

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

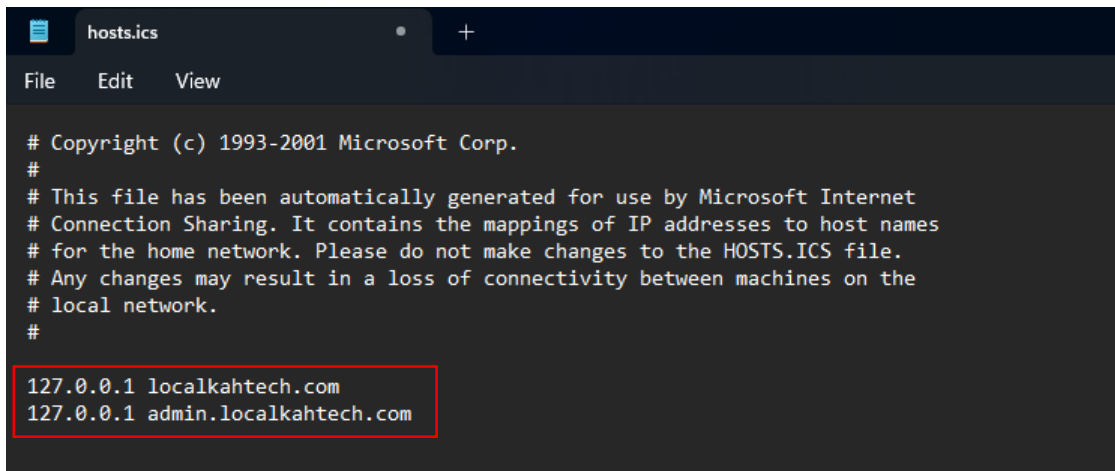
SELF-SIGNED DIGITAL CERTIFICATE

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
```



```
hosts.ics
File Edit View

# 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

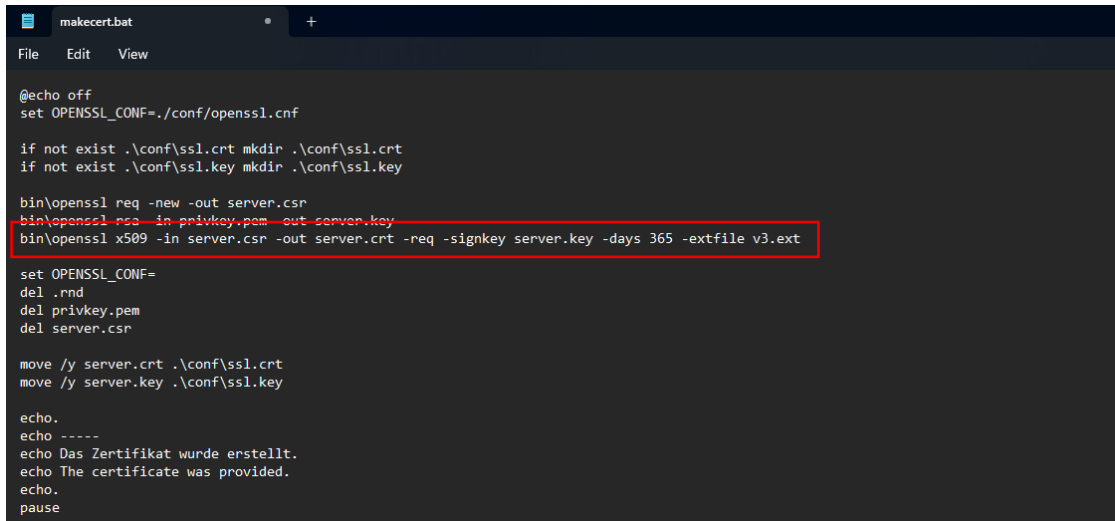
4. Modify this code in the file:

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
```



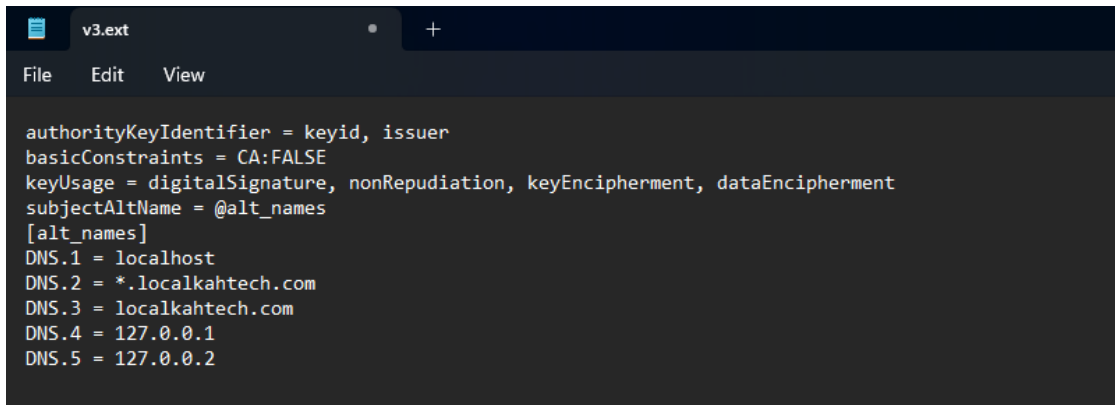
```
makecert.bat  
File Edit View  
@echo off  
set OPENSSL_CONF=.\conf\openssl.cnf  
  
