1. **Buy a domain name from a domain Registrar**:
   * Choose a domain name and register it through a domain registrar such as GoDaddy, Namecheap, or Google Domains.
2. **Spin up a Ubuntu server**:
   * Create a virtual machine or cloud instance with Ubuntu as the operating system using providers like AWS, Azure, or DigitalOcean.
3. **SSH into the server and install Nginx**:
   * Connect to your Ubuntu server using SSH (ssh user@your\_server\_ip) and install Nginx by running sudo apt update and sudo apt install nginx.
4. **Download freely available HTML website files**:
   * Find and download HTML website files from sources like GitHub or free templates websites.
5. **Using SCP, copy the website files to the Nginx website directory**:
   * Use SCP (Secure Copy Protocol) to transfer the downloaded HTML files to the Nginx directory (/var/www/html). For example: scp -r /path/to/local/files user@your\_server\_ip:/var/www/html.
6. **Validate the website using the server IP address**:
   * Access your website using the server's IP address in a web browser (http://your\_server\_ip) to ensure it displays correctly.
7. **In your DNS account, create an A record and add the Elastic IP**:
   * Log in to your DNS provider's account and create an A record pointing your domain to your server's IP address (Elastic IP).
8. **Use the dig command to verify the DNS records**:
   * Run dig yourdomain.com in your terminal to check if the DNS records have propagated and are pointing to the correct IP address.
9. **Using DNS verify the website setup**:
   * Access your website using your domain name (http://yourdomain.com) to ensure it resolves correctly and displays your website.
10. **Create a Let's Encrypt certificate for the DNS and configure it on the Nginx server**:
    * Use Certbot to obtain a free SSL certificate from Let's Encrypt. Install Certbot (sudo apt install certbot python3-certbot-nginx), then run sudo certbot --nginx -d yourdomain.com to obtain and configure the certificate.
11. **Validate the website SSL using the OpenSSL utility**:
    * Use the OpenSSL command to check your SSL certificate: openssl s\_client -connect yourdomain.com:443 -servername yourdomain.com. Verify that the certificate is correctly installed and valid.