

## INSTALLATION AND PREPARATION

**1. Install XAMPP in your device:**

<https://www.apachefriends.org/download.html>

**2. Locate the htdocs folder:**

C:\xampp\htdocs

**3. Put the following folders inside htdocs:**

- Admin Online Computer Store
- Online Computer Store
- Image

**4. Set up database:**

- Start XAMPP Apache and MySQL module
- Enter phpMyAdmin by clicking MySQL's Admin button
- Create a new database named computer\_store
- Inside the database, click import
- Import computer\_store.sql

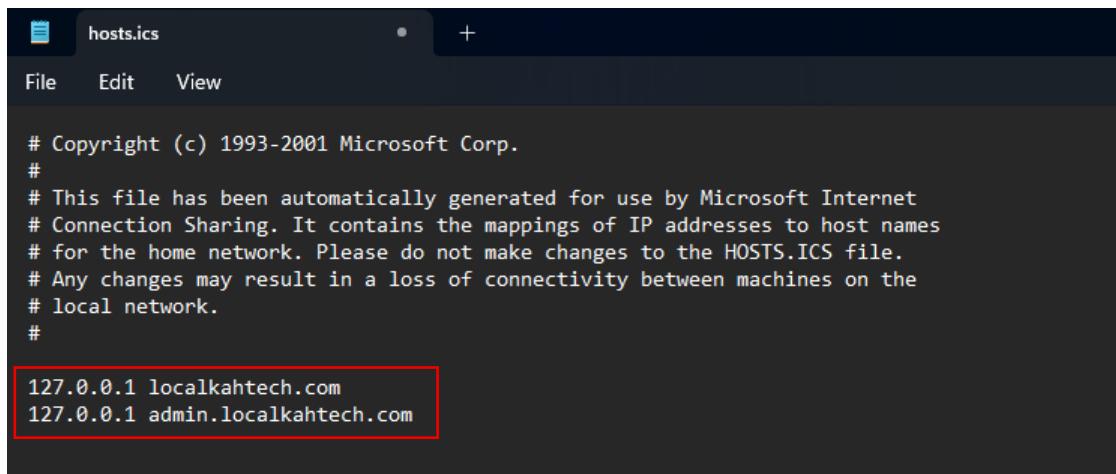
## SELF-SIGNED DIGITAL CERTIFICATE

1. Open this file (need a notepad with administrator's permission):

C:\Windows\System32\drivers\etc\hosts.ics

2. Add this code into the file:

```
127.0.0.1 localkahtech.com  
127.0.0.1 admin.localkahtech.com
```



```
# Copyright (c) 1993-2001 Microsoft Corp.  
#  
# This file has been automatically generated for use by Microsoft Internet  
# Connection Sharing. It contains the mappings of IP addresses to host names  
# for the home network. Please do not make changes to the HOSTS.ICS file.  
# Any changes may result in a loss of connectivity between machines on the  
# local network.  
  
127.0.0.1 localkahtech.com  
127.0.0.1 admin.localkahtech.com
```

**3. Open this file (open with a notepad / code editor):**

C:\xampp\apache\makecert.bat

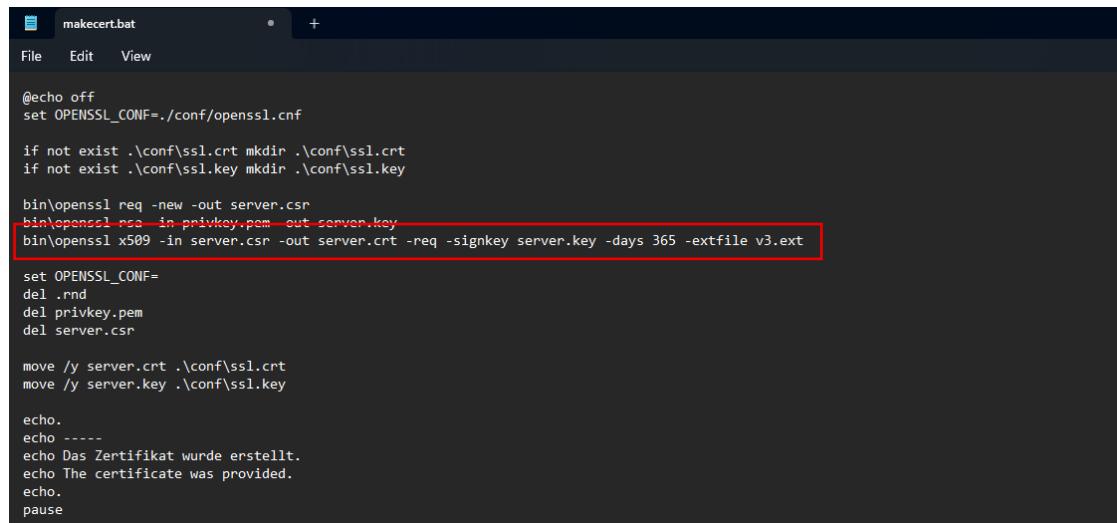
**4. Modify this code in the file:**

Change:

```
bin\openssl x509 -in server.csr -out server.crt -req -  
signkey server.key -days 365
```

