

ASSIGNMENT 2

1.What will be the output?

Input: let x=5;

let y=x;

x=10;

console.log(x);

console.log(y);

Code:

```
let x=5;
let y=x;
x=10;
console.log(x);
console.log(y);
```

Output:

10

5

Explanation: The console.log(x) gives the output as 10, because initially the x value is 5, but then the value is updated to 10. And console.log(y) gives the output as 5, initially the x value is 5, that x value is assigned to the y. Since the x value is assigned to y, y stores the values of x, so the value of y is 5.

2.What will be the output?

Input: let obj1={name:"Alice"};

let obj2=obj1;

obj1.name="Bob"

console.log(obj1.name);

console.log(obj2.name);

Code:

```
let obj1={name:"Alice"};
let obj2=obj1;
obj1.name="Bob"
console.log(obj1.name);
console.log(obj2.name);
```

Output:

Bob

Bob

Explanation: The output of obj1.name is 'Bob', because obj1.name is assigned by 'Bob'. The output of obj2.name is also 'Bob', the reason is obj1.name is assigned by 'Bob' and obj2 is assigned by obj1 which stores 'Bob'.

3.What will be the output?

Input: let a='hello';

let b=42;

let c=true;

let d = {key:"value"};

let e=null;

let f=undefined;

console.log (typeof a);

console.log (typeof b);

console.log (typeof c);

console.log (typeof d);

console.log (typeof e);

console.log (typeof f);

Code:

```
let a='hello';
let b=42;
let c=true;
let d={key:"value"};
let e=null;
let f=undefined;
console.log(typeof a);
console.log(typeof b);
console.log(typeof c);
console.log(typeof d);
console.log(typeof e);
console.log(typeof f);
```

Output:

string

integer

Boolean

object

object

undefined

Explanation:

The output of `typeof a` is 'string', the output of `typeof b` is 'integer', the output of `typeof c` is 'boolean', the output of `typeof d` is 'object'.

4.What will be the output?

Input: `let numbers = [10,20,30,40,50];`

```
console.log(numbers[2]);  
console.log(numbers[0]);  
console.log(numbers[numbers.length-1]);
```

Code:

```
let numbers=[10,20,30,40,50];  
console.log(numbers[2]);  
console.log(numbers[0]);  
console.log(numbers[numbers.length-1]);
```

Output:

30

10

50

Explanation: The output of `numbers[2]` is 30, the output of `numbers[0]` is 10. And the output of `numbers[numbers.length-1]` is 50 because the index number starts from 0 (index0 → 10, index1 → 20, index2 → 30, index3 → 40, index4 → 50), the `numbers.length=5`, `length-1=4`, since the index4 is 50 the output is 50.

5.What will be the output?

Input: `let fruits=['apple', 'banana', 'mango'];`

```
fruits[1]='orange';  
console.log(fruits);
```

Code:

```
let fruits=['apple', 'banana', 'mango'];  
fruits[1]='orange';  
console.log(fruits);
```

Output:

['apple','orange','mango']

Explanation: The output of above code is ['apple','orange','mango'], initially the variable `fruits` store ['apple','banana','mango'] and then the `index1` is updated to 'orange' so the final output has updated `index1` value that is ['apple','orange','mango'].

6.What will be the output?

Input: let matrix = [
 [1,2,3],
 [4,5,6],
 [7,8,9]
];
console.log(matrix[1][2]);
console.log(matrix[2][0]);

Code:

```
let matrix = [  
  [1,2,3],  
  [4,5,6],  
  [7,8,9]  
];  
console.log(matrix[1][2]);  
console.log(matrix[2][0]);
```

Output:

6

7

Explanation: The output of matrix[1][2] is 6 because here the matrix indexing(row & column) starts from 0 and ends at 2, in matrix[1][2] the value of 1st row and 2nd column is 6. Similarly the output of matrix[2][0] is 7, the value of 2nd row and 0th column is 7.

7.What will be the output?

Input: let person={name:"John",age:25,city:"New York"};
console.log(person.name);
console.log(person.age);

Code:

```
let person={  
  name:"John",  
  age:25,  
  city:"New York"  
};  
console.log(person.name);  
console.log(person.age);
```

Output:

John

25

Explanation: The output of person.name is 'John', because name is assigned by John and the output of person.age is '25', because age is assigned by 25 value.

8.What will be the output?

Input: let car={ make: "Toyota",model: "Corella",year: 2021};

console.log(car["make"]);

console.log(car["model"]);

Code:

```
let car={
  make: "Toyota",
  model: "Corella",
  year: 2021
};
console.log(car["make"]);
console.log(car["model"]);
```

Output:

Toyota

Corella

Explanation: The output of car["make"] is Toyota because make is assigned by Toyota and output of car["model"] is Corella as model is assigned by Corella.

9.What will be the output?

Input: let book={ title:'The Great Gatsby', author:'F. Scott Fitzgerald'};

book.author='Anonymous';

console.log(book.author);

Code:

```
let book={
  title:'The Great Gatsby',
  author:'F. Scott Fitzgerald'
};
book.author='Anonymous';
console.log(book.author);
```

Output: Anonymous

Explanation: The output of book.author is 'Anonymous', initially the author is assigned by value 'F. Scott Fitzgerald' and then the book.author is assigned by 'Anonymous' the updated value of author is the output.

10.What will be the output?

Input: let student={name:"Alice",grade:"A"};

```
student.age=20;  
console.log(student);
```

Code:

```
let student={  
  name:"Alice",  
  grade:"A"  
};  
student.age=20;  
console.log(student);
```

Output:

```
{name:'Alice',grade:'A',age:20}
```

Explanation: The output of student is {name:'Alice',grade:'A',age:20}, initially student has only name and grade, later age is added to the student with value 20 so the final output after adding age to the student is {name:'Alice',grade:'A',age:20}.