### CS 305 Module Five Coding Assignment Certificate Generator

#### Certificate Authorities:

Certificate authorities (CA) are third party services that provide identity authentication through a private and public key pair and certificate signing request. The CA will receive the certificate signing request from a requestor, verify that its information is accurate, and then send the requestor a private key, granting access to the requested privileges (SSL.com Support Team, 2021). A primary reason for using a CA is to ensure trust between end users and a website. CAs are part of the public key infrastructure and allow users to trust that the website they are connected to is legitimate; the site is what it says it is (Awati, 2021)

There are several benefits that come with using a third-party CA. First is that they often come with a warranty to cover some losses should a certificate be mis-issued. Next, unlike many self-signed certificates, third-party CAs usually do not cause browsers to issue warnings of untrusted connections. Whether the connection is secure or not, a warning of such nature can breed mistrust for end users, or even desensitize users to security warnings (Information Technology Journal, 2023).

#### Certificate Generation:

A black screen with white text

Description automatically generated

Figure : Certificate generation form

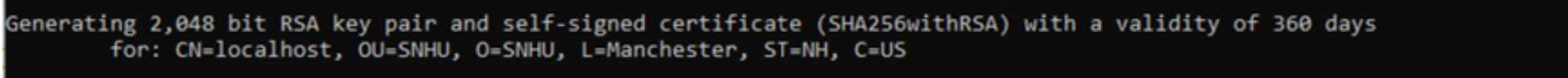
Note: in the tutorial, the above form was followed by the following text. The equivalent text was not shown after filling out the form, however the next two steps verify the certificate was successfully generated: 

Figure : Source: SNHU, generating status, not shown after certificate generation form filled out

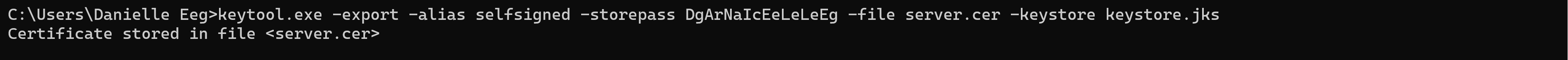


Figure : Certificate file

A screen shot of a computer

Description automatically generated

Figure :Certificate file data printout

# References

Awati, R. (2021, 09). *certificate authority (CA)*. Retrieved from TechTarget: https://www.techtarget.com/searchsecurity/definition/certificate-authority

Information Technology Journal. (2023). *Self-Signed Certificate vs Trusted CA Signed Certificate*. Retrieved from SSL2Buy: https://www.ssl2buy.com/wiki/self-signed-certificate-vs-trusted-ca-signed-certificate

SSL.com Support Team. (2021, 12 06). *What Is a Certificate Authority (CA)?* Retrieved from SSL.com: https://www.ssl.com/faqs/what-is-a-certificate-authority/