# OSI Model with Protocol Examples and UDP Mapping

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Layer | Name | Description | Protocol Examples | Relevance to UDP Chat App |
| 7 | Application | Interface for user and application logic | HTTP, FTP, DNS, DHCP | Chat message formatting and logic |
| 6 | Presentation | Data translation (encryption, compression) | SSL/TLS, ASCII, JPEG | Handled manually in simple apps like this |
| 5 | Session | Session control and synchronization | NetBIOS, RPC | Stateless in UDP, session logic in code |
| 4 | Transport | End-to-end communication | TCP, UDP | UDP used for sending/receiving messages |
| 3 | Network | Routing and IP addressing | IP, ICMP | Used via socket API for IP communication |
| 2 | Data Link | MAC addressing and framing | Ethernet, Wi-Fi | Handled by Linux kernel & drivers |
| 1 | Physical | Transmission medium | Ethernet cables, Wi-Fi radio | Hardware layer, outside of app control |