if not exist .\conf\ssl.crt mkdir .\conf\ssl.crt  
if not exist .\conf\ssl.key mkdir .\conf\ssl.key  
  
bin\openssl req -new -out server.csr  
bin\openssl rsa -in privkey.pem -out server.key  
bin\openssl x509 -in 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 text editor window titled 'v3.ext'. The window has a dark theme and a menu bar with 'File', 'Edit', and 'View'. The text inside the editor matches the code block shown in the previous block, including the authorityKeyIdentifier, basicConstraints, keyUsage, subjectAltName, and the alt_names section with five DNS entries.

```
v3.ext
File Edit View

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) []:localkahitech.com
Email Address [e: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.

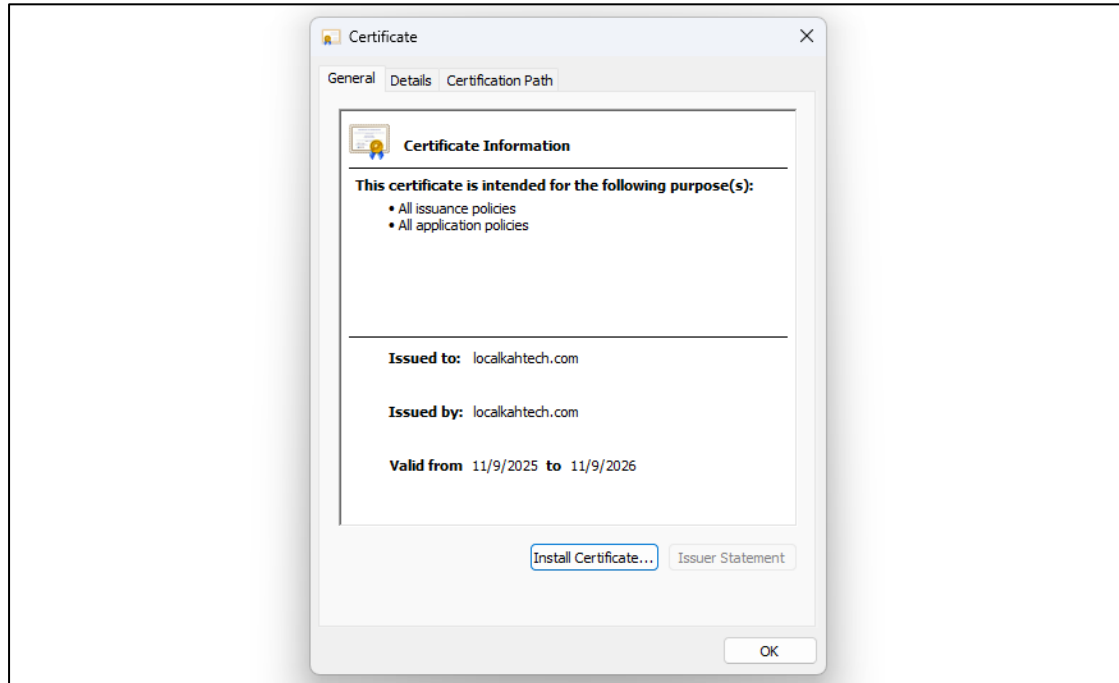
Press any key to continue . . . |
```