To:

```
bin\openssl x509 -in server.csr -out server.crt -req -  
signkey server.key -days 365 -extfile v3.ext
```



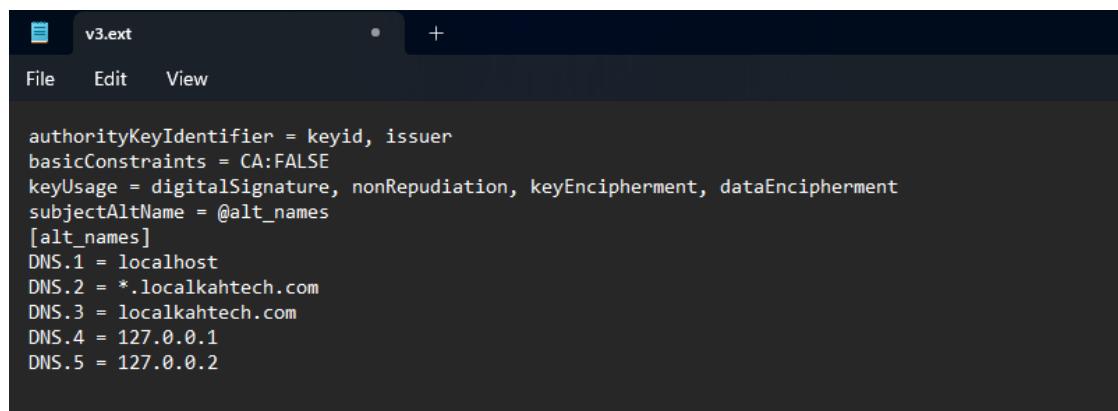
```
@echo off  
set OPENSSL_CONF=.\conf\openssl.cnf  
  
if not exist .\conf\ssl.crt mkdir .\conf\ssl.crt  
if not exist .\conf\ssl.key mkdir .\conf\ssl.key  
  
bin\openssl req -new -out server.csr  
bin\openssl rsa -in privkey.pem -out server.key  
bin\openssl x509 -in server.csr -out server.crt -req -signkey server.key -days 365 -extfile v3.ext  
  
set OPENSSL_CONF=  
del .rnd  
del privkey.pem  
del server.csr  
  
move /y server.crt .\conf\ssl.crt  
move /y server.key .\conf\ssl.key  
  
echo.  
echo -----  
echo Das Zertifikat wurde erstellt.  
echo The certificate was provided.  
echo.  
pause
```

**5. Create a new *v3.ext* file (same folder with *makecert.bat*):**

C:\xampp\apache\v3.ext

**6. Add this code into the file:**

```
authorityKeyIdentifier = keyid, issuer
basicConstraints = CA:FALSE
keyUsage = digitalSignature, nonRepudiation,
keyEncipherment, dataEncipherment
subjectAltName = @alt_names
[alt_names]
DNS.1 = localhost
DNS.2 = *.localkahtech.com
DNS.3 = localkahtech.com
DNS.4 = 127.0.0.1
DNS.5 = 127.0.0.2
```



A screenshot of a dark-themed text editor window titled "v3.ext". The window shows the configuration file content from the previous code block. The menu bar includes "File", "Edit", and "View". The code is displayed in a monospaced font.

```
authorityKeyIdentifier = keyid, issuer
basicConstraints = CA:FALSE
keyUsage = digitalSignature, nonRepudiation, keyEncipherment, dataEncipherment
subjectAltName = @alt_names
[alt_names]
DNS.1 = localhost
DNS.2 = *.localkahtech.com
DNS.3 = localkahtech.com
DNS.4 = 127.0.0.1
DNS.5 = 127.0.0.2
```

## 7. Run this file (double click to run):

C:\xampp\apache\makecert.bat

## 8. Fill in details:

```
+.....+.....+.....+...+.....+.....+++++
Enter PEM pass phrase:
Verifying - Enter PEM pass phrase:
```

- PEM pass phrase: kahtech
  - Verifying PEM pass phrase: kahtech
- \*\* Take note: it is normal that the input is hidden**

```
-----
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:
State or Province Name (full name) [Some-State]:
Locality Name (eg, city) []:
Organization Name (eg, company) [Internet Widgits Pty Ltd]:
Organizational Unit Name (eg, section) []:
Common Name (e.g. server FQDN or YOUR name) []:localkahtech.com
Email Address []:kahtechpng@gmail.com
```

