1.DIFFERRENCE BETWEEN COPY BY VALUE AND COPY BY REFERENCE

|  |  |
| --- | --- |
| Copy by value | Copy by reference |
| The primitive data types like numbers, strings, Boolean, null are copy copied by their values | Object ,function, array are copied by their reference |
| They are independent on each other. | here address is copied. The both refer to the same adress |
| Here value is copied | Here reference |
| Eg.  Let x=10;  Let y=x;  Let x=20;  Output:  X=20;  Y=10; | Eg:  Let x={ value:20};  Let y=x;  value=10;  output:  x= 10;  y=10; |

2. JSON.stringify , JSON.parse

JSON.stringify turns an object into a string.

JSON.parse turns a string into an object.

Combining them can turn an object into a string, and then reverse the process to create a brand new data structure.

Eg:

Numbers = [[1], [2]];

numbersCopy = JSON.parse(JSON.stringify(nestedNumbers));

numbersCopy[0].push(300);

console.log(Numbers, numbersCopy);

output:

1,2

1,300 2

These two arrays are completely separate.