Hitting [www.google.com](http://www.google.com) (<https://medium.com/@maneesa/what-happens-when-you-type-an-url-in-the-browser-and-press-enter-bb0aa2449c1a>)

1. To get the IP address of the server that has this url
2. 4 types of Caches
3. Check for caching
4. Browser caching
5. OS caching would be there commands like ​​gethostname
6. Router caching
7. ISP caching
8. Go to your dns server and look for the ip address
9. You will initiate a connection with the server
10. TCP connection would happen with server
11. What happens in 3 way handshake
    1. Syn- send to ask server if server is open for new connection
    2. SYN/ACK - yes i am open to connection
    3. I have recieved the SYN/ACK and I acknowledge that sending another ACK
12. Browser send an HTTP request
    1. GET
    2. POST
13. Now your sever will take the request and return a response
    1. JSON
    2. HTML
    3. XML
14. Server responds would status codes(400 best for backend engineer , 500 best for front end : P
    1. 1XX Info
    2. 2XX Success
    3. 3XX Redirection
    4. 4XX CLient Side Error
    5. 5XX Server side
15. Browser recieves a html document
16. Broser will parse it
17. DOM and displayed to the user
18. If you encounter a script tag or external js
19. JS is block rendering in nature
20. CSS is encountered it will be block rendering then cssom is formed and the page is shown in a beautiful manner.
21. ASYNC/DEFER (<https://www.thatjsdude.com/images/asyncVsDefer.jpg>)
22. Different things that you can do to make page speed faster
23. WHy should page speed be fast
    1. User experience
    2. SEO would be impacted
    3. Page rank would be impacted
    4. More advertisement costs
24. How to make page faster
    1. minify and uglify the css and js files when in production
    2. Add restriction to size of image that can be added 200kb
    3. Reduce the size of images using <https://tinypng.com/>
    4. Webp format is where images are better loaded and page speed is considered better
    5. Cache the images
       1. Browser - Expires header suggests that till this time browser cache would be used
       2. CDN - Would give the data faster
    6. Sprite images- <https://assets-v2.scaler.com/assets/scaler/png/companies-new-10225f0526bc97cf1374c3c4596abea4e572d7123ad876de6c07e73718beaf07.png>
    7. Icons- font awesome, iconmoon
    8. Lazy loading your images
    9. document.getElementByClassnames(“lazy”);
    10. On scroll function
    11. Which would be run everytime there is a page scroll