

PoC for XAMPP root account password process:

1. First install xampp any version
2. Then start apache & mysql services through xampp control panel
3. Once localhost phpmyadmin is accessed, goto phpmyadmin dashboard
4. Then goto users section
5. Delete **(any)** named users from users table
6. Create a new demo users with **NO** privileges
7. Change the root passwords as well
8. Logout and verify the credentials of root & users that we made before & check the privileges by making a database

PoC for multisite wordpress configuration with specific ports on XAMPP (Apache):

1. Download wordpress & Xampp
2. Once done downloading xampp, install xampp & make two different folders with different names, along with the databases in phpmyadmin
3. Extract wordpress files & rename both folders
4. Install wordpress through web browser by giving the same name as given before in phpmyadmin database
5. Once wordpress is installed, Open the dashboard add download some favorite themes from appearance section then activate the downloaded theme in order to view it on a new tab
6. Repeat the same process for 2nd static wordpress site
7. Once done performing the 2 or more static website tasks, goto the Xampp folder
8. Then goto this path "**C:\xampp\apache\conf\extra**"
9. We have to make changes in two files
 - a. One file is named as **httpd-vhosts**
 - b. Another file named as **httpd-conf** located in **C:\xampp\apache\conf**.
10. In **httpd-vhosts** file, we have to add this command at the end:

a. **<VirtualHost *:8081>**

b. **ServerAdmin webmaster@dummy-host2.example.com**

```

c. DocumentRoot "C:/xampp/htdocs/static-web-02"
d. ServerName staticv1.localhost
e. </VirtualHost>
f.
g. <VirtualHost *:8082>
h. ServerAdmin webmaster@dummy-host.example.com
i. DocumentRoot "C:/xampp/htdocs/static-web-03"
j. ServerName static2.localhost
k. </VirtualHost>

```

11. In **httpd-conf file**, we have to add these line

```

a. Listen 8081
b. Listen 8082
c. Or any ports you want to specify, according to your
   requirements.

```

12. Once done configuring all the changes, restart the apache from xampp server.

13. Check the localhost URL by adding specific ports.

PoC for deploying multi site application with specific ports using Nginx:

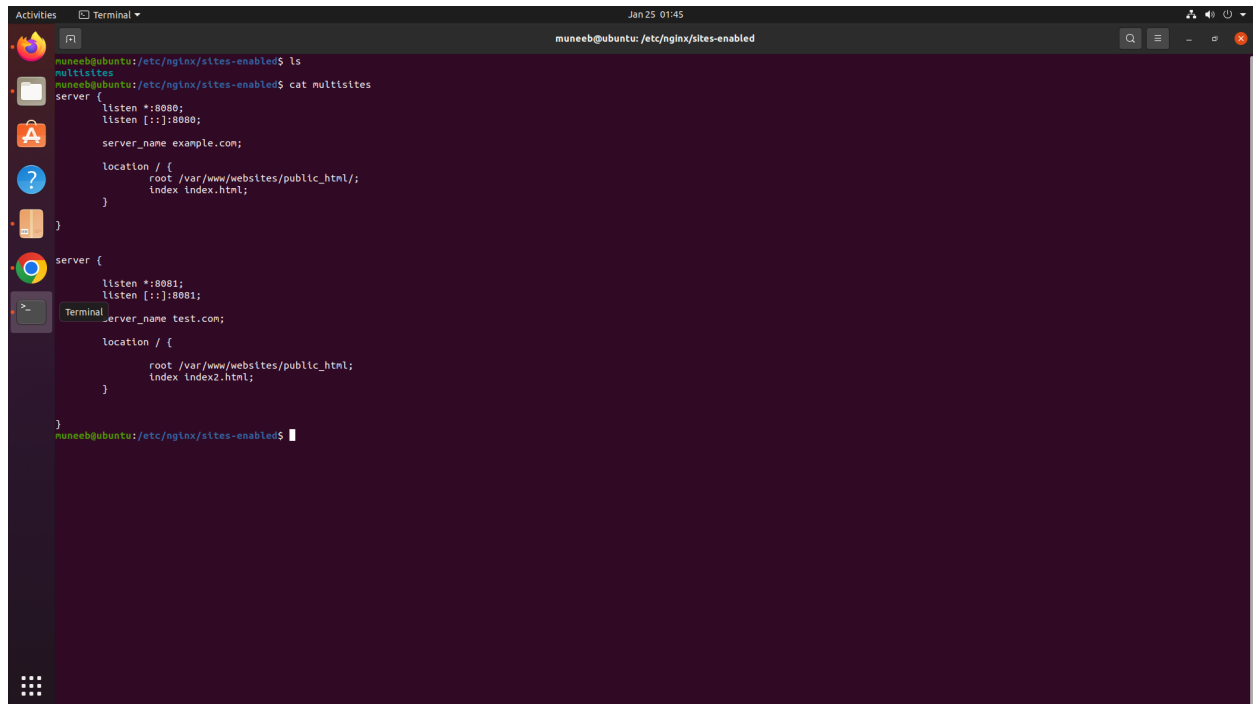
- Install nginx by the command,
 - **Apt-get install nginx -y**
- Check your nginx web server whether it is running or not. If not then, enable them first & then start services. Steps to check:
 - **Sudo systemctl enable nginx.service**
 - **Sudo service nginx start**
 - **Sudo service nginx status**
- Make a directory & add two html files for static websites.
- After making html files, run these commands :
 - **sudo mkdir -p /var/www/websites2/public_html**
 - **sudo chown -R muneeb:muneeb /var/www/websites/public_html/**
 - **sudo chmod 775 /var/www/websites/public_html/**
- Add those html files in the above directory.