- First 5 rows leave empty to use the default value
- Common name: localkahtech.com
- Email address: kahtechpng@gmail.com

**\*\* Take note: the email address is just an example, it can  
be changed to any valid email address**

```
Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:kahtech
An optional company name []:kahtech
Enter pass phrase for privkey.pem:

writing RSA key
Certificate request self-signature ok
subject=C = AU, ST = Some-State, O = Internet Widgits Pty Ltd, CN = localkahtech.com, emailAddress = kahtechpng@gmail.com
Could Not Find C:\xampp\apache\.rnd
    1 file(s) moved.
    1 file(s) moved.

-----
Das Zertifikat wurde erstellt.
The certificate was provided.

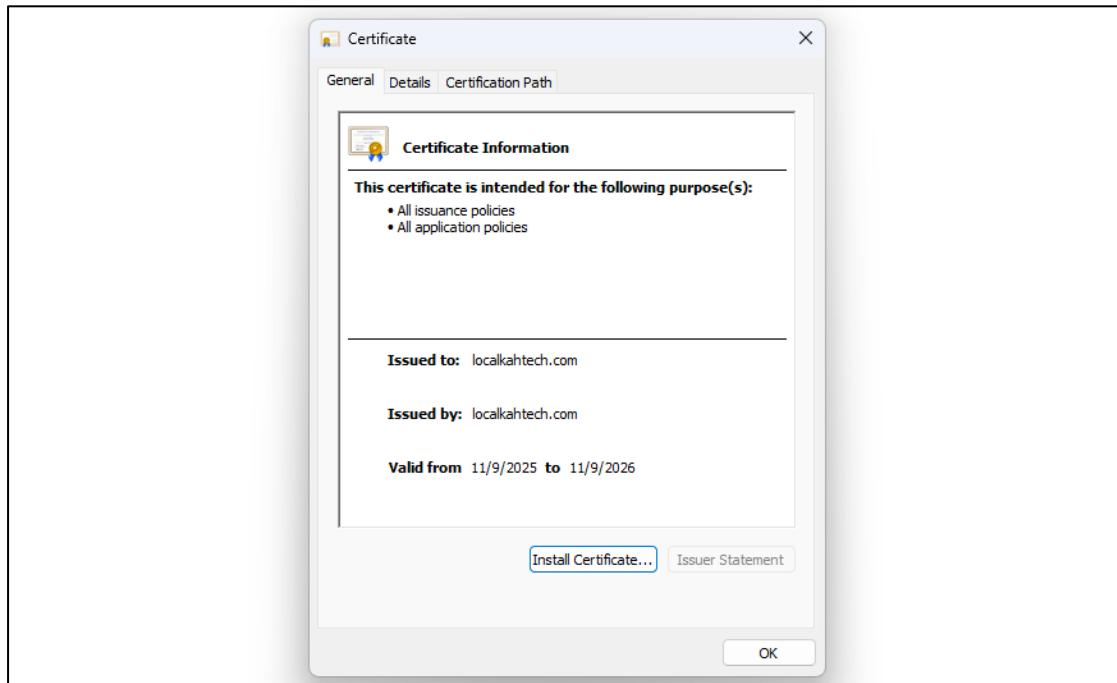
Press any key to continue . . . |
```

- Challenge password: kahtech
- Optional company name: kahtech
- Pass phrase for privkey.pem: kahtech

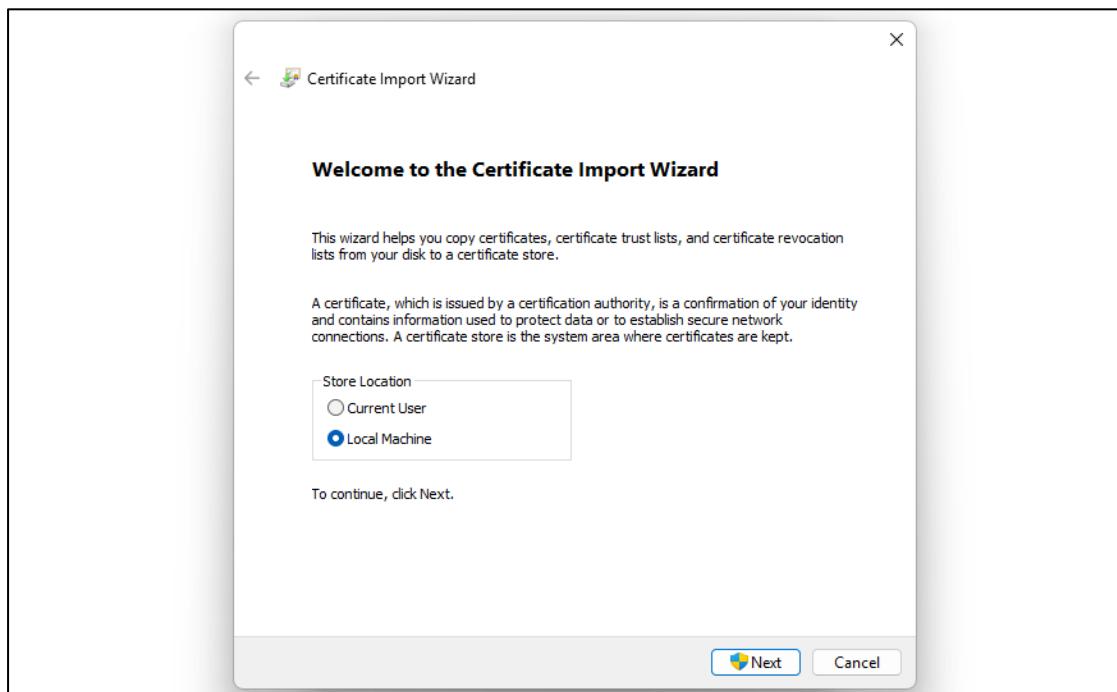
**9. Run this file (double click to run):**