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

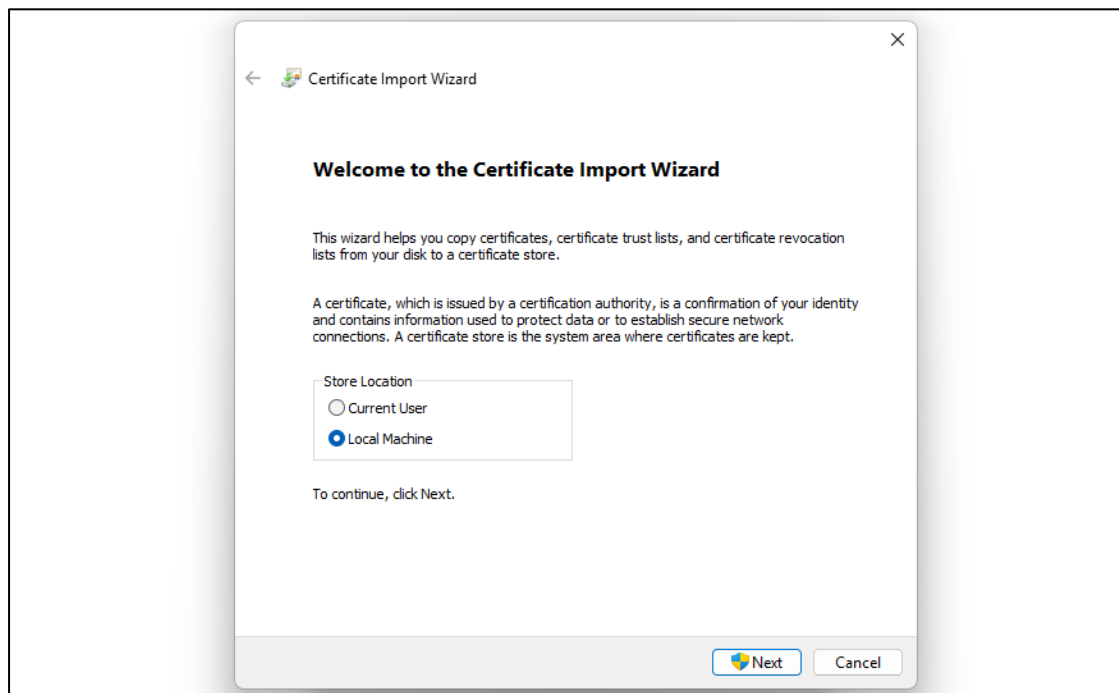
**9. Run this file (double click to run):**

