1. **List 5 difference between Browser JS(console) v Nodejs**

|  |  |  |
| --- | --- | --- |
| **NO** | **Javascript** | **NODE JS** |
| 1 | JavaScript is a programming language that is used for writing scripts on a website. | Node JS is a JavaScript runtime environment. |
| 2 | JavaScript can only be run in browsers. | We can run JavaScript outside the browser with the help of NodeJS. |
| 3 | JavaScript is basically used on the client-side and is used in frontend development. | Nodejs is mostly used on the server-side and is used in server-side development |
| 4 | JavaScript is capable enough to add HTML and play with the DOM. | Nodejs does not have the capability to add HTML tags. |
| 5 | JavaScript can run in any browser engine as like JS core in safari and Spider monkey in Firefox.  Some of the JavaScript frameworks are RamdaJS, TypedJS, etc. | V8 is the JavaScript engine inside of node.js that parses and runs JavaScript.  Some of the Nodejs modules are Lodash, express, etc. These modules are to be imported from npm. |

**2) Watch & summary 5 points -** [**https://www.youtube.com/watch?v=SmE4OwHztCc&ab\_channel=JSConf**](https://www.youtube.com/watch?v=SmE4OwHztCc&ab_channel=JSConf)

1. Parsing CSS and html will create dom tree.
2. DOM tree combines the html & CSS,converted into rendering tree
3. It's actually 4 trees.
   * + a). Render objects.
     + b). Render styles.
     + c). Render layers.
     + d). Line boxes.
4. Layout will parse and computes the elements, appearing on the page based on the installation to draw the elements by taking the call of the CSS and then give the value, position, and image. It will arrange the setup based on the changes made. like when we change the font size of a document the entire arrangement of document changes likewise based on the changes layout will rearrange the layouts
5. Painting computes bitmaps and composites the format which we expect on the page

* Use always script tag at the bottom
* Parse will not get interrupted
* It will become easy and faster to render

**3) Execute the below code and write your description in txt file**

* 1. typeof(1) => number
  2. typeof(1.1) => number
  3. typeof('1.1') => string
  4. typeof(true) =>boolean
  5. typeof(null) =>object
  6. typeof(undefined) =>undefined
  7. typeof([])=>object
  8. typeof({})=>object
  9. typeof(NaN) => number