C:\xampp\apache\conf\ssl.crt\server.crt

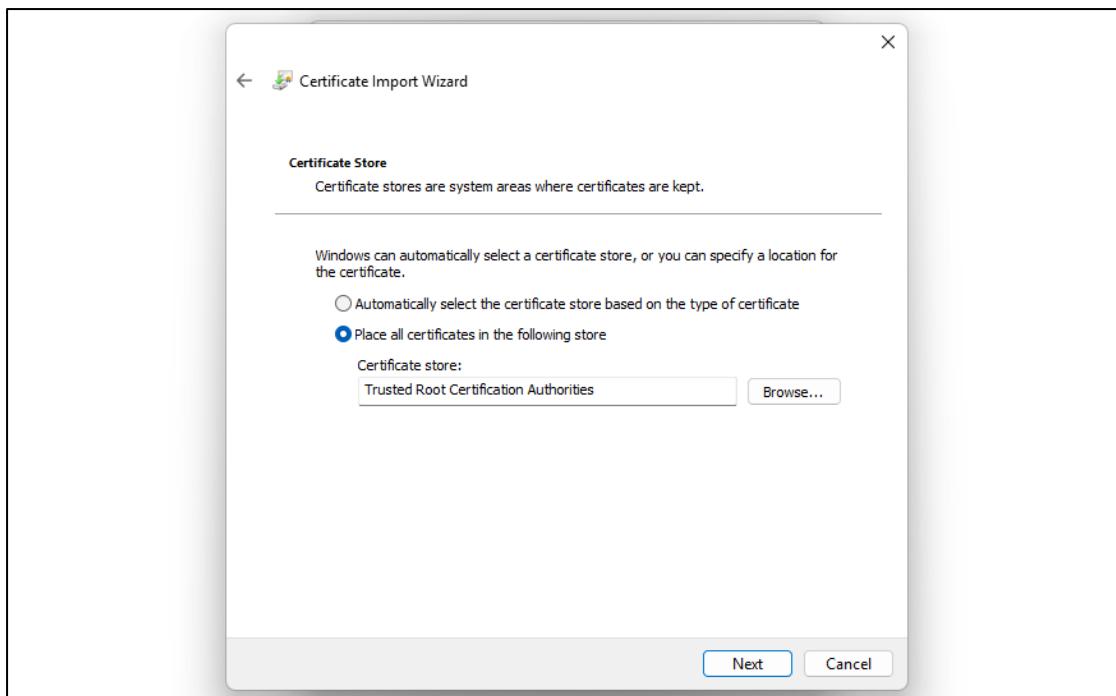
**10. Install certificate:**



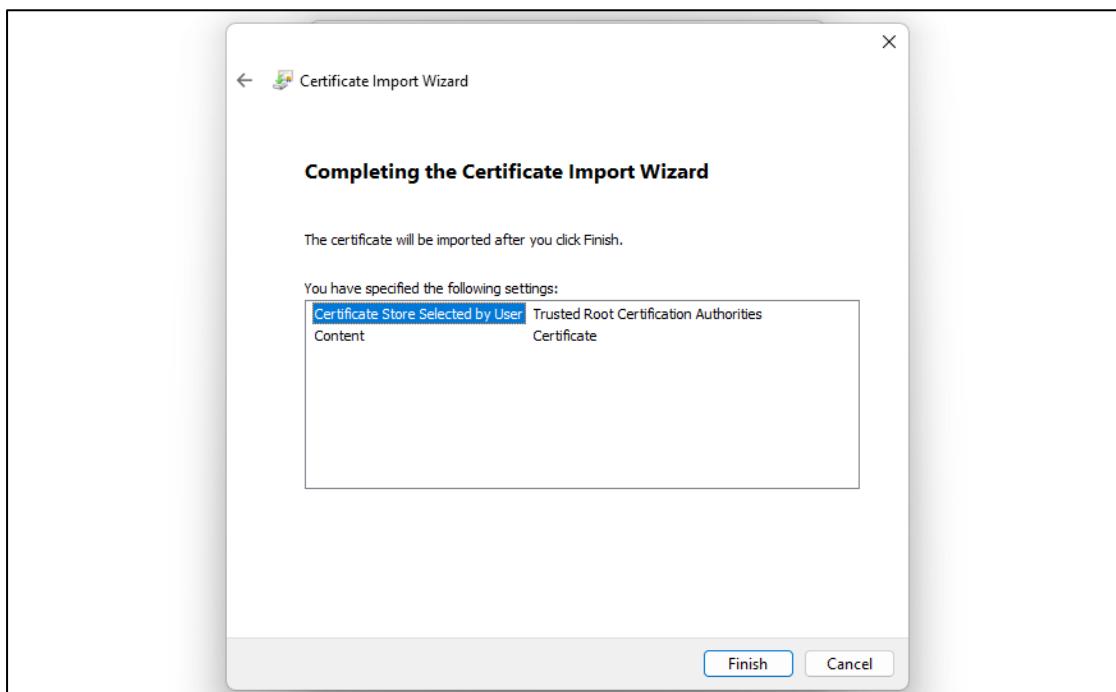
- Click < **Install Certificate** >



- Choose < **Local Machine** >
- Click < **Next** >



- Choose < Place all certificates in the following store >
- Click < Browse... >
