

SIT202 – Computer Networks and Communication

Task 3.1 P

Module Summary

- We studied application layer protocols in this topic, which are essential to network communication. Important protocols covered in the conversation include: We studied application layer protocols in this topic, which are essential to network communication. Important protocols covered in the conversation include:
 1. Hypertext Transfer Protocol
 - With HTTP, hypertext documents can be transferred between web servers and browsers, which is crucial for the functioning of the internet. A request/response paradigm underpins this stateless protocol.
 2. Hypertext Transfer Protocol Secure
 - With the addition of SSL/TLS to encrypt data, HTTPS improves HTTP by guaranteeing secure communication and safeguarding private information.
 3. File Transfer Protocol
 - Users can upload, download, and manage data on distant servers with the help of File Transfer Protocol (FTP), which speeds up file transfers between clients and servers.
 4. Simple Mail Transfer protocol
 - Email clients can connect with servers and with one another thanks to SMTP, which is used for email transfer.
 5. Domain Name System
 - Websites can be accessed with easily remembered names rather than numeric IP addresses thanks to DNS, which converts domain names into IP addresses.
 6. Simple Network Management Protocol
 - Network administrators can control network performance, identify issues, and make expansion plans for their networks by using SNMP for monitoring and management of networks.
- We used Wireshark to record and examine HTTP and HTTPS traffic, and we role-played HTTP interactions between clients and a server in order to gain a deeper understanding of these protocols.

Reflection Content

1. Most important thing that I learn
 - Especially useful was the thorough comprehension of HTTP and HTTPS. Understanding how clients and servers request and transfer data, as well as how HTTPS secures this communication, was essential. For web development and cybersecurity, this information is fundamental.
 - My knowledge of how websites operate was rudimentary before this module. My understanding of online communication was expanded by this module, which outlined the fundamental protocols. It made a great connection with my previous web development and fundamental networking courses.
 - An understanding of application layer protocols is essential for anyone working in networking or information technology, and this was the goal of the course team. They wanted to make sure we could apply theory to real-world situations, so they got us involved in hands-on activities like packet analysis and role-playing.
 - Anyone looking to work in IT can benefit greatly from the knowledge acquired, especially in positions involving web development, networking, and cybersecurity. Comprehending these protocols is crucial for the creation, administration, and protection of networked systems.
 - Practical experience was gained through role-playing HTTP conversation and using Wireshark to analyze packet data. My comprehension of the functioning of these protocols and their importance in network communication has been strengthened by this real-world application.
- To summarize, this module provided a thorough review of fundamental application layer protocols together with hands-on exercises that strengthened my comprehension and equipped me for practical applications in the communication and computer network fields.