- **cp example.html /var/www/websites/public_html/index.html**
 - **cp test.html /var/www/websites/public_html/index2.html**
- Goto this directory
 - **cd /etc/nginx/sites-available/**
- Make a new file with a custom name through nano/vim editor & add these server blocks, but remember the path where you have copied your static website files.

Server Block Code:

```
server {  
    listen *:8080;  
    listen [::]:8080;  
    server_name example.com;  
    location / {  
        root /var/www/websites/public_html/;  
        index index.html;  
    }  
}
```

```
server {  
    listen *:8081;  
    listen [::]:8081;  
    server_name test.com;  
    location / {  
        root /var/www/websites/public_html/;  
        index index2.html;  
    }  
}
```

A terminal window on Ubuntu showing the configuration of nginx sites-enabled. The user runs 'ls' and 'cat multisites' to view the contents of the multisites file. The output shows two server blocks: one for 'example.com' listening on *:8080 and another for 'test.com' listening on *:8081. Both are configured to serve files from /var/www/websites/public_html/.

```
muneeb@ubuntu:/etc/nginx/sites-enabled$ ls
multisites
muneeb@ubuntu:/etc/nginx/sites-enabled$ cat multisites
server {
    listen *:8080;
    listen [::]:8080;

    server_name example.com;

    location / {
        root /var/www/websites/public_html;
        index index.html;
    }
}

server {
    listen *:8081;
    listen [::]:8081;

    server_name test.com;

    location / {
        root /var/www/websites/public_html;
        index index2.html;
    }
}
muneeb@ubuntu:/etc/nginx/sites-enabled$
```

- Once done making a file, copy this file in a new directory **/etc/nginx/sites-enabled/**
- Run this command:
 - **sudo ln -s /etc/nginx/sites-available/customwebsites ../sites-enabled/multisites**
- Delete the default file that will exist in both sites-enabled & sites-directory
- Run this command: **nginx -t** to verify the syntax of files we made earlier.
- Restart the nginx service:
 - **Sudo systemctl restart nginx.service**
- Check & verify the static website with custom ports on your browser.

Activities Google Chrome Jan 25 01:52

Invoice

Jonathan Neal
101 E. Chapman Ave
Orange, CA 92666
(800) 555-1234

Choose File | No file chosen

Recipient

Some Company
c/o Some Guy

Invoice # 101138
Date January 1, 2012
Amount Due \$600.00

Item	Description	Rate	Quantity	Price
-	Front End Consultation	Experience Review	\$150.00	4
				\$600.00
+				
Total				\$600.00
Amount Paid				\$0.00
Balance Due				\$600.00

Additional Notes

A finance charge of 1.5% will be made on unpaid balances after 30 days.

Activities Google Chrome Jan 25 01:52

Invoice

name password email address create

Already registered? [Sign in](#)

username password login

Not registered? [Create an account](#)

PoC for deploying multi site application with specific ports using NGINX REVERSE PROXY:

In this scenario, the process of reverse proxy will be the same as the previous one, i.e, PoC for deploying multi-site applications with specific ports. But we have to make some changes in the file which will be made later on.