- Choose < Trusted Root Certification Authorities >
- Click < Next >



- Click < Finish >

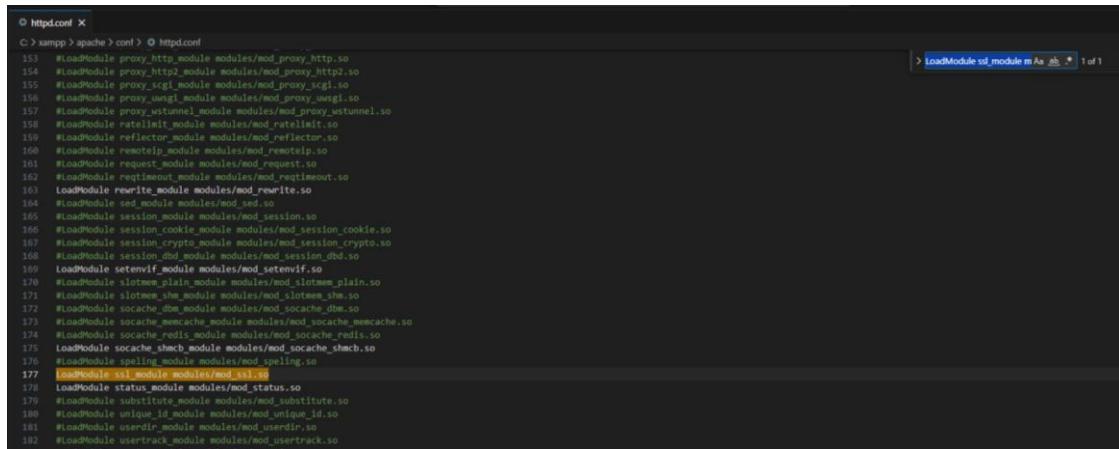
## 11. Open this file (open with a notepad / code editor):

C:\xampp\apache\conf\httpd.conf

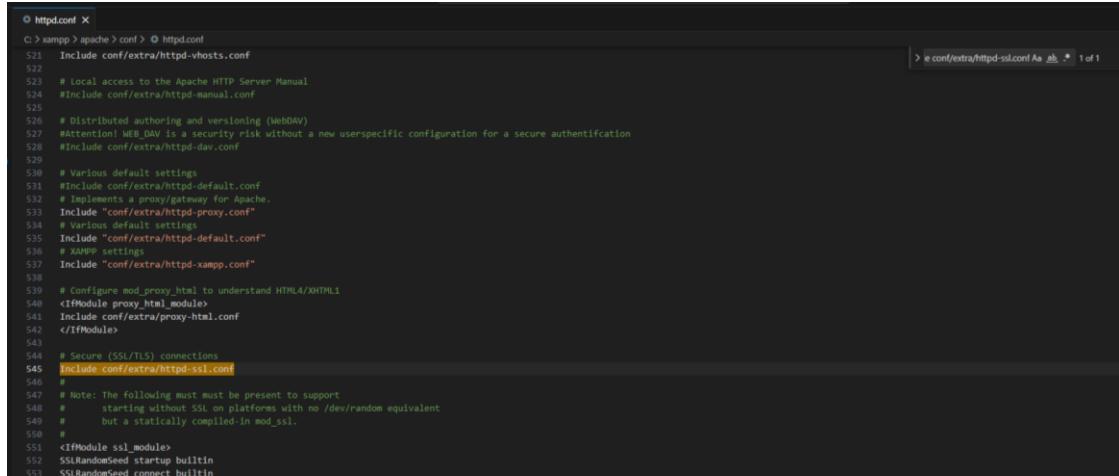
## 12. Make sure these lines are not comments:

- LoadModule ssl\_module modules/mod\_ssl.so
- Include conf/extra/httpd-ssl.conf

\*\* Take note: remove the # to uncomment the line



```
① httpd.conf X
C > xampp > apache > conf > ② httpd.conf
153 #LoadModule proxy_http module modules/mod_proxy_http.so
154 #LoadModule proxy_http2 module modules/mod_proxy_http2.so
155 #LoadModule proxy_scgi module modules/mod_proxy_scgi.so
156 #LoadModule proxy_ugraph module modules/mod_proxy_ugraph.so
157 #LoadModule proxy_wstunnel module modules/mod_proxy_wstunnel.so
158 #LoadModule ratelimit module modules/mod_ratelimit.so
159 #LoadModule reflector module modules/mod_reflector.so
160 #LoadModule remotepipe module modules/mod_remoteip.so
161 #LoadModule request_module modules/mod_request.so
162 #LoadModule rewrite module modules/mod_rewrite.so
163 #LoadModule sed module modules/mod_sed.so
164 #LoadModule session module modules/mod_session.so
165 #LoadModule session_cookie module modules/mod_session_cookie.so
166 #LoadModule session_crypto module modules/mod_session_crypto.so
167 #LoadModule session_dbd module modules/mod_session_dbd.so
168 #LoadModule sessionif module modules/mod_sessionif.so
169 LoadModule setenvif module modules/mod_setenvif.so
170 #LoadModule slotmem_plain module modules/mod_slotmem_plain.so
171 #LoadModule slotmem_shm module modules/mod_slotmem_shm.so
172 #LoadModule socache_dbm module modules/mod_socache_dbm.so
173 #LoadModule socache_memcache module modules/mod_socache_memcache.so
174 #LoadModule socache_redis module modules/mod_socache_redis.so
175 LoadModule socache_shmcb module modules/mod_socache_shmcb.so
176 #LoadModule spelling module modules/mod_spelling.so
177 #LoadModule status module modules/mod_status.so
178 #LoadModule substitute module modules/mod_substitute.so
179 #LoadModule unique_id module modules/mod_unique_id.so
180 #LoadModule userdir module modules/mod_userdir.so
181 #LoadModule usertrack module modules/mod_usertrack.so
182
```



```
① httpd.conf X
C > xampp > apache > conf > ② httpd-ssl.conf
521 Include conf/extra/httpd-ssl.conf
522
523 # Local access to the Apache HTTP Server Manual
524 #Include conf/extra/httpd-manual.conf
525
526 # Distributed authoring and versioning (WebDAV)
527 #Attention! WEBDAV is a security risk without a new userspecific configuration for a secure authentication
528 #Include conf/extra/httpd-dav.conf
529
530 # Various default settings
531 #Include conf/extra/httpd-default.conf
532 # Implements a proxy/gateway for Apache.
533 Include "conf/extra/httpd-proxy.conf"
534 # Various default settings
535 Include "conf/extra/httpd-default.conf"
536 # XAMPP settings
537 Include "conf/extra/httpd-xampp.conf"
538
539 # Configures mod_proxy_html to understand HTML4/XHTML1
540 <IfModule proxy_html_module>
541 Include conf/extra/proxy-html.conf
542 </IfModule>
543
544 # Secure (SSL/TLS) connections
545 Include conf/extra/httpd-ssl.conf
546 #
547 # Note: The following must must be present to support
548 #       starting without SSL on platforms with no /dev/random equivalent
549 #       but a statically compiled-in mod_ssl.
550 #
551 <IfModule ssl_module>
552 SSLRandomSeed startup builtin
553 SSLRandomSeed connect builtin
554
```

