JavaScript

Using typeof in all the datatypes

typeof(1) - "number"

typeof(1.1) - "number"

typeof("1.1") - "string"

typeof(true) - "boolean"

typeof(null) - "object"

typeof(undefined) - "undefined"

typeof([]) - "object"

typeof({}) - "object"

Copying Contents in Primitive and Copying Contents in Non-Primitive

Primitive -> Copying contents in Primitive types performs copy by value

Non-Primitive -> Copying contents in Non-Primitive types performs shallow copy (i.e) Only the reference to the object is copied and not the actual content.

Reason for the difference in behaviour

- ➔ Primitive types are stored in stack memory and their values are copied directly
- ➔ Reference (composite) types are stored in heap memory. Whereas the stack has only a pointer to the reference in heap. Hence their reference is copied.
- ➔ When dealing with a large data (consider a large array) iterating over each and every element and copying it takes more time and utilizes more memory. Hence copy by reference makes this task simple.

Objects and its internal representation in JavaScript

Object – It is a collection of properties. Property refers to the representation of Data in Key, Value pair format. An object, is a reference data type which means the variables don't actually store the value and the actual data is stored in the heap memory. Variables has just a reference to the heap.

Each object may contain any combination of these primitive data-types as well as reference data-types.

```
let car = {

    name: 'Honda',

    model: 'City',

    price: '10L',
      engine: 'Petrol'

   }
```

In this example car is an object and it has a list of properties. All these properties are in key value pair format.

Keys -> name, mode, price, engine

Values -> ‘Honda’, ‘City’, ‘10L’, ‘Petrol’

Accessing Object Members

Object Members can be accessed either with a DOT NOTATION or a BRACKET NOTATION

Example for DOT NOTATION -> console.log(car.name)

Example for BRACKET NOTATION -> console.log(car[‘name’];

In both of the above cases, it prints the “name” property of the “car” object

Blog Link: https://muthu-rama-krishnan.medium.com/

Window, Document and Screen

Window -> It is an Object and has a bunch of properties in it. Document and Screen are properties of the window object

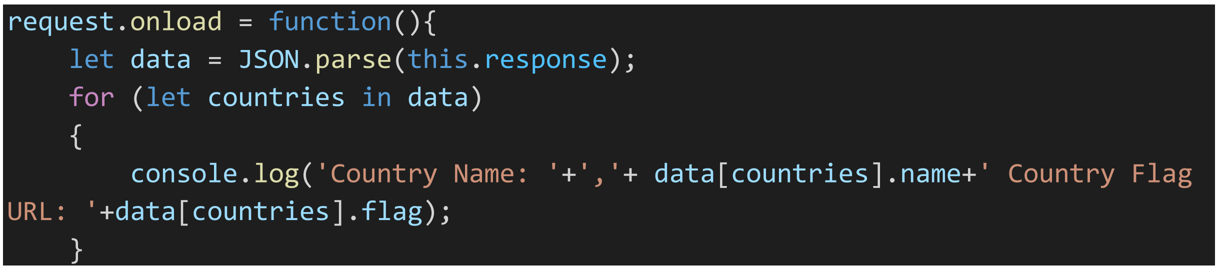
Each tab has a different window object. When a variable is declared without the var , let, or const keywords, they’re automatically attached to the window object, making them available to every part of your web app.

Document -> Document is constructed after the window and usually it represents the content on the screen. It could be HTML, XML etc.