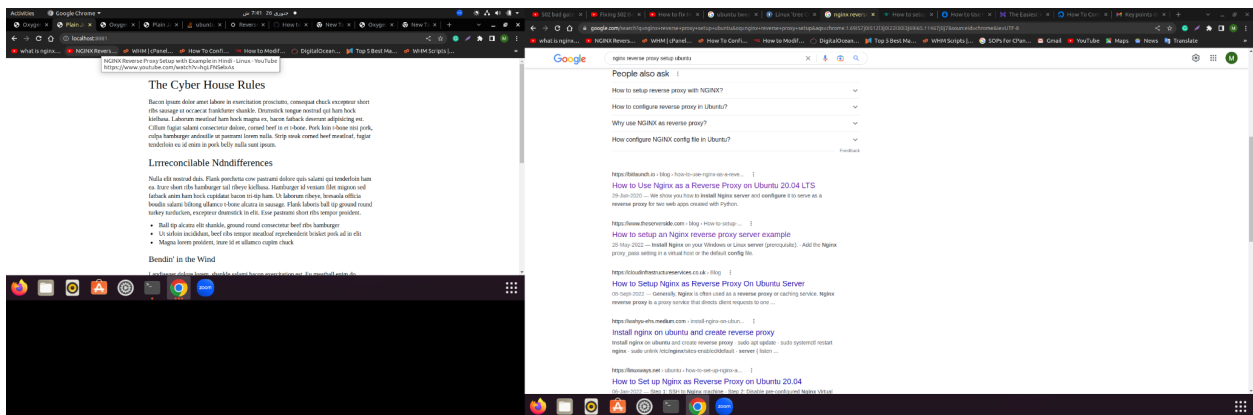
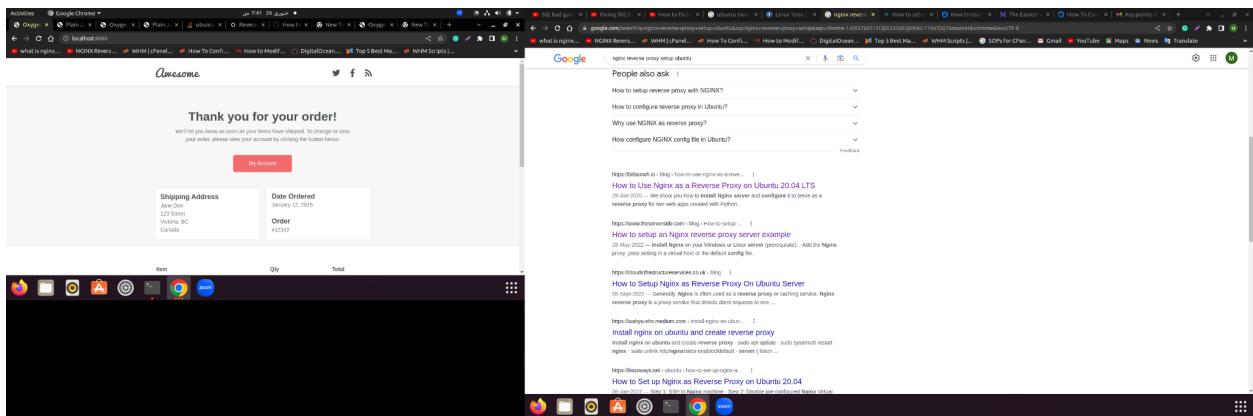
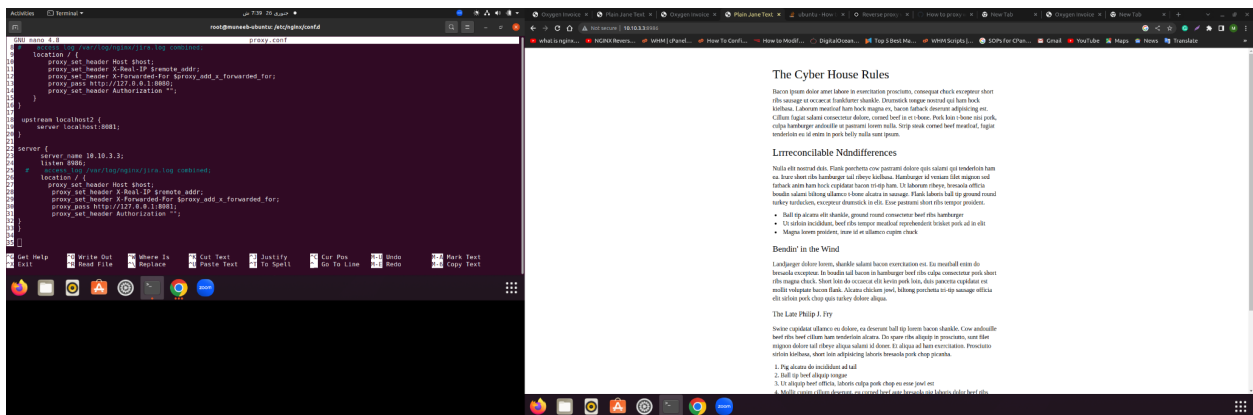
Path directory to make changes in file: /etc/nginx/conf.d/