**13. Open this file (open with a notepad / code editor):**

C:\xampp\apache\conf\extra\httpd-vhosts.conf

**14. Add this code into the file:**

```
<VirtualHost *:80>
    ServerName localhost
    DocumentRoot "C:/xampp/htdocs"
    <Directory "C:/xampp/htdocs">
        AllowOverride All
        Require all granted
    </Directory>
</VirtualHost>

<VirtualHost *:80>
    ServerName www.localkahtech.com
    ServerAlias localkahtech.com
    DocumentRoot "C:/xampp/htdocs/Online Computer Store"
    Alias /Image "C:/xampp/htdocs/Image"

    <Directory "C:/xampp/htdocs/Image">
        Options Indexes FollowSymLinks
        AllowOverride All
        Require all granted
    </Directory>

    RewriteEngine on
    RewriteCond %{SERVER_NAME} =www.localkahtech.com [OR]
    RewriteCond %{SERVER_NAME} =localkahtech.com
    RewriteRule ^ https:// %{SERVER_NAME} %{REQUEST_URI}
    [END,NE,R=permanent]
</VirtualHost>

<VirtualHost *:443>
```

```
ServerName www.localkahtech.com
ServerAlias localkahtech.com
DocumentRoot "C:/xampp/htdocs/Online Computer Store"

Alias /Image "C:/xampp/htdocs/Image"

<Directory "C:/xampp/htdocs/Image">
    Options Indexes FollowSymLinks
    AllowOverride All
    Require all granted
</Directory>

SSLEngine on
SSLCertificateFile "conf/ssl.crt/server.crt"
SSLCertificateKeyFile "conf/ssl.key/server.key"

Header always set Strict-Transport-Security "max-
age=31536000"
</VirtualHost>

<VirtualHost *:80>
    ServerName www.admin.localkahtech.com
    ServerAlias admin.localkahtech.com
    DocumentRoot "C:/xampp/htdocs/Admin Online Computer
Store"

Alias /Image "C:/xampp/htdocs/Image"

<Directory "C:/xampp/htdocs/Image">
    Options Indexes FollowSymLinks
    AllowOverride All
    Require all granted
</Directory>
```

```

    RewriteEngine on
    RewriteCond %{SERVER_NAME} =www.admin.localkahtech.com
[OR]
    RewriteCond %{SERVER_NAME} =admin.localkahtech.com
    RewriteRule ^ https:// %{SERVER_NAME} %{REQUEST_URI}
[END,NE,R=permanent]
</VirtualHost>

<VirtualHost *:443>
    ServerName www.admin.localkahtech.com
    ServerAlias admin.localkahtech.com
    DocumentRoot "C:/xampp/htdocs/Admin Online Computer
Store"
    Alias /Image "C:/xampp/htdocs/Image"

    <Directory "C:/xampp/htdocs/Image">
        Options Indexes FollowSymLinks
        AllowOverride All
        Require all granted
    </Directory>

    SSLEngine on
    SSLCertificateFile "conf/ssl.crt/server.crt"
    SSLCertificateKeyFile "conf/ssl.key/server.key"

    Header always set Strict-Transport-Security "max-
age=31536000"
</VirtualHost>

```

\*\* Take note: the folder path can be different, ensure they  
match the actual path of your folders

**15. YouTube references:**

<https://www.youtube.com/watch?v=leAFGFhE8O8>

<https://www.youtube.com/watch?v=eqrDHkIFe8U>

## SUPPRESSING ERRORS CONFIGURATION

1. Open this file (open with a notepad / code editor):

C:\xampp\apache\conf\httpd.conf

2. Add this code below LogLevel warn:

ServerTokens Prod

```
<Files ".ht*"
        Require all denied
</Files>

#
# ErrorLog: The location of the error log file.
# If you do not specify an ErrorLog directive within a <VirtualHost>
# container, error messages relating to that virtual host will be
# logged here. If you *do* define an error logfile for a <VirtualHost>
# container, that host's errors will be logged there and not here.
#
ErrorLog "logs/error.log"

#
# LogLevel: Control the number of messages Logged to the error_log.
# Possible values include: debug, info, notice, warn, error, crit,
# alert, emerg.
#
LogLevel warn

ServerTokens Prod
```

