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Lab 2

1. Configure apache to use Worker MPM

```
seif@alienware-17-r5:~$ apachectl -V | grep MPM
Server MPM:      event
seif@alienware-17-r5:~$ sudo a2dismod mpm_event
Module mpm_event disabled.
To activate the new configuration, you need to run:
    systemctl restart apache2
seif@alienware-17-r5:~$ sudo a2enmod mpm_worker
Considering conflict mpm_event for mpm_worker:
Considering conflict mpm_prefork for mpm_worker:
Enabling module mpm_worker.
To activate the new configuration, you need to run:
    systemctl restart apache2
seif@alienware-17-r5:~$ sudo systemctl restart apache2
seif@alienware-17-r5:~$ apachectl -V | grep MPM
Server MPM:      worker
seif@alienware-17-r5:~$
```

2. Check the status of rewrite_mod and enable it if it is enabled.

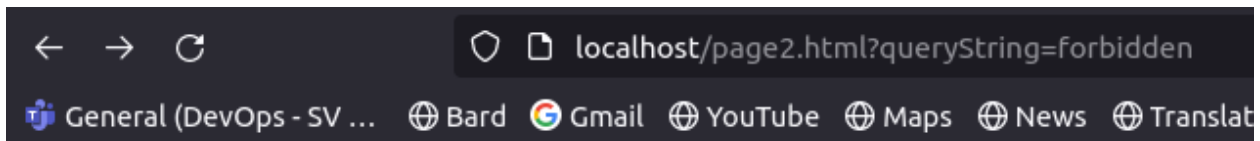
```
seif@alienware-17-r5:~$ apachectl -M | grep rewrite
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 192.16
8.1.11. Set the 'ServerName' directive globally to suppress this message
seif@alienware-17-r5:~$ sudo a2enmod rewrite
Enabling module rewrite.
To activate the new configuration, you need to run:
    systemctl restart apache2
seif@alienware-17-r5:~$ sudo systemctl restart apache2
seif@alienware-17-r5:~$ apachectl -M | grep rewrite
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 192.16
8.1.11. Set the 'ServerName' directive globally to suppress this message
    rewrite_module (shared)
seif@alienware-17-r5:~$
```

3. Write RewriteCond and RewriteRules for:

a. Deny access to `http://localhost/page?queryString` if queryString contains the string forbidden.

```
GNU nano 6.2
#Redirect 301 /page1.html /page2.html

RewriteEngine On
RewriteCond %{QUERY_STRING} forbidden [NC]
RewriteRule "." "-" [F]
```

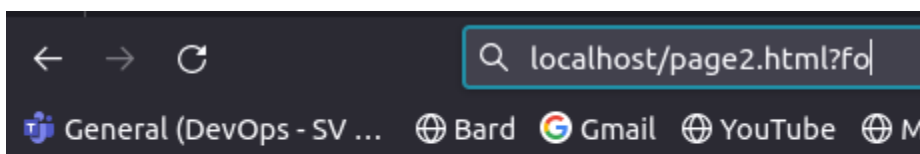


You don't have permission to access this resource.

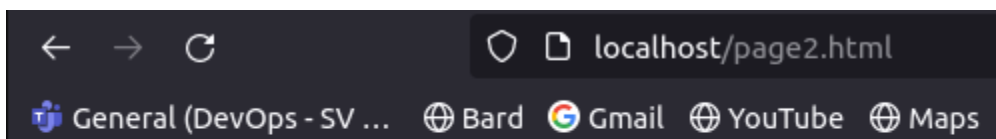
Apache/2.4.52 (Ubuntu) Server at localhost Port 80

b. Remove the Query String

```
RewriteEngine On
RewriteCond %{QUERY_STRING} .
RewriteRule (.*) $1? [QSD]
```



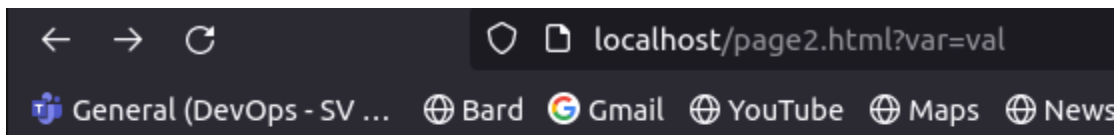
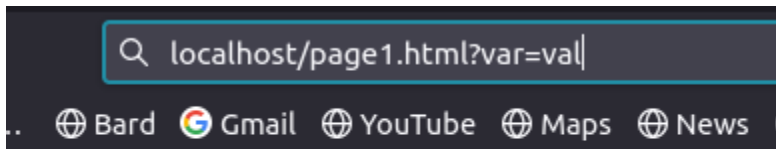
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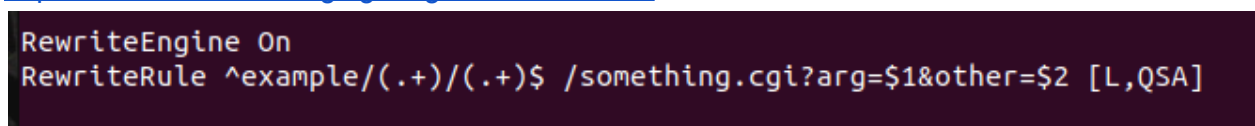
c. Rewrite URLs like `http://localhost/page1?var=val` to `http://localhost/page2?var=val` but do not rewrite if `val` isn't present.
301 status code (permanent redirect)

