

# ASSIGNMENT-5

for-in, for-of, array, string, object

## 1.What will be the output of the given Input?

### Input:

```
var car = {brand: 'Toyota', model: 'Corolla', year:2020 };
```

### Code:

```
var car = {brand: "Toyota", model: "Corolla", year:2020};
car.brand = car.brand.toUpperCase();
car.model = car.model.toUpperCase();
for (i in car) {
  console.log(`${i}:${car[i]}`);
}
```

### Output:

brand: TOYOTA

model: COROLLA

Year:2020

### Explanation:

- var car = {brand: 'Toyota', model: 'Corolla', year:2020}; initializes the car object.
- car.brand=car.brand.toUpperCase(); converts the brand property value to uppercase, so car.brand becomes 'TOYOTA'.
- car.model=car.model.toUpperCase(); converts the model property value to uppercase, so car.model becomes 'COROLLA'.
- The for...in loop iterates over each key in the car object. For each key, it prints the key and its corresponding value.

Here's what happens during each iteration:

- First iteration: 'i' is 'brand', so it prints brand: TOYOTA.
- Second iteration: 'i' is 'model', so it prints model: COROLLA.
- Third iteration: 'i' is 'year', so it prints year:2020.

So, final output will be:

brand: TOYOTA

model: COROLLA

year:2020

## 2.What will be the output of the given Input?

### Input:n

```
var numbers=[1,2,3,4,5]
```

**Code:**

```
var numbers = [1, 2, 3, 4, 5];
for (i of numbers) {
  console.log(`${i}-HI`);
}
```

**Output:**

1-HI

2-HI

3-HI

4-HI

5-HI

**Explanation:**

- var numbers = [1,2,3,4,5]; initializes an array numbers with the elements [1,2,3,4,5].
- The for...of loop iterates over each element in the numbers array.
- For each element 'i' in the array, console.log(`\${i}-HI`); logs the value of 'i' followed by '-HI' to the console.

**So the Output will be:**

1-HI

2-HI

3-HI

4-HI

5-HI

**3.What will be the output of the given Input?****Input:**

```
var fruits = ['Apple', 'Banana', 'Cherry', 'Date']
```

**Code:**

```
var fruits = ["Apple", "Banana", "Cherry", "Date"];
for (i in fruits) {
  console.log(`${i}-${fruits[i].toUpperCase()}`);
}
```

**Output:**

0-APPLE

1-BANANA

2-CHERRY

3-DATE

**Explanation:**

- `var fruits = ['Apple', 'Banana', 'Cherry', 'Date'];` initializes the fruits array with the elements ['Apple', 'Banana', 'Cherry', 'Date'].
- The `for...in` loop iterates over the properties of the fruits array. In this case, it iterates over the indices 0,1,2, and 3.
- Inside the loop, `console.log(`${i}-${fruits[i].toUpperCase()});` prints the current index 'i' followed by a hyphen(-) and the uppercase version of the fruit at that index.

Here's what happen in each iteration:

- First iteration(`i=0`):Prints 0-APPLE.
- Second iteration(`i=1`):Prints 1-BANANA.
- Third iteration(`i=2`):Prints 2-CHERRY.
- Fourth iteration(`i=3`): Prints 3-DATE.

**4.What will be the output for the given Input?**

Update the city property here

**Input:**

```
var obj={name: 'john',age:30,address:{city: 'Los Angles', state: 'CA'}}
```

**code:**

```
var obj = {
  name: "john",
  age: 30,
  address: { city: "Los Angles", state: "CA" },
};
obj.address.city = "San Fransico";
console.log(obj);
```

**Output:**

```
{name: 'john', age:30, address:{city: 'San Franciso', state: 'CA'}}
```

**Explanation:**

- `var obj = {name:'john',age:30,address:{city: 'Los Angles', state: 'CA'}};` initializes the obj object with properties including a nested address object.
- `obj.address.city = 'San Fransico';` updates the city property of the address object to 'San Fransico'.
- `console.log(obj);` outputs the updated obj object.
- So the output will be `: {name: 'john', age:30, address:{city: 'San Franciso', state: 'CA'}}.`

**5.What will be the output of given Input?**

Update the model and year here

**Input:**

```
var car = {brand: 'Toyota', model: 'Camry', year:2020}
```

**Code:**

```
var car = { brand: "Toyota", model: "Camry", year: 2020 };
car.model = "Corolla";
car.year = 2022;
console.log(car);
```

**Output:**

```
{brand: 'Toyota', model: 'Corolla', year:2022}
```

**Explanation:**

- `var car = {brand: 'Toyota', model: 'Camry', year:2020};` creates an object `car` with properties `brand`, `model`, and `year`.
- `car.model = 'Corolla';` updates the `model` property of the `car` object to `'Corolla'`.
- `car.year = 2022;` updates the `year` property of the `car` object to `2022`.
- `console.log(car);` outputs the updated `car` object to the console.
- So the final output will be: `{brand: 'Toyota', model: 'Corolla', year:2022}`.

**6.What will be the output for the given Input?**

Add an ingredient here

**Input:**

```
var recipe = {name: 'Pasta', servings: 2, ingredients: ['noodles', 'sauce']}
```

**Code:**

```
var recipe = { name: "Pasta", servings: 2, ingredients: ["noodles", "sauce"]
};
recipe.ingredients.push("cheese");
console.log(recipe);
```

**Output:**

```
{name: 'Pasta', servings: 2, ingredients: ['noodles', 'sauce', 'cheese']}
```

**Explanation:**

- `var recipe = {name: 'Pasta', servings: 2, ingredients: ['noodles', 'sauce']}`; initializes the `recipe` object.
- `recipe.ingredients.push('cheese');` adds the string `'cheese'` to the end of the `ingredients` array.
- `console.log(recipe);` prints the updated `recipe` object to the console.
- So, the final output will be: `{name: 'Pasta', servings: 2, ingredients: ['noodles', 'sauce', 'cheese']}`.