**3. Open this file (open with a notepad / code editor):**

C:\xampp\apache\conf\extra\httpd-vhosts.conf

**4. Add these lines to both *localkahtech.com* and *admin.localkahtech.com*:**

```
ServerSignature Off  
ErrorDocument 404 /errors/404.php  
ErrorDocument 500 /errors/500.php
```

```
<VirtualHost *:80>  
    ServerName www.localkahtech.com  
    ServerAlias localkahtech.com  
    DocumentRoot "C:/xampp/htdocs/INT6005CEM_group_assignment_G23/Online Computer Store"  
  
    ServerSignature Off  
    ErrorDocument 404 /errors/404.php  
    ErrorDocument 500 /errors/500.php  
  
    Alias /Image "C:/xampp/htdocs/INT6005CEM_group_assignment_G23/Image"  
  
    <Directory "C:/xampp/htdocs/INT6005CEM_group_assignment_G23/Image">  
        Options Indexes FollowSymLinks  
        AllowOverride All  
        Require all granted  
    </Directory>  
  
    RewriteEngine on  
    RewriteCond %{SERVER_NAME} =www.localkahtech.com [OR]  
    RewriteCond %{SERVER_NAME} =localkahtech.com  
    RewriteRule ^ https://.%{SERVER_NAME}%{REQUEST_URI} [END,NE,R=permanent]  
</VirtualHost>  
  
<VirtualHost *:443>  
    ServerName www.localkahtech.com  
    ServerAlias localkahtech.com  
    DocumentRoot "C:/xampp/htdocs/INT6005CEM_group_assignment_G23/Online Computer Store"  
  
    ServerSignature Off  
    ErrorDocument 404 /errors/404.php  
    ErrorDocument 500 /errors/500.php  
  
    Alias /Image "C:/xampp/htdocs/INT6005CEM_group_assignment_G23/Image"  
  
    <Directory "C:/xampp/htdocs/INT6005CEM_group_assignment_G23/Image">  
        Options Indexes FollowSymLinks  
        AllowOverride All  
        Require all granted  
    </Directory>  
  
    SSLEngine on  
    SSLCertificateFile "conf/ssl.crt/server.crt"  
    SSLCertificateKeyFile "conf/ssl.key/server.key"  
  
    Header always set Strict-Transport-Security "max-age=31536000"  
</VirtualHost>
```

**5. Open this file (open with a notepad / code editor):**

C:\xampp\php\php.ini

**6. Modify this code in the file:**

Change :

```
display_errors=On  
display_startup_errors=On  
log_errors=On
```

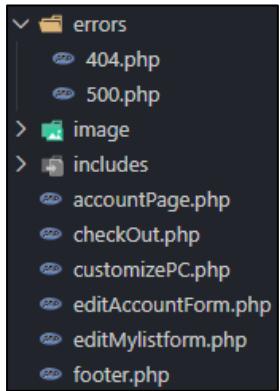
To :

```
display_errors=Off  
display_startup_errors=Off  
log_errors=On
```

```
display_errors=Off  
  
; The display of errors which occur during PHP's startup sequence are handled  
; separately from display_errors. We strongly recommend you set this to 'off'  
; for production servers to avoid leaking configuration details.  
; Default Value: On  
; Development Value: On  
; Production Value: Off  
; https://php.net/display-startup-errors  
display_startup_errors=Off  
  
; Besides displaying errors, PHP can also log errors to locations such as a  
; server-specific log, STDERR, or a location specified by the error_log  
; directive found below. While errors should not be displayed on productions  
; servers they should still be monitored and logging is a great way to do that.  
; Default Value: Off  
; Development Value: On  
; Production Value: On  
; https://php.net/log-errors  
log_errors=On
```

## 7. Check files:

Make sure you have **404.php** and **500.php** inside your **errors folder** for both **user** and **admin**



## EMAIL VERIFICATION

- 1. Open this file (open with a notepad / code editor):**

C:\xampp\php\php.ini

- 2. Add this code into the file:**

```
[mail function]

For Win32 only.

http://php.net/smtp
SMTP=smtp.gmail.com
http://php.net/smtp-port
smtp_port=587
sendmail_from = your_email_address_here
sendmail_path = "\"C:\xampp\sendmail\sendmail.exe\" -t"
```

**\*\* Take note: this code must be added below [mail function]**

- 3. Open this file (open with a notepad / code editor):**

C:\xampp\sendmail\sendmail.ini

- 4. Add this code into the file:**

```
[sendmail]

smtp_server=smtp.gmail.com
smtp_port=587
error_logfile=error.log
debug_logfile=debug.log
auth_username=your_email_address_here
auth_password=your_password_here
force_sender=your_email_address_here (it's optional)
```

**\*\* Take note: this code must be added below [sendmail]**

## **5. Email address and password**

For the previous steps, you are required to provide your email address. All the OTP verification emails will be sent using the email address you provided.

**\*\* Take note: the auth\_password in step no.4 is not your actual email address password, please follow the steps below to get the auth\_password**

- Go to your Google Account
- Click < **Security & Sign-in** >
- Click < **2-Step Verification** >
- Click < **App Passwords** >
- Create your app password
- You will get a 16-character app password, use it as your auth\_password

**\*\* Take note: don't share the auth\_password to anyone to protect your google account.**

## **6. Website references:**

<https://www.codingnepalweb.com/configure-xampp-to-send-mail-from-localhost/>

## VISIT THE WEBSITE

### 1. Visit the website:

- Start XAMPP Apache and MySQL module
- Open any browser (Google Chrome and Microsoft Edge are recommended)
- Use the link to visit the user website:  
<https://localkahtech.com/>
- Use the link to visit the admin / manager website:  
<https://admin.localkahtech.com/>

\*\* Take note: if your XAMPP is running, please restart it  
after you configure all the files