Draw Global Execution Context for Below Codes and Explain Line by line.

console.log(a);  
var a = 10;  
console.log(a);   
a = 20;  
console.log(a);

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| **Memory phase** | .  **Code execution phase** |
| Var a=undefined  In the code 1st line is console.log(a);  Var a is hoisted but not assigned value so output is undefined  2nd line is var a = 10 ;  In the 2nd line changed in to var a =10; 2nd line declare the value  3rd line is console.log(a); output is 10  4th line is a = 20;  Re-assigned the 20  when its comes into the 4th line  5th line is console.log(a)  Output is 20 | Console.log(a);//undefined  Var a= 10;  Console.log(a);  a = 20;  Console.log(a);  **index.js:1 undefined**  **index.js:3 10**  **index.js:5 20** |

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console.log(b);  
var b = 5;  
var b = 15;  
console.log(b);  
b = b + 5;  
console.log(b);

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| **Memory phase** | **Code execution phase** |
| By default var b undefined    1st line is undefined because var b is hoisted but value is not assigned  so output is undefined  2nd line is var b value is assigned 5  The var declare the a value  3rd line var b value is re-assigned  Change the value 5 to 10  4th line the current value of b is 15 so output is 15  5th line identifier b value is b+5  The current value of b is 15 and add value 5 is equal to 20  6th line the current value is 20 so  Output is 20 | console.log(b); var b = 5; var b = 15; console.log(b); b = b + 5; console.log(b);  **index.js:1 undefined**  **index.js:4 15**  **index.js:6 20** |

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console.log(c);  
c = 30;  
var c;  
console.log(c);  
c = c \* 2;  
console.log(c);

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| Memory phase | Code execution phase |
| By default var c is undefined  1st line is undefined because var c  value is not assigned so output is undefined  2nd line c value is assigned 30  3rd line var c declaration that c value is 30  4th line the current value of c is 30 so output is 30  5th line re-assigning value of c the current value is 30 and multiply with 2 that value is 60  6th line the current value is 60 so that output is 60 | console.log(c); c = 30; var c; console.log(c); c = c \* 2; console.log(c);  **index.js:1 undefined**  **index.js:4 30**  **index.js:60** |

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var d;  
console.log(d);  
d = 50;  
console.log(d);  
d = d + 10;  
console.log(d);  
var d = 100;  
console.log(d);

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| Memory phase | Code execution phase |
| By default value var d is undefined  1st line declaration of variable d it without assigned value to variable  2ndline its current value is undefined because var d declare but not assign any value to the **d** so its output is undefined  3rd line d is assigned the value is 50  4th line the current d value is 50 so the output is 50  5th line this line re-assigning value to same identifier d its present value is 50 and add 10 its value is 60  6th line its current d value is 60 so output is 60  7th line re-assigning d value is 100  8th line the current d value is 100 so output is 100 | var d; console.log(d); d = 50; console.log(d); d = d + 10; console.log(d); var d = 100; console.log(d);  **index.js:2 undefined**  **index.js:4 50**  **index.js:6 60**  **index.js:8 100** |

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var e = 1;  
console.log(e);  
e = e + 1;  
console.log(e);  
var e = 10;  
console.log(e);  
e = e \* 2;  
console.log(e);

|  |  |
| --- | --- |
| Memory phase | Code execution phase |
| By default var e = undefined but  1st line **initialized the var e = 1**  **Its combination of both declaration**  **And assigned the value to e**  **2nd line the current e value is 1 so its output 1**  **3rd line is re-assigning the e value**  **Addition of current value and 1 is equal to 2**  **4th line the current value is 2 so output is 2**  **5th line re-assigning the var e value is 10**  **6th line its current e value is 10 so output is 10**  **7th line re-assigning the e value**  **Multiplication current value and 2 is equal to 20**  **8th line the current e value is 20 so output is 20** | var e = 1; console.log(e); e = e + 1; console.log(e); var e = 10; console.log(e); e = e \* 2; console.log(e);  index.js:2 1  index.js:4 2  index.js:6 10  index.js:8 20 |