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Advanced Ethical Hacking

Assignment 2-2

**Database**: MySQL

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| **Layer** | **Description** | **Example** |
| Application Logic | **Logic of the application –**What to do with the data that is communicated | Display result of SELECT request on web app |
| 7 – Application | **Communicating with Application**/program - aka “**abstraction**” layer – being able to send a “request”, simply shipping a package without worrying about what it takes to make that happen. Not application logic, just communication. e.g: HTTP, FTP, Telnet, DHCP, etc | MySQL Protocol, sending a SELECT request |
| 6 – Presentation | **Translate/transform data**so the application layer understands – aka “syntax” layer e.g: ASCII, Serialization, character encoding, etc | ASCII, or transactions can become serializable |
| 5 – Session | How to **manage a session,**not just send data but have a **conversation** – special rules/methods for connecting e.g: when I say “over” it means I finished saying a sentence, simple rules or grammar   e.g: pptp, SOCKS, RTP, SSH, DNS, HTTP, etc | Authenticating Handshake with MySQL  Reference:  https://www.oreilly.com/library/view/understanding-mysql-internals/0596009577/ch04.html |
| 4 – Transport | **How “structured” data is transferred**, variable-length data sequences  e.g: TCP, UDP, etc | TCP |
| 3 – Network | **How to interact with multiple nodes**- routing protocols, network-layer address assignment e.g: ipv4, ipv6, icmp, ipsec, etc | Ipv4 |
| 2 – Data Link | Protocol/**How to handle raw bits**, protocol for flow control of 1 node to 1 node e.g: 802.3 Ethernet, 802.11 Wi-Fi, and 802.15.4 ZigBee | 802.3 Ethernet |
| 1 – Physical | **Electrical Connection**- raw bit streams over a physical medium e.g: Bluetooth, Ethernet, USB, etc | Ethernet Port |

Overall, it seems that MySQL starts at the ‘Session Layer’.