Project Report for

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**Project Task:**

Set up a website as part of your Computer Networking project. Your task includes:

1. **Domain & Hosting:** Choose a hosting service and set up a domain (can be free or temporary).
2. **Website Setup:** Create a basic website using HTML, CSS, and optionally JavaScript or a framework of your choice.
3. **Networking Aspects:** Ensure the site is accessible online and demonstrate knowledge of networking concepts such as DNS, IP addresses, and protocols.
4. **Documentation:** Submit a report including your website link, a description of the setup process, challenges faced, and how networking principles were applied.

**Bonus:** Implement security features such as HTTPS, firewalls, or access control.

**Project Overview:** This project demonstrates the successful setup, secure and documentation of my website project and applies my understanding of both web development and computer networking fundamentals.

**Website Link:** [My website](https://projectmide.xyz/)

**Setup Process:**

1. **WEBSITE SETUP:**
2. Creating my project folder (for housing all project files
3. Setup basic files: ***index.html, styles.css***
4. Installed Notepad ++ for creating my index website file for creating website basic structure
5. Using the same notepad, I created my CSS source file for my basic website styling.
6. After creating both files in my folder. I tested locally by accessing my index.html file to see the live website on my chrome browser.
7. **SETTING UP VERSION CONTOL WITH GIT**
8. I initialized a Git Repository using my command prompt
9. Navigated my project folder path and initialized Git command
10. Added and committed my changes to the Git repo.
11. After a successful push, I was able to push to a repository hosting serving using GitHub.
12. **CHOOSING HOSTING SERVICE AND DEPLOYMENT OF MY WEBSITE**
13. Deployment using Netlify: I signed up using for a Netlify free account
14. I connected my Git repository to my Netlify account and selected my active project repository.
15. I deployed the site and was provided with the following URL: <https://olumideadebisiproject.netlify.app/>
16. **SETTING UP A DOMAIN NAME**
17. I signed up on a Hosting provider: Namecheap and searched for available domain names and registered <https://projectmide.xyz/>
18. I proceeded to set up my DNS Settings: I created a CName record which started pointing to my chosen domain.
19. I also registered my Custom DNS on My domain provider using the 4 different nameservers provided by my hosting service.
20. DNS propagation took a couple of hours and was successfully done.
21. I tested my website using my custom domain on chrome to ensure it correctly points to my deployed site.
22. I then enabled SSL/HTTPS for security and ensure site is served securely
23. **IMPLEMENTING NETWORKING ANS SECURITY ASPECTS**

The domain name server is a system that is used to translate human-readable domain names into machine readable IP addresses. This enables users to access their websites without using number IP addresses.

HTTP/HTTPS are protocols used to transmit data across the web. While the HTTP is secured

The Setup was done using the following steps

1. The domain name that I set up automatically translates into the following IP address using my DNS Servers.
2. I confirmed this using command prompt “nslookup olumideadebisioroject.netlify.app and got the below results: A screenshot of a computer

   AI-generated content may be incorrect.
3. HTTP/ HTTPS Protocols:

HTTP is the basic protocol usually used for web traffic. Netlify my hosting server automatically provisions an SSL certificate via the Let’s Encrypt Module as seen below

A screenshot of a computer

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1. Additional Security features provided by Netlify: Netlify automatically provides services such as built-in DDoS protection and firewalls.

Access control provides an extra layer of security by applying basic authentication if needed. For this project I made use of OAuth by installing the Provider by providing my client ID and secret key which was provider by using the developer setting mode on GitHub as seen below:

A screenshot of a chat

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**Challenges and lessons learned:**

1. I had a lot of deployment errors from my GitHub to Netlify especially around putting the files in the public folder where I also kept getting “Fatal error” which indicated the file was not saved correctly in my directory.
2. Delay in website propagation: I experienced about a 1 hr. delay for my website to propagate correctly.

**Lessons Learned:**

1. The importance of DNS and Domain configuration: Setting up a DNS record and linking it to the domain can be tricky. The most important take away is that the DNS Propagation can take time, and it means when you make changes to your website it might not be reflected immediately. Having this understanding helped me be patient during my test phase.
2. The Importance of HTTPS for Security:

Switching from HTTP to HTTPS is crucial for both security and trustworthiness. We should prioritize setting up https from the beginning of the project.

1. I will always Use GIT for managing even smaller projects as it helps to organize and safeguard code changes