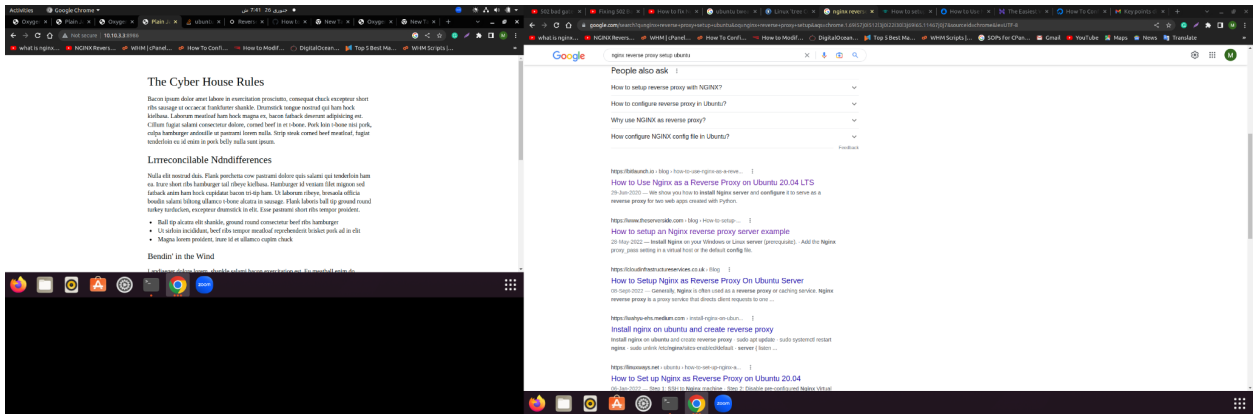
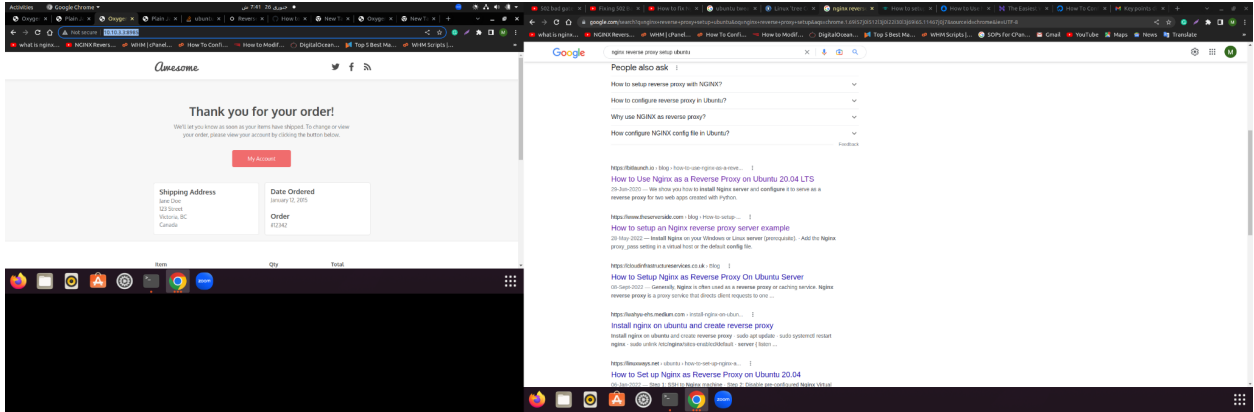
New file: proxy.conf