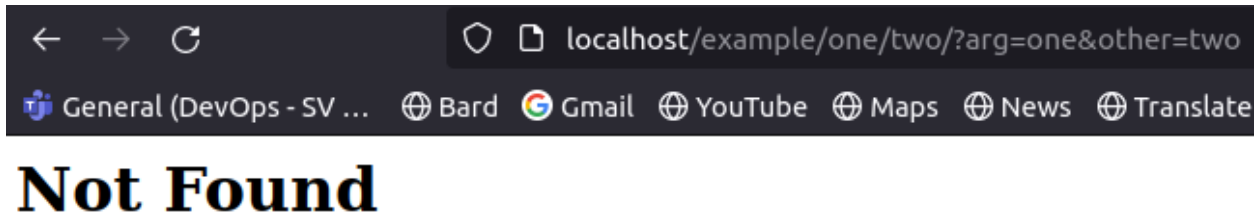
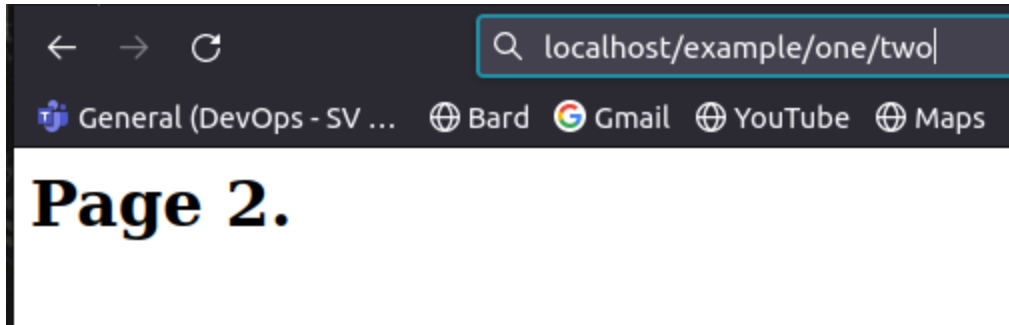
```
RewriteEngine On
RewriteCond %{QUERY_STRING} "(.+)=(.+)"
RewriteRule ^page1.html$ /page2.html [R=301]
```



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```
RewriteEngine On
RewriteCond %{QUERY_STRING} ^var=(.*)&val=(.*)&$
RewriteRule ^path$ /path/%1/%2? [R=301,L]
```





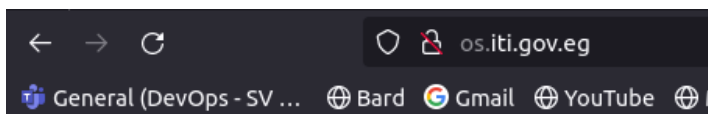
4. Create a virtual host for os.iti.gov.eg to redirect to a local directory in your server

```
seif@alienware-17-r5:/var/www/html$ sudo mkdir os.iti.gov.eg
seif@alienware-17-r5:/var/www/html$ cd os.iti.gov.eg/
seif@alienware-17-r5:/var/www/html/os.iti.gov.eg$ sudo nano index.html
seif@alienware-17-r5:/var/www/html/os.iti.gov.eg$ sudo nano /etc/apache2/sites-available/os.iti.gov.eg.conf
seif@alienware-17-r5:/var/www/html/os.iti.gov.eg$ sudo a2ensite os.iti.gov.eg.conf
Enabling site os.iti.gov.eg.
To activate the new configuration, you need to run:
systemctl reload apache2
seif@alienware-17-r5:/var/www/html/os.iti.gov.eg$ sudo systemctl reload apache2
seif@alienware-17-r5:/var/www/html/os.iti.gov.eg$ sudo systemctl restart apache2
seif@alienware-17-r5:/var/www/html/os.iti.gov.eg$ sudo nano /etc/hosts
```

```
GNU nano 6.2 /etc
127.0.0.1 localhost
127.0.1.1 seif-Alienware-17-R5
127.0.0.1 os.iti.gov.eg

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

```
GNU nano 6.2
<h1>
os.iti.gov.eg
Index
</h1>
```



os.iti.gov.eg Index