DATABASES = {

    "default": {

        "ENGINE": "django.db.backends.postgresql",

        "NAME": "blog",

        "USER": "alvin",

        "PASSWORD": "123",

    }

}

1. **To generate self-signed certificates**

openssl req -x509 -newkey rsa:4096 -keyout key.cert -out cert.crt -days 365

openssl req -x509 -newkey rsa:4096 -keyout key.cert -out cert.crt -days 365 -subj "/CN=localhost"

1. **Import certificate to browsers**
2. **Run development server for https**

python manage.py runserver\_plus --cert-file cert.crt

python manage.py runserver\_plus --cert-file cert.crt --key-file key.cert

to generate self-signed certificate:

openssl req -x509 -newkey rsa:4096 -keyout key.pem -out cert.pem -days 365

To verify the SHA:

Get-FileHash cert.pem -Algorithm SHA1

User

**You**

PS C:\Users\alvin\desktop\\_repos\socialwebsite\bookmarks> Get-FileHash cert.pem -Algorithm SHA1 >> Algorithm Hash Path --------- ---- ---- SHA1 02A89AB5EF5F3EDD723C5B0125180AC40C87FE8C

# Step 1: Generate CA key and certificate

openssl genrsa -aes256 -out ca-key.pem 4096

openssl req -new -x509 -sha256 -days 3650 -key ca-key.pem -out ca.pem

# Step 2: Generate certificate key

openssl genrsa -out cert-key.pem 4096

# Step 3: Create extfile.cnf with subjectAltName

echo "subjectAltName=DNS:\*.account,IP:127.0.0.1" > extfile.cnf

# Step 4: Generate CSR and sign the certificate

openssl req -new -key cert-key.pem -out cert.csr

openssl x509 -req -sha256 -days 3650 -in cert.csr -CA ca.pem -CAkey ca-key.pem -out cert.pem -extfile extfile.cnf -CAcreateserial

# Step 4: Generate a fullchain.pem by combining the self-signed certificate and CA key

cat cert.pem > fullchain.pem  
cat ca.pem >> fullchain.pem

# Step 5: Run following command in VS Code using the self-signed certificate and certificate key

python manage.py runserver\_plus --cert cert.pem --key cert-key.pem

PS C:\Users\alvin\desktop\\_repos\socialwebsite\bookmarks> openssl x509 -in ca.pem -text

Certificate:

Data:

Version: 3 (0x2)

Serial Number:

67:a5:bb:85:53:9f:e4:cf:3a:f7:ca:c4:36:2d:36:3e:25:9d:85:5c

Signature Algorithm: sha256WithRSAEncryption

Issuer: C = SG, ST = Some-State, O = GreenBikeSG, CN = mysite.com, emailAddress = alvinwong7896@gmail.com

Validity

Not Before: Jan 13 04:30:15 2024 GMT

Not After : Jan 10 04:30:15 2034 GMT

Subject: C = SG, ST = Some-State, O = GreenBikeSG, CN = mysite.com, emailAddress = alvinwong7896@gmail.com

Subject Public Key Info:

Public Key Algorithm: rsaEncryption

Public-Key: (4096 bit)

Modulus:

00:d2:c4:78:59:90:a4:8a:5f:f0:87:4c:30:c2:79:

4f:d4:1e:d0:34:ee:f3:7e:e8:cd:75:9b:7b:39:e7:

63:fd:91:71:15:65:ed:41:20:f8:56:bc:a9:ef:41:

cb:55:2f:51:1f:60:17:be:7e:72:88:3c:c5:49:9b:

f0:ba:13:1c:ff:7a:41:c8:4a:9e:e8:a1:95:52:f5:

51:68:e8:0d:93:6c:43:b4:b8:cb:f0:22:45:f3:2e:

ad:a3:93:f1:3b:ef:ce:1c:d9:56:b0:7f:3d:8b:5e:

06:24:ef:21:ca:20:e9:2c:e6:c1:e1:59:20:00:8b:

58:52:db:13:0f:98:f9:22:8f:c1:e4:1a:69:69:69:

e6:b2:02:fd:70:16:4f:f6:49:54:18:0e:10:64:de:

b8:7e:df:9f:f9:00:e1:ef:f2:c2:ce:5c:18:94:1d:

b2:37:8c:3c:2d:8d:9d:29:70:dd:e0:5e:b9:1b:c0:

a3:69:af:71:c3:42:9c:ba:24:5a:bf:d8:17:ae:05:

2a:bf:00:80:13:10:e3:70:79:0f:80:33:73:b0:cb:

bc:7e:4a:c1:ef:50:a3:6f:ed:7d:32:fb:23:c8:70:

