1. List 5 difference between Browser JS(console) v Nodej:

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| --- | --- | --- |
| S.No | Javascript | NodeJS |
| 1. | Javascript is a programming language that is used for writing scripts on the website. | NodeJS is a Javascript runtime environment. |
| 2. | Javascript can only be run in the browsers. | NodeJS code can be run outside the browser. |
| 3. | It is basically used on the client side. | It is mostly used on the server side. |
| 4. | Javascript is capable enough to add HTML and play with the DOM. | NodeJS does not have capability to add HTML tags. |
| 5. | Javascript can run in any browser engine as like JS core in safari and Spidermonkey in Firefox. | NodeJS can only run in V8 engine of google chrome. |
| 6. | Javascript is used in frontend development. | NodeJS is used in server-side development. |
| 7. | Some of the javascript frameworks are RamdaJS, TypedJS, etc | Some of the NodeJS modules are Lodash, express, etc. These modules are to be imported from npm. |
| 8. | It is the upgraded version of ECMA script that uses Chrome’s V8 engine written in C++. | NodeJS is written in C, C++ and Javascript. |

2. Watch & summary 5 points –

Solution:

Ryan Seddon : How does the browser actually renders a website.

1. The video is slit into 3 parts – High level view, In-depth view and Performance insights.
2. The steps involved after the page loads are as follows:
3. We pass CSS and HTML that creates the DOM tree.
4. The DOM tree then gets converted into render tree.
5. Then the CSS and HTML combines, and they are actually 4 trees:
6. RenderObject
7. RenderStyles
8. RenderLayers
9. Lineboxes

4. Then comes layout it is the recursive process where the elements will appeaqr on the page i.e it will compute where the node will be on the screen.

5. Painting will give you visual output, it wil computes bitmaps and composites to screen.

1. Execute the below code and write your description in txt file
   1. typeof(1) :

ans: The output of the above code is number.

* 1. typeof(1.1):

ans: The output of the above code is number.

* 1. typeof('1.1'):

ans: The output of the above code is string as the number is inside the double code.

* 1. typeof(true):

ans: The output of the above code is boolean.

* 1. typeof(null):

ans: The output of the above code is object.

* 1. typeof(undefined):

ans: The output of the above code is undefined.

* 1. typeof([]):

ans: The output of the above code is object.

* 1. typeof({}):

ans: The output of the above code is object.

* 1. typeof(NaN):

ans: The output of the above code is number.