CSC120 Lab 07

Q1. Differences between TCP and UDP protocols. TCP and UDP belong to Layer 4 of the OSI model.

|  |  |
| --- | --- |
| **TCP** | **UDP** |
| Connection-orientated | Connectionless protocol |
| Allows retransmission of lost data packets | Does not allow retransmission of lost data packets |
| Slower than UDP | Faster than TCP |
| Guarantees delivery of data to designated router | Does not guarantee delivery of data |
| Extensive error checking mechanisms | Basic error checking mechanisms |
| Packets arrive in order at receiver | No sequencing of data |
| Heavy weight | Light weight |
| Does not support Broadcasting | Supports Broadcasting |
| Connection is a byte stream | Connection is a message stream |
| Used by HTTPS, HTTP, SMTP, POP, FTP, ect | Video conferencing, streaming, DNS, VoIP, ect. |

Q2.

|  |  |  |
| --- | --- | --- |
| Layer 7 | Application | HTTP |
| Layer 6 | Presentation | DNS, IMAP |
| Layer 5 | Session | POP3, IMAP, IRC |
| Layer 4 | Transport | E-mail/Document |
| Layer 3 | Network | IP address |
| Layer 2 | Data Link | Acknowledged Connectionless Service |
| Layer 1 | Physical | 1000 BASE-T copper cable |

Q3. The difference between HTTP and HTTPS is security validation. HTTP does not contain SSL & TLS which is a layer of security around your communications. HTTPS shows a lock beside the domain name providing it is SSL and TLS certified. Encryption protects your identity. It converts text that is readable by humans and changes it to where it is not understandable by humans, therefore it appears at random. Whom ever receives the information uses a key to decrypt the data, to transform it back into text that is readable by the user. It’s like morse-code.

Q4. A port uniquely identifies a process that it has been assigned to in a network system. A socket is a endpoint of the process communication. The port number for email is Port 25.

Q5. Connecting to a public Wi-Fi is risky because you are subjected to theft of your personal information such as financial information, personal data, and login information. Also, anyone in range can intercept everything you send or receive if you are connected to an unencrypted website. You are subject to malware, such as viruses, adware, and trojan horses.

Q6. 192.168.1.82

Q7. Ping sends a single packet to another computer. It is basically asking the other computer, “Hey, are you there?” It shows me that it sent 4 packets and received 4 packets, and 0 of the packets were lost. It gives me the time that it took to send and receive each packet. It also gives me the minimum, maximum, and average time it took round trip to send and receive each packet.

Graphical user interface

Description automatically generated

Q8.

(a) 5GHz

(b) I have 2.4 GHz, and 5 GHz.

(c) 80 MHz

(d) Yes

(e) No

Q9.

1. The 200 code is a example of a response code. It is indicating that the request has succeeded.
2. 404 code tells the web user that the requested page is not available.

(c)Graphical user interface, text, application, email

Description automatically generated

(4) Graphical user interface, text, application, email

Description automatically generated