9b:de:fd:06:21:b3:22:4a:5d:7a:9e:37:00:6a:b0:

4f:20:a9:6e:ea:c8:28:d2:95:42:6d:88:80:5d:21:

60:93:58:99:ec:f2:6d:28:76:97:89:cb:31:19:f7:

5e:e8:6e:e3:11:2e:c3:60:14:61:9a:16:d7:e6:58:

1f:de:d7:87:69:a0:b3:1e:ab:c0:2f:6d:68:fd:e9:

86:79:fb:ff:05:b7:7f:4a:8c:bc:5d:f2:2c:66:1a:

83:ac:1c:dc:21:f5:cc:ec:55:6a:7d:fe:ee:8a:83:

e9:98:df:56:14:00:9b:a0:9c:0d:04:60:ad:94:c7:

8a:bf:41:17:e1:f9:9c:6f:7d:96:43:14:cc:04:57:

46:a0:71:2c:dc:ab:a6:a4:fa:36:7e:c9:e9:cd:ba:

c6:a7:af:db:77:95:5b:a2:0d:16:6c:d0:b1:be:56:

c1:c9:b7:9f:21:22:4d:8c:21:14:38:c3:11:bb:c0:

3c:6f:72:cb:dd:a4:19:62:4b:f2:5e:7d:fa:50:aa:

00:74:d1:1a:90:58:10:2d:95:98:77:d3:48:34:bc:

9a:d4:55:ad:17:ca:12:20:fa:9a:d4:85:63:01:3e:

96:b8:38:83:0c:58:4c:e9:0c:c4:fb:81:4c:0b:a3:

31:a7:91:59:a8:f1:72:66:27:86:e5:fa:e5:60:c6:

58:26:5b:cd:35:75:de:82:c1:e3:95:27:b1:a9:31:

41:f7:8d:fc:50:e6:61:8d:ac:43:76:56:7a:5e:19:

57:fe:7f

Exponent: 65537 (0x10001)

X509v3 extensions:

X509v3 Subject Key Identifier:

CA:BF:D3:85:6F:BE:15:4E:0E:D8:3A:37:0B:5A:CA:E0:F4:97:15:D3

X509v3 Authority Key Identifier:

CA:BF:D3:85:6F:BE:15:4E:0E:D8:3A:37:0B:5A:CA:E0:F4:97:15:D3

X509v3 Basic Constraints: critical

CA:TRUE

Signature Algorithm: sha256WithRSAEncryption

Signature Value:

98:5a:d1:52:78:f0:38:2e:f6:69:a5:c7:45:68:0b:5b:79:b1:

9b:79:fb:d2:26:02:62:a4:ff:f0:fc:43:d9:4c:eb:d4:b4:82:

59:c5:22:44:af:14:f4:09:98:98:06:2c:55:74:7c:26:5b:39:

14:d8:38:4d:02:39:97:16:e7:46:53:05:8a:fe:64:d6:1d:4c:

67:28:c3:52:9d:67:44:96:45:9d:ee:cd:2f:93:24:b4:92:ae:

22:b4:e2:a2:33:5a:79:79:0b:f6:82:b6:c7:53:2c:07:1e:55:

a8:54:fe:70:5d:20:8f:b2:9d:7f:5b:44:b8:13:5e:ed:f7:0c:

53:ad:b6:02:68:f1:c2:a6:57:07:72:bd:ec:78:6b:84:9f:39:

9b:f4:0c:b6:97:ef:3a:5b:b8:58:21:60:11:c1:87:40:bf:02:

2b:15:44:ee:07:67:4f:96:d6:ec:7c:a7:00:50:51:90:af:d8:

c9:2d:1e:3c:17:52:d5:fe:91:7b:2d:e9:12:d8:04:4c:5e:9c:

73:95:19:8f:d6:e0:93:ab:58:ce:b3:1a:cd:5d:e8:1d:0f:46:

b4:c1:2a:0d:57:ae:0c:e9:e1:28:0d:31:26:63:8a:23:92:3c:

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75:35:51:ca:6d:e3:88:84:5d:1e:ee:7c:bf:00:f9:8b:00:15:

63:23:27:68:b7:a6:b1:3d

-----BEGIN CERTIFICATE-----

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C0dyZWVuQmlrZVNHMRMwEQYDVQQDDApteXNpdGUuY29tMSYwJAYJKoZIhvcNAQkB

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MTAwNDMwMTVaMHUxCzAJBgNVBAYTAlNHMRMwEQYDVQQIDApTb21lLVN0YXRlMRQw

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-----END CERTIFICATE-----