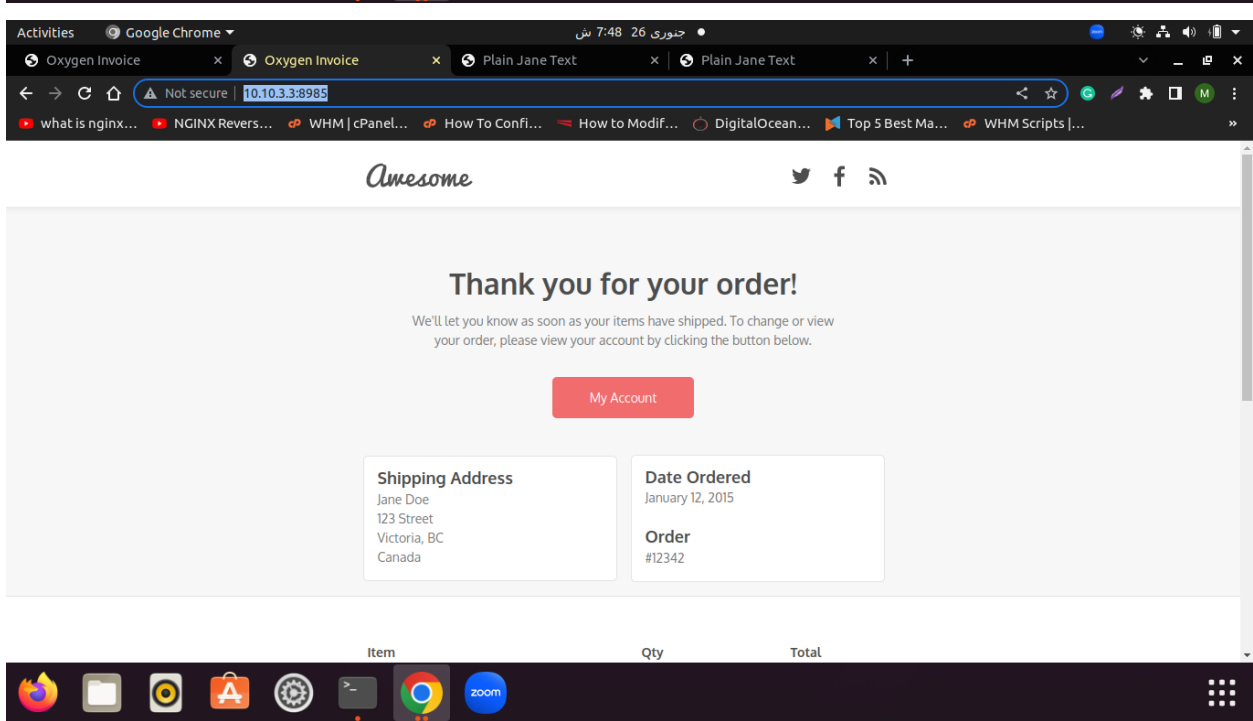
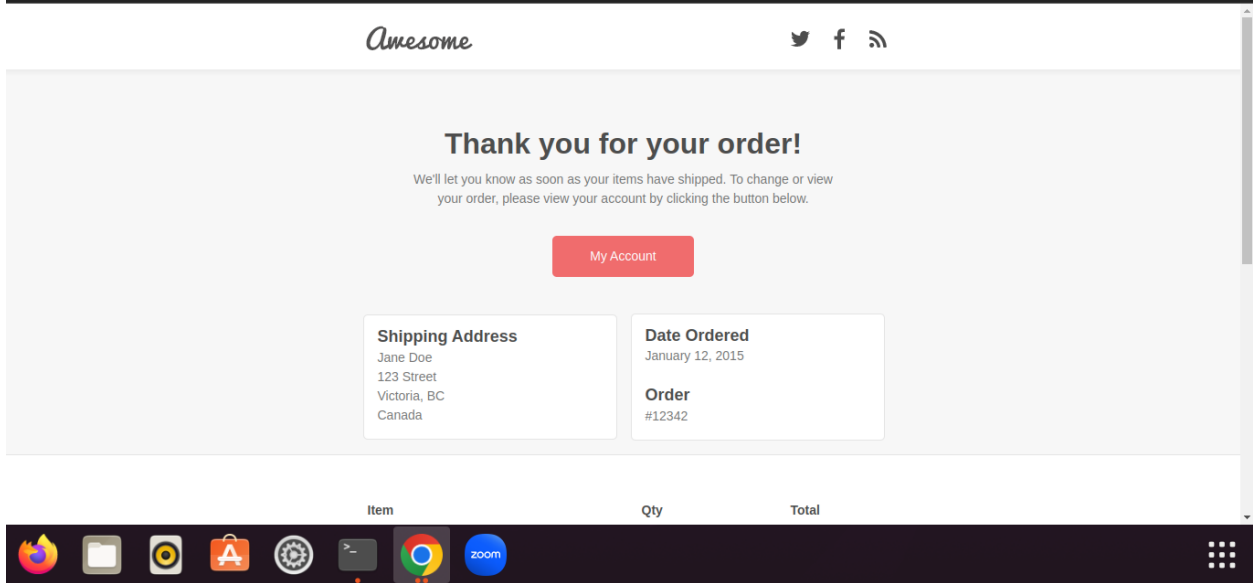
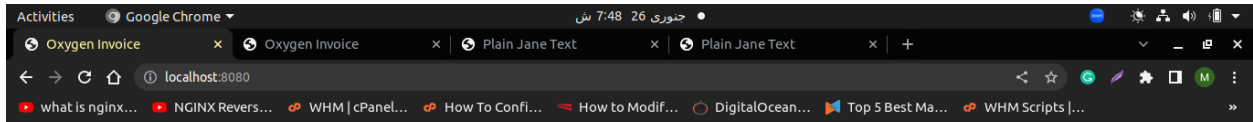
Add these statements in the above file that is made in the above directory.

```
upstream localhost {
    server localhost:8985;
}
server {
    server_name 192.168.17.130;
    listen 8985;
    location / {
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_pass http://127.0.0.1:8080;
        proxy_set_header Authorization "";
    }
}
upstream localhost2 {
    server localhost:8986;
}
server {
    server_name 192.168.17.130;
    listen 8986;
    location / {
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_pass http://127.0.0.1:8081;
        proxy_set_header Authorization "";
    }
}
```

