PROTOCOL

# DEFINTION

Protocol is a set of rules & regulation that governs how client & server has to communicate with each other.

# EXAMPLES OF PROTOCOLS

* HTTP 🡪 used between client & server communication ; used for transferring any data [not secured]
* HTTPS 🡪 used between client & server communication ; used for transferring any data [secured]
* FTP 🡪 used between client & server communication ; used for transferring files [not secured]
* SFTP 🡪 used between client & server communication ; used for transferring files [secured]
* MQTT 🡪 used between client & server communication ; used for big data
* SQL 🡪 used between client & server communication ; used in database
* FILE 🡪 used between client & server communication ; used for Windows OS files/folders
* LDAP 🡪 used between client & server communication ; used for Windows Active Directory
* IMAP/POP3 🡪 used between client & server communication ; used for incoming emails
* SMTP 🡪 used between client & server communication ; used for outgoing emails

# HTTP PROTOCOL

* http 🡪 used between client & server communication – used for transferring the data [not secured] from client to server or server to client
* http = hypertext transfer protocol
* http is a unsecured protocol i.e., the data transfer between client & server is not protected/not secured/ not encrypted i.e., your data is transferred in plain text making it highly visible and attackable by any attacker/hacker
* Examples: <http://plugins.katalon.com/> ; <http://ignou.ac.in/>

# HTTPS PROTOCOL

* https 🡪 used between client & server communication – used for transferring any data [secured] – used for transferring any data [secured]
* https = hypertext transfer protocol with SECURITY
* https is a secured protocol i.e., the data transfer between client & server is protected/secured/ encrypted i.e., your data is transferred not in plain text but in encrypted text making it highly invisible and un-attackable by any attacker/hacker
* Examples: <https://mindmajix.com/> ; <https://www.dell.com>
* HTTP is converted to HTTPS by using cryptographic protocols such as
  + SSL 🡪 secure sockets layer
  + TLS 🡪 transport layer security [advanced version of SSL protocol]
* HTTP + SSL = HTTPS
* HTTP + TLS = HTTPS