DATA types in JS

1. What will be the output?

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

Output:10;

```
console.log(y);
```

output:5;

2. What will be the output?

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

console.log(obj2.name);
```

Output:

Bob,Bob;

3.
```
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

Number

Boolean

Object

object

undefined
```

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

```
5. let fruits=["apple","banana","mango"];
       fruits[1]="orange";
console.log(fruits); //output :["apple","banana","mango"]
```

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

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

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

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

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