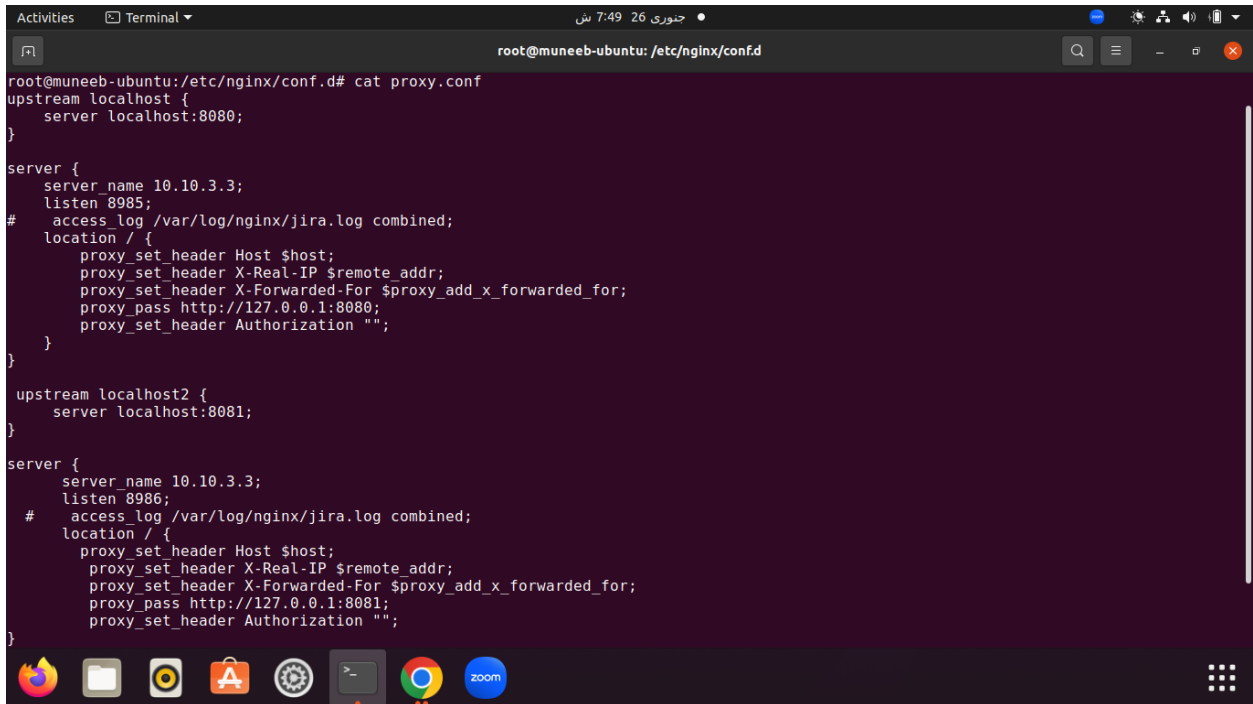
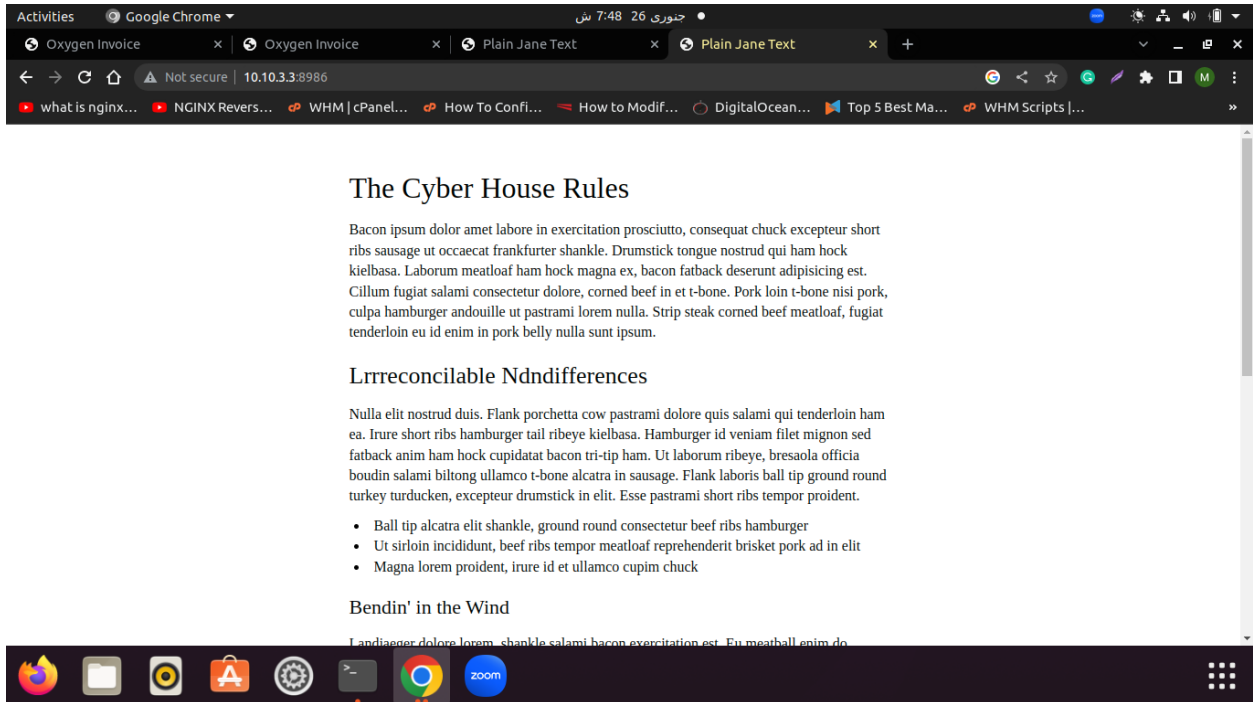
- Once done making the file, refresh the nginx service & debug the syntax with the following commands:
 - **Sudo nginx -t** (for syntax verification)
 - **Sudo service nginx force-reload**
 - **Sudo service nginx restart**
- Then check the multisite on the browser with the port.