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

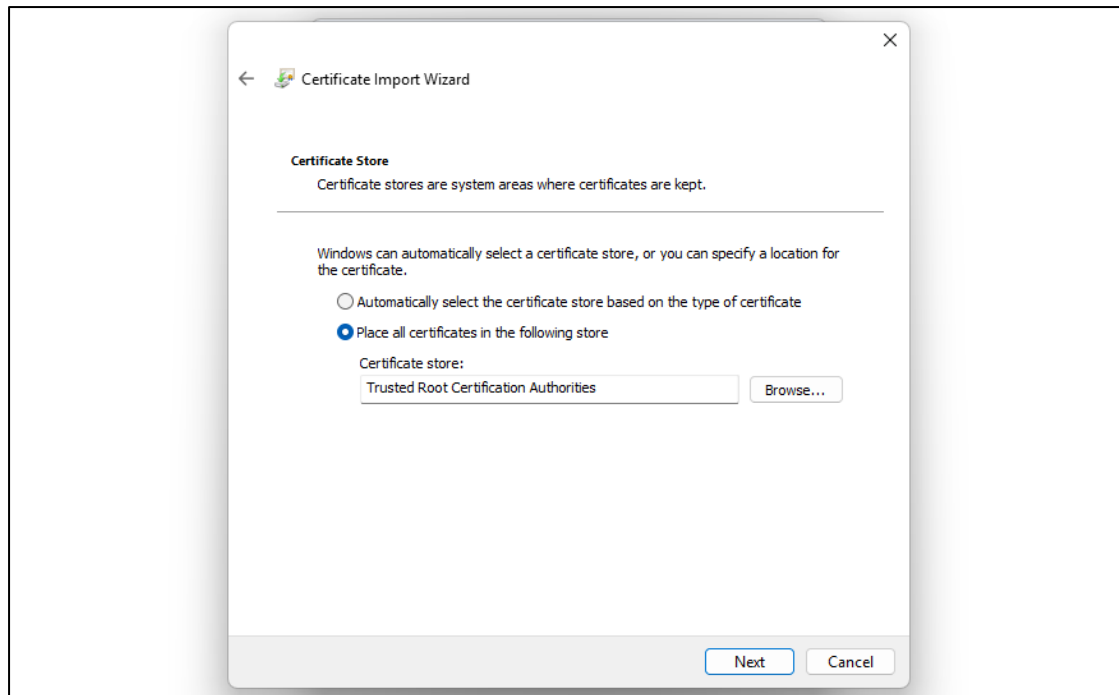
**10. Install certificate:**



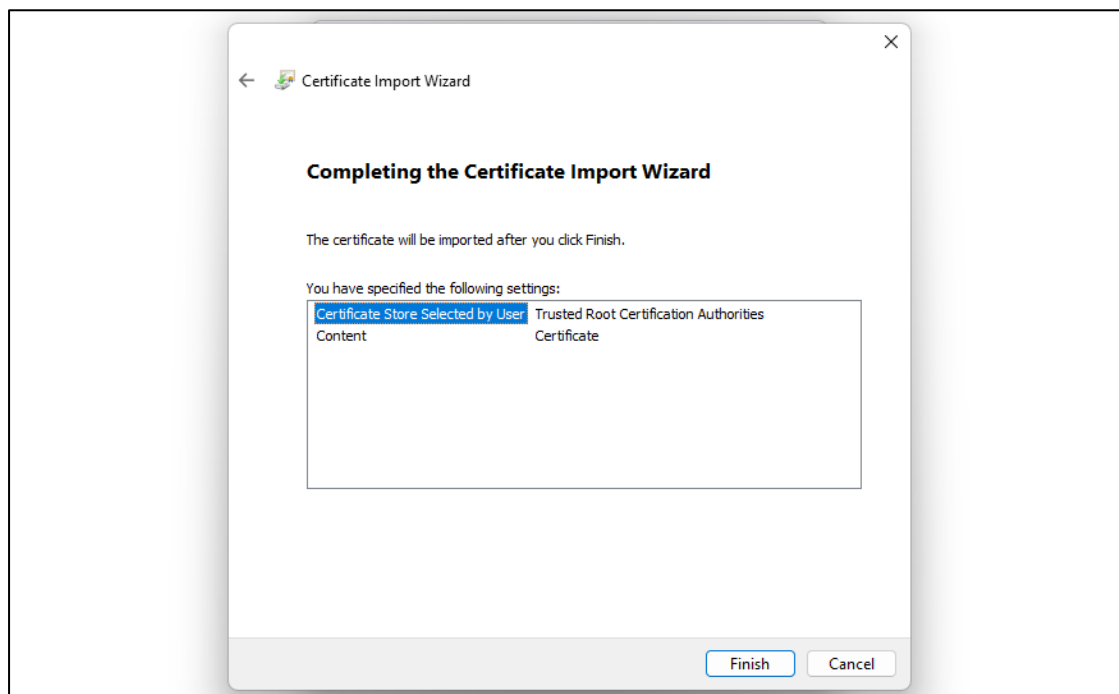
- Click **< Install Certificate >**



- 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**

```
153 #LoadModule proxy_http_module modules/mod_proxy_http.so
154 #LoadModule proxy_http_module modules/mod_proxy_http2.so
155 #LoadModule proxy_ssgi_module modules/mod_proxy_ssgi.so
156 #LoadModule proxy_wsgi_module modules/mod_proxy_wsgi.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 remotepip_module modules/mod_remotepip.so
161 #LoadModule request_module modules/mod_request.so
162 #LoadModule reqtimeout_module modules/mod_reqtimeout.so
163 LoadModule rewrite_module modules/mod_rewrite.so
164 #LoadModule sed_module modules/mod_sed.so
165 #LoadModule session_module modules/mod_session.so
166 #LoadModule session_cookie_module modules/mod_session_cookie.so
167 #LoadModule session_crypto_module modules/mod_session_crypto.so
168 #LoadModule session_dbd_module modules/mod_session_dbd.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_dlm_module modules/mod_socache_dlm.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 ssl_module modules/mod_ssl.so
178 #LoadModule status_module modules/mod_status.so
179 #LoadModule substitute_module modules/mod_substitute.so
180 #LoadModule unique_id_module modules/mod_unique_id.so
181 #LoadModule userdir_module modules/mod_userdir.so
182 #LoadModule usertrack_module modules/mod_usertrack.so
```

```
521 Include conf/extra/httpd-vhosts.conf
522
523 # Local access to the Apache HTTP Server Manual
524 #Include conf/extra/httpd-manual.conf
525
526 # Distributed authoring and versioning (DAV)
527 #Attention! WEB_DAV 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 # XSLT settings
537 #Include "conf/extra/httpd-xslt.conf"
538
539 # Configure mod_proxy_html to understand HTML4/XML
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 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
```



**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

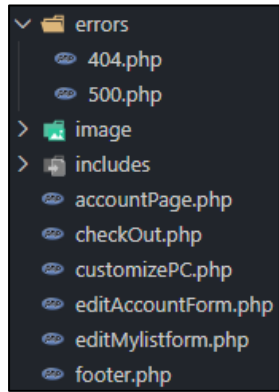
```
display_errors=Off

; 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**