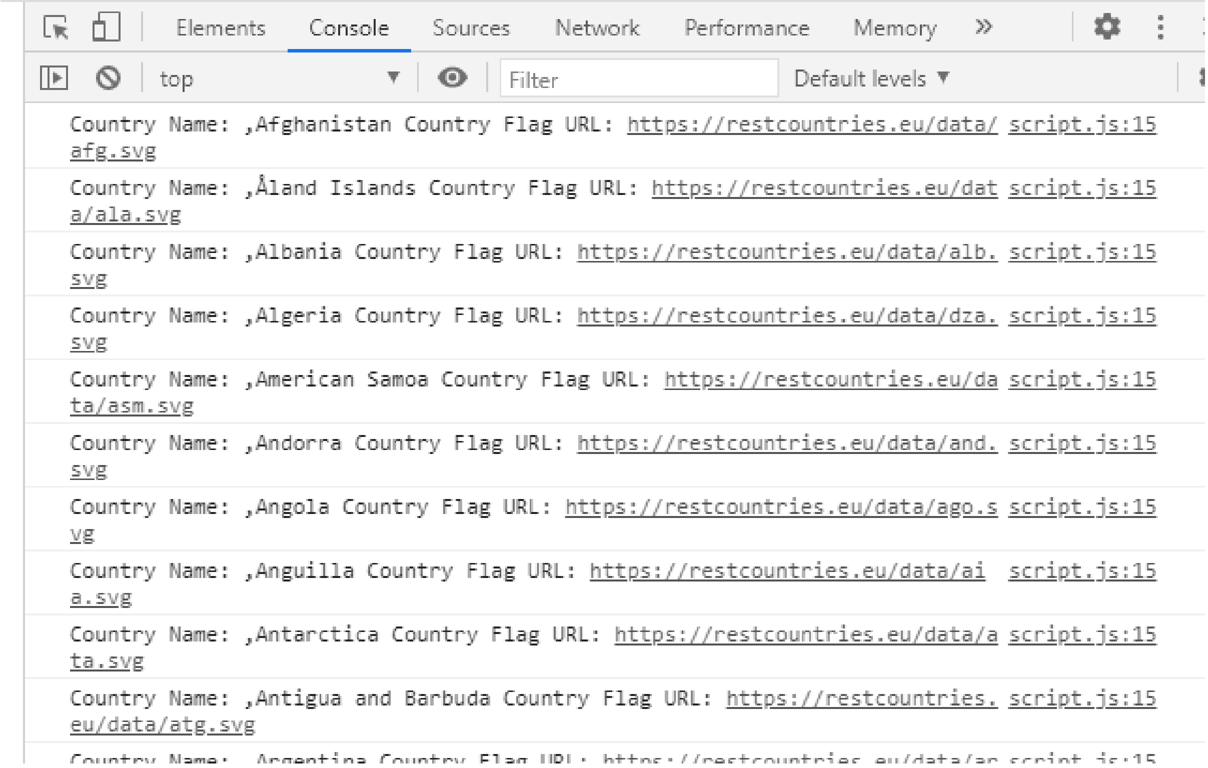
It also contains methods that are used for manipulating the DOM – Document Object Model. Example -> getElementById(), using query selectors etc.

Screen -> It has the information about the screen that is currently being used. It has the information like screen height, width, layout etc.

Extract and Print the values of country flag URLs in the console



```
request.onload = function(){
    let data = JSON.parse(this.response);
    for (let countries in data)
    {
        console.log('Country Name: '+','+ data[countries].name+' Country Flag
URL: '+data[countries].flag);
    }
    //console.log(data[0].flag);
}
```



```
Country Name: ,Afghanistan Country Flag URL: https://restcountries.eu/data/ script.js:15
afg.svg
Country Name: ,Åland Islands Country Flag URL: https://restcountries.eu/dat script.js:15
a/ala.svg
Country Name: ,Albania Country Flag URL: https://restcountries.eu/data/alb. script.js:15
svg
Country Name: ,Algeria Country Flag URL: https://restcountries.eu/data/dza. script.js:15
svg
Country Name: ,American Samoa Country Flag URL: https://restcountries.eu/da script.js:15
ta/asm.svg
Country Name: ,Andorra Country Flag URL: https://restcountries.eu/data/and. script.js:15
svg
Country Name: ,Angola Country Flag URL: https://restcountries.eu/data/ago.s script.js:15
vg
Country Name: ,Anguilla Country Flag URL: https://restcountries.eu/data/ai  script.js:15
a.svg
Country Name: ,Antarctica Country Flag URL: https://restcountries.eu/data/a script.js:15
ta.svg
Country Name: ,Antigua and Barbuda Country Flag URL: https://restcountries. script.js:15
eu/data/atg.svg
Country Name: ,Argentina Country Flag URL: https://restcountries.eu/data/ar script.js:15
```