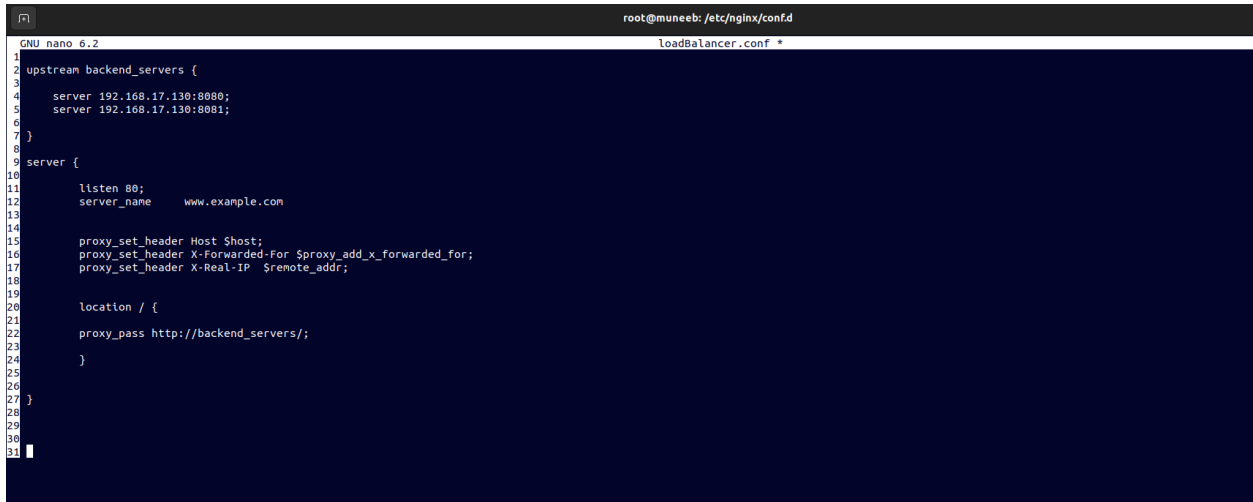






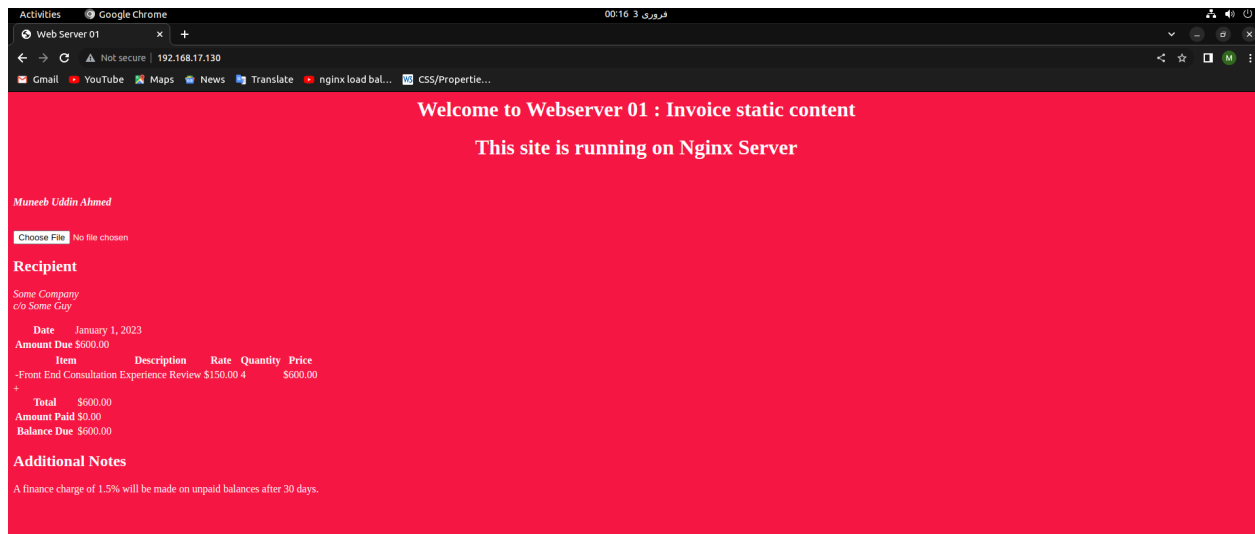
PoC for deploying multi site application with specific ports using NGINX REVERSE PROXY ALONG WITH LOAD BALANCING

- Repeat the same process of Nginx reverse proxy tasks. Details already mentioned above.
- We have to make a new configuration file for **Load balancing** in a given directory:
 - **/etc/nginx/conf.d**
- In the load balancing config file, add these statements, the only thing which is going to change is the path where you have stored the static content & IP Address of a server (with custom ports). Pic attached below.



```
GNU nano 6.2 root@muneeb: /etc/nginx/conf.d
loadBalancer.conf *
1 upstream backend_servers {
2
3
4     server 192.168.17.130:8080;
5     server 192.168.17.130:8081;
6 }
7
8
9 server {
10
11     listen 80;
12     server_name www.example.com
13
14
15     proxy_set_header Host $host;
16     proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
17     proxy_set_header X-Real-IP $remote_addr;
18
19
20     location / {
21         proxy_pass http://backend_servers/;
22     }
23
24
25
26 }
27
28
29
30
31
```

- Once adding above statements for nginx load balancer. Restart the nginx service by using any of these commands:
 - Sudo service nginx restart / force-reload
