Domain Name System (DNS)

The **Domain Name System (DNS)** translates human-readable domain names (e.g., www.google.com) into machine-readable IP addresses (e.g., 142.250.190.14), enabling internet communication

It enables computers to locate and communicate with each other on the internet.

Functions as a hierarchical, distributed database.

Queries pass through multiple levels:

Root server

Top-Level Domain (TLD) server

Authoritative server (stores the specific IP address).

Ensures seamless website access using easy-to-remember names instead of numerical IP addresses.