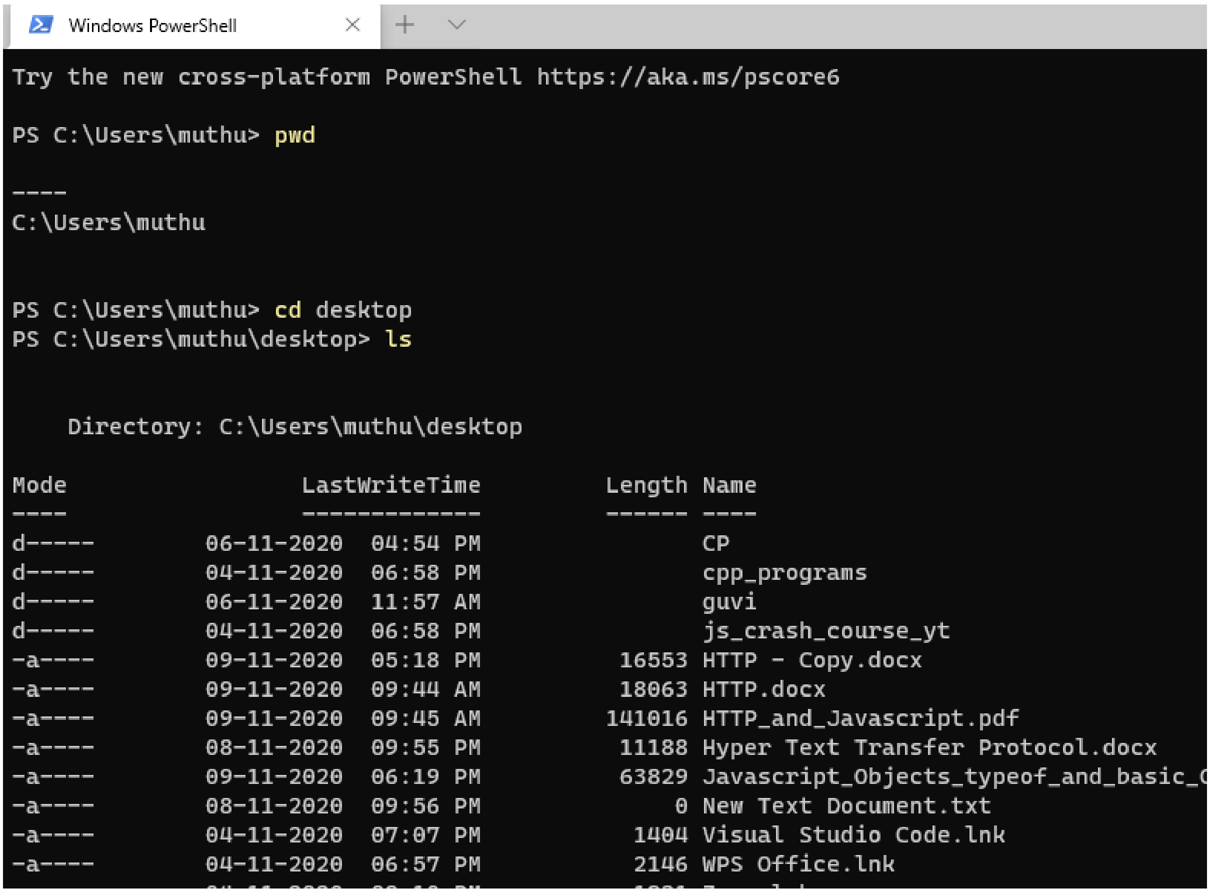
Copy by value a composite data type

Usually composite types can be copied only by reference. To copy by value the composite type can be stringified and then copied.

Example: JSON.stringify()

Else we can use third party libraries like ramda or lodash to perform copy by value operations

Basic CLI Commands



```
Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\muthu> pwd

----
C:\Users\muthu


PS C:\Users\muthu> cd desktop
PS C:\Users\muthu\desktop> ls


    Directory: C:\Users\muthu\desktop

Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----        06-11-2020  04:54 PM                CP
d-----        04-11-2020  06:58 PM                cpp_programs
d-----        06-11-2020  11:57 AM                guvi
d-----        04-11-2020  06:58 PM                js_crash_course_yt
-a----        09-11-2020  05:18 PM          16553 HTTP - Copy.docx
-a----        09-11-2020  09:44 AM          18063 HTTP.docx
-a----        09-11-2020  09:45 AM         141016 HTTP_and_Javascript.pdf
-a----        08-11-2020  09:55 PM          11188 Hyper Text Transfer Protocol.docx
-a----        09-11-2020  06:19 PM          63829 Javascript_Objects_typeof_and_basic_C
-a----        08-11-2020  09:56 PM              0 New Text Document.txt
-a----        04-11-2020  07:07 PM           1404 Visual Studio Code.lnk
-a----        04-11-2020  06:57 PM           2146 WPS Office.lnk
```