 - Sudo nginx -s reload
 - Systemctl restart nginx
- Goto the browser & check if the load balancing is working properly or not by adding your server IP address then refresh it repeatedly.



PoC for NGINX CACHING TASK along with Reverse Proxy:

- Repeat the same procedure of reverse proxy (for only 1 website) for this task.
- Goto this directory: `/etc/nginx/conf.d`
- Goto that file where you have passed the function & command of **proxy_pass** for reverse proxy configuration.
- Add the first line:
 - **“proxy_cache_path /var/cache/nginx levels=1:2 keys_zone={cache_name that you specify}:10m inactive=60m;”**
- After adding the above statement, add these lines after the `proxy_pass` statement.

- **proxy_cache** custom_cache;
- **proxy_cache_valid** any 10m;
- **add_header** X-Proxy-Cache \$upstream_cache_status;
- After adding the above statement, save this file & restart the nginx service.
- Goto your browser, refresh the page & check the results of cache through **Inspect (Ctrl+Shift+I)**.
- Goto **network** section in inspect, select your **localhost IP**.
- In **Response Header**, you will find the result of Nginx cache which shows **X-Proxy-Cache: HIT**. meaning that your caching tasks for nginx has been successfully done.
- Reference link: <https://tonyteaches.tech/nginx-server-cache/>

