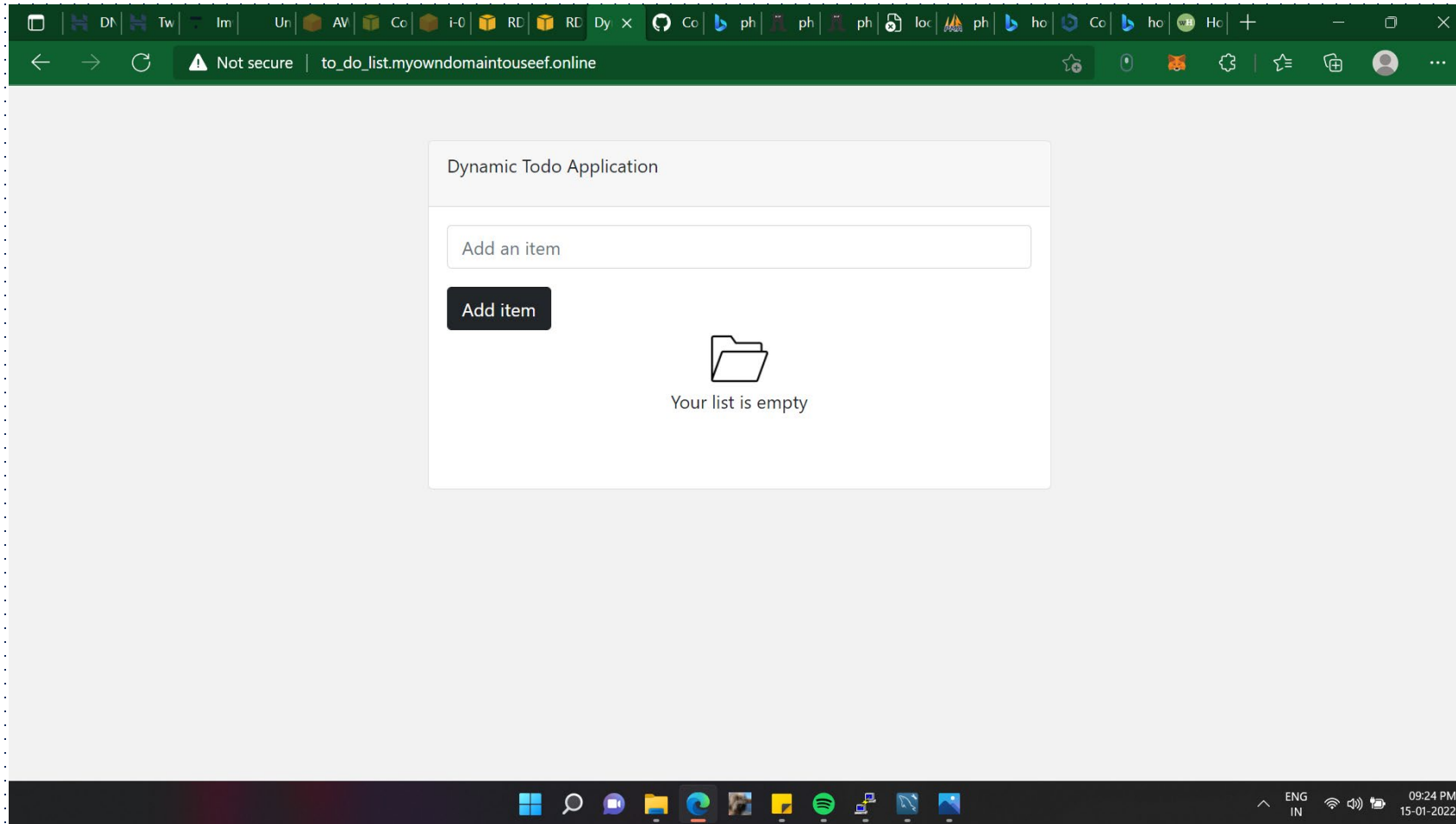


```
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
Cloud_internproject_1
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ cd Cloud_internproject_1
bash: cd: Cloud_internproject_1: No such file or directory
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ cd Cloud_internproject_1
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
tribution.md  folder.png  index.php
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
tribution.md  folder.png  index.php
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ git pull
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 726 bytes | 726.00 KiB/s, done.
From https://github.com/Coder-1002/Cloud_internproject_1
   66d49dd..6338227  main    -> origin/main
Updating 66d49dd..6338227
Fast-forward
 index.php | 4 ++--
1 file changed, 2 insertions(+), 2 deletions(-)
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$ ls
tribution.md  folder.png  index.php
ec2-user@ip-172-31-9-129:/var/www/html/Cloud_internproject_1$
```

Then we added a table to the database



After this our website launched SUCCESSFULLY without any errors.





THANK YOU

-Mohammad Touseef