

The screenshot shows a Windows terminal window with a black background and green text. The title bar at the top reads "MINGW64/c/Users/VICTORIA/digitalcertificate". The terminal content shows the execution of the following commands:

```
VICTORIA@DESKTOP-IBVH96C MINGW64 ~/digitalcertificate
openssl req -x509 -new -days 365 -in certificate.csr -signkey private.key -out certificate.crt
Certificate request self-signature ok
subject=C=NG, ST=FCR, L=Abuja, O=Vicks enterprise, OU=cybersecurity, CN=Https.server-vicksman, emailAddress=egmuivictor232@gmail.com
VICTORIA@DESKTOP-IBVH96C MINGW64 ~/digitalcertificate
$ |
```

At the bottom right of the terminal window, there is a watermark that reads "Activate Windows Go to Settings to activate Windows."

[illegible]

```

C:\MINGW64\c\Users\VICTORIA\digitalcertificate
C:\MINGW64\c\Users\VICTORIA\digitalcertificate
$ openssl x509 -in certificate.crt -text -noout
Certificate:
    Data:
        Version: 3 (0x2)
        Serial Number:
            44:f7:62:7a:fa:42:5b:48:fd:b7:2a:93:47:33:ab:2d:0b:da:92:6d
        Signature Algorithm: sha256withRSAEncryption
        Issuer: C=NG, ST=FCtrl, L=Abuja, O=Vicks enterprise, OU=cybersecurity, CN=Https.server-vicksman, emailAddress=egwuvictor232@gmail.com
        Validity
            Not Before: May  3 15:53:16 2025 GMT
            Not After:  May  3 15:53:16 2026 GMT
        Subject: C=NG, ST=FCtrl, L=Abuja, O=Vicks enterprise, OU=cybersecurity, CN=Https.server-vicksman, emailAddress=egwuvictor232@gmail.com
        Subject Public Key Info:
            Public Key Algorithm: rsaEncryption
            Public-Key: (2048 bit)
            Modulus:
                00:c2:73:b7:28:13:3b:a4:e9:0e:3e:a3:b3:27:54:
                cd:12:f6:29:b1:2f:0e:03:98:94:2d:a3:2f:5d:10:
                b3:b5:42:00:32:2e:a0:ae:c5:a1:60:b6:68:48:89:
                58:b2:ab:bc:62:23:ba:b1:23:6e:03:c2:b1:ee:6d:
                34:0f:c6:3c:83:90:bb:b1:40:c2:e5:a1:27:65:55:72:
                4c:7c:d9:f2:18:4c:ce:b6:d5:bc:3c:3c:1e:68:fb:
                b7:a3:c6:9a:0d:2e:ab:e9:61:42:bb:ab:65:90:29:
                70:d0:66:19:72:4d:7e:a2:0f:d4:b3:
                a3:02:14:f8:b3:c3:cd:a1:79:4e:e0:48:68:55:16:ae:
                70:81:66:45:5f:58:0a:5f:3c:46:31:32:02:4d:
                50:9f:fc:07:2d:08:f9:2c:cf:45:24:68:4c:1b:74:54:
                b1:d5:7f:0f:ab:3f:78:0b:60:da:36:40:9e:06:9f:
                73:52:70:77:a2:82:b6:c7:ce:a4:ae:6f:5d:20:af:
                13:bdd8:c7:0d:ed:b5:f2:53:b4:a1:50:26:11:4a:
                5c:f0:7e:34:04:13:05:ab:0c:d6:28:ee:b6:45:60:
                5e:02:15:b7:c7:cf:d2:7e:b0:04:5a:d8:a4:f4:7b:26:
                cc:72:98:d3:60:ae:34:f4:63:ef:f2:5e:3b:fe:47:
                48:59
            Exponent: 65537 (0x10001)
        X509v3 extensions:
            X509v3 Subject Key Identifier:
                96:67:1d:19:30:89:72:61:65:53:34:c8:12:FE:19:60:18:D0:8B:17:FE:55
            Signature Algorithm: sha256withRSAEncryption
            Signature Value:
                00:c6:ed:0e:0d:ae:3f:3e:fa:f2:0d:5f:4e:01:c3:6b:
                2f:b8:9b:32:14:00:0b:ff:0b:a8:b7:8c:4e:9e:41:e9:5b:47:
                e0:ef:47:2b:86:c2:34:a7:21:08:a4:f4:cc:1e:fa:1d:54:c7:
                7e:ed:ff:a9:25:11:be:76:b6:c8:f8:da:1c:09:1c:14:85:f1:
                ce:1f:b0:6c:9c:50:35:5e:3a:2a:37:07:cc:bf:ae:00:da:
                49:0a:0f:63:04:8c:53:f3:5a:27:10:f3:4b:5e:38:ef:39:
                f2:52:bfd6:9c:b1:f3:60:36:b7:0c:a2:64:89:cd:1e:1e:68:
                02:32:b1:1fff:02:72:7f:54:8b:16:4e:9b:7b:23:d8:e1:f3:

```

```

MINGW64/c/Users/VICTORIA/digitalcertificate
import http.server
import ssl

server_address = ('localhost', 4443)
httpd = http.server.HTTPServer(server_address, http.server.SimpleHTTPRequestHandler)

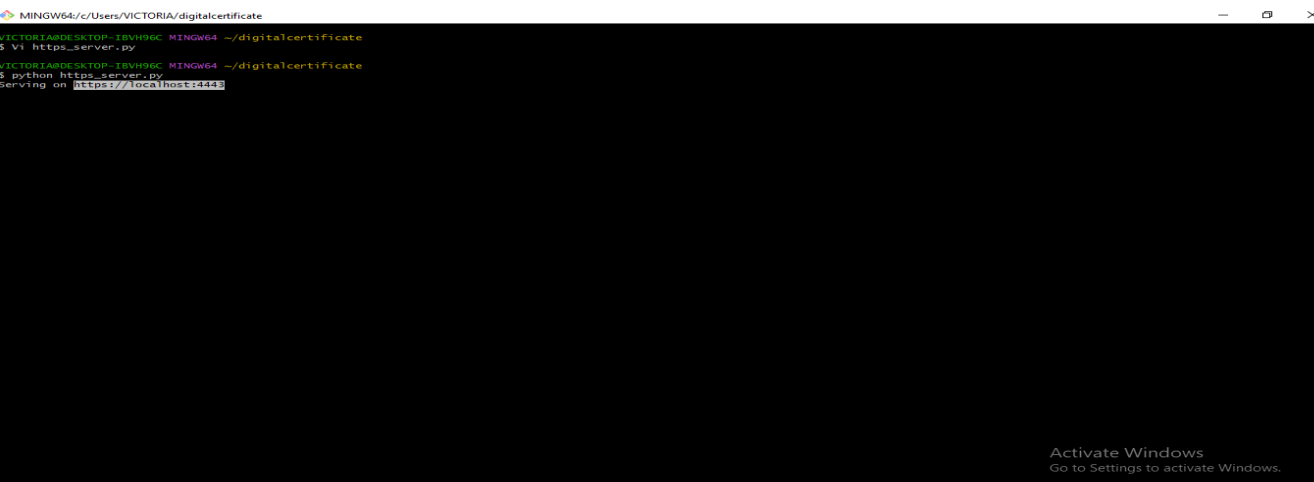
context = ssl.SSLContext(ssl.PROTOCOL_TLS_SERVER)
context.load_cert_chain(certfile="certificate.crt", keyfile="private.key")
httpd.socket = context.wrap_socket(httpd.socket, server_side=True)

print("Serving on https://localhost:4443")
httpd.serve_forever

```

Activate Windows  
Go to Settings to activate Windows.

https\_server.py [•] [unix] (15:59 31/12/1969) 12,21 A1

A screenshot of a Windows terminal window titled "MINGW64/c/Users/VICTORIA/digitalcertificate". The terminal shows a user running a Python script named "https\_server.py" in the directory "~/digitalcertificate". The command prompt is "C:\Users\VICTORIA> python https\_server.py". The output of the script is "serving on https://localhost:4443". The terminal window has a standard Windows title bar with minimize, maximize, and close buttons. In the bottom right corner, there is a watermark that says "Activate Windows Go to Settings to activate Windows."

```
MINGW64/c/Users/VICTORIA/digitalcertificate
C:\Users\VICTORIA> python https_server.py
serving on https://localhost:4443
```

Activate Windows  
Go to Settings to activate Windows.

## The Contents of the Private Key, CRS, and Certificate Files

[illegible]

```

MINGW64/c/Users/VICTORIA/digitalcertificate

VICTORIA@DESKTOP-IBVH96C MINGW64 ~
$ mkdir digitalcertificate

VICTORIA@DESKTOP-IBVH96C MINGW64 ~
$ cd digitalcertificate/

VICTORIA@DESKTOP-IBVH96C MINGW64 ~/digitalcertificate
$ openssl genrsa -out private.key 2048

VICTORIA@DESKTOP-IBVH96C MINGW64 ~/digitalcertificate
$ ls
private.key

VICTORIA@DESKTOP-IBVH96C MINGW64 ~/digitalcertificate
$ |

```



# Validation Output Confirming the Certificate Details

