

async and defer attribute in JS.

async and defer are boolean attributes which are used along with script tags to load the external scripts efficiently into our web-page.

*** when you load a webpage then there are 2 major things happening in the browser :-

*** (i) HTML Parsing - process by which a web browser analyzes the HTML code of a web-page, creates a structured representation of its contents in the form of the DOM, and prepares it for rendering to the user.

(ii) Loading of Scripts

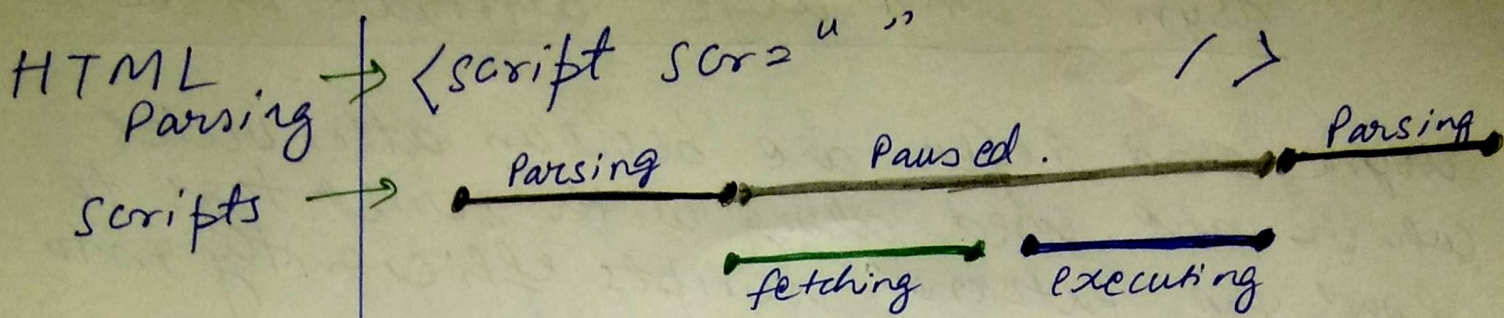
(A) ↓
fetching scripts from the network.

(B) ↓
executing the script line by line.

Three Scenarios:

- (i) Only using script tag.
- (ii) using async attribute in script tag.
- (iii) using defer attribute in script tag.

- HTML Parsing
- Executing script tag
- Fetching script from network.

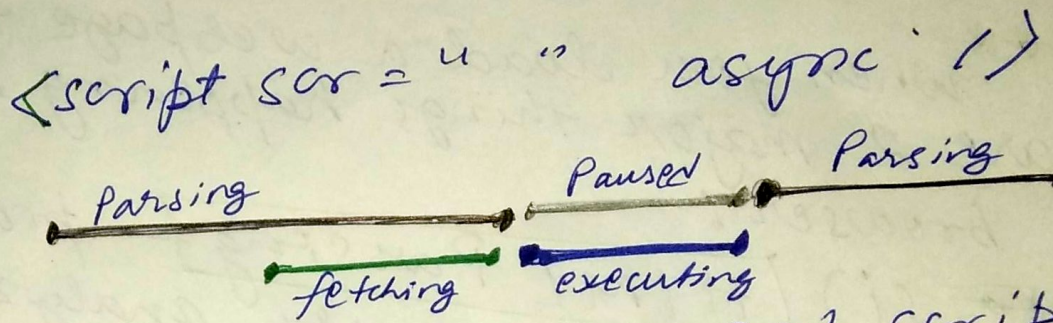


NOTE

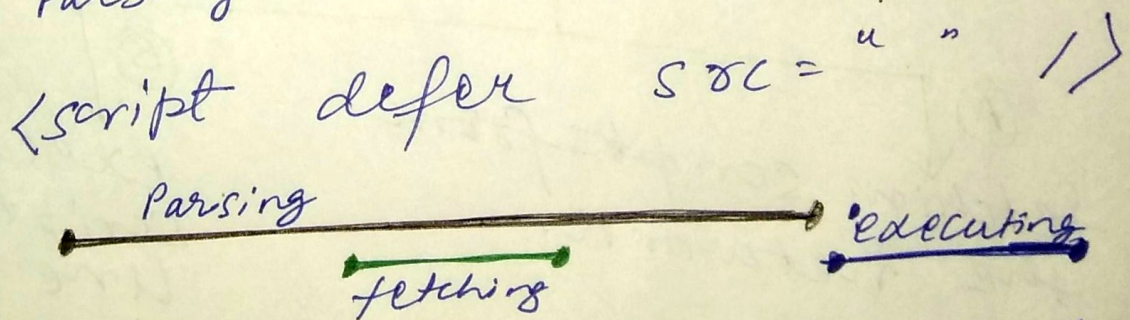
Async attribute does not guarantee the order of execution of scripts, but defer does.

So it is advisable to use the defer scripts.

multiple scripts which are dependent on each other.



HTML Parsing goes on, and scripts are fetched from the network in parallel, and as soon as the script are available, the scripts are executed and during execution of script, the HTML parsing is paused. After completion, the HTML parsing continues.



The scripts are only executed only when the HTML parsing is completed fully.