

## Part3

### Development Assignment

1. The IITD Proxy System is essentially a content-filtering web proxy server which provides the respective authorities the means to ensure that all the users (system also helps ensuring only valid users get access to the server) conform to the agreed access conditions and fair use policy are followed by all the users.

- The proxy server acts as an intermediate which receives requests from the user and then forwards them and returns the response to the user.
- This helps in keeping a log of the urls used and the access points and ip addresses on which a particular account has accesses the server.
- Further, this helps in load balancing and imposing restrictions to content or bandwidth or both on a user account.

- Analogically, website is some place and the URL is its address.

On entering the URL, the request is sent to the DNS identified by the domain name, which returns an IP address.

Using Transfer Control Protocol, the browser establishes a link to the server associated with the IP address.

On receiving the response via File Transfer Protocol , the browser identifies the type of content and then renders it.

2. Databases are essentially a structured and organized way of storage and retrieval of data.

A good database is easy to manage, update and edited.

A noSQL database would be a better choice as not all the data about the professor and his works would be such that they can be stored in a tabular/relational form.

3. `setTimeout()` and `setInterval()` have a bit of delay/lag in response time and resource intensive as the frequency of their execution is very high.

`RequestAnimationFrame()` is one such alternative that checks if a required amount of time has passed after a certain event.