

# DNS

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## DNS

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- It is **Domain Name System**.
- Domain name are mapped to IP Adresses.
- It is a phone book of IP Addresses with their Name to lookup for.
- HTTP takes url of the website and it tries to look for its IP Address and connect to it.
- Its a Database of IP Addresses.
- This Database of IP Addresses is divided into various classes.
- In the url **mail.google.com**, **mail** is the **subdomain**, **google** is **second-level domain** and **com** is the **top-level domain**.
- First HTTP looks at the **top level domain** or **root DNS server**.
- Top level domains or root DNS server are i.e **.io, .org, .com**
- These are managed by **ICANN (Internet Corporation for Assigned Name and Numbers)**.
- When we visit a website for the first time on the device, it will save the website's IP Address on the browser so it will not be looking at the server again for the same website.
- If the website is not found locally, then it will look on the local DNS Server.
- We can only rent a domain name, we cannot own it.

## Flowchart

- Computer => ISP => Root Server (if not found) => ISP => Top Level Domain => ISP => google.com website.