

JAVASCRIPT for in, methods in objects and arrays.

1. Solve using for in loop.

i/p: var car={brand:'Toyota',model:'corolla',year:2020}

o/p: brand:Toyota

model:corolla

year:2020

solution:

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

```
for(i in car)
```

```
console.log(`${i}:${car[i]}`)
```

Explanation: Here at first, we taken an object key some features by using for in loop we want to print both keys and values so that's why here we used

(`\${i}:\${car[i]}`) at first iteration i will start with 0 so the first iteration is \${0} is brand and \${car[0]} is Toyota. In the second iteration i will update to 1 then \${1} is model and \$car[1] is corolla and in the last iteration I will be updated to 2 then \${2} is year and \$car[2] is 2020.

2. Solve using for in loop.

i/p: var num=[1,2,3,4,5];

o/p:

1-HI

2-HI

3-HI

4-HI

5-HI

solution:

```
var num=[1,2,3,4,5];
```

```
for(j in num){
```

```
    console.log(`${num[j]}-HI`)
```

```
}
```

Explanation: Here at first, we taken an array. By using for in loop for(j in num) we want to print each value with -HI so that's why we used (`\${num[j]}-HI`). Here in

the first iteration j will be 0 so $\text{\$}\{\text{num}[0]\}$ is 1 and added with -HI so the output for first iteration is 1-HI like this iteration goes on.

3. Solve using for in loop.

i/p: `var fruits=["apple","banana","cherry","date"]`

o/p:

0-apple

1-banana

2-cherry

3-date

solution:

```
var fruits=["apple","banana","cherry","date"]
```

```
for(k in fruits){
```

```
    console.log(`\${k}-\${fruits[k]}`)
```

```
}
```

Explanation: Here at first, we taken an array. By using for in loop `for(k in fruits)`

we want to print each value with index so that's why we used (``\${k}-`

`\${fruits[k]}``) at first iteration k is 0 so $\text{\$}\{0\}$ is 0 and $\text{\$}\{\text{fruits}[0]\}$ is apple so the

final output for first iteration is 0-apple. In the next iteration k is 1 so $\text{\$}\{1\}$ is 1

and $\text{\$}\{\text{fruits}[1]\}$ is banana so the final output for this iteration is 1-banana like this

iteration goes on.

4. Update the city property here

i/p: `var obj={ name1:'john',age:30,address:{`

`city:'los angeles',state:'ca'`

`}`

`}`

o/p:

`{`

`name1: 'john',`

```
age: 30,  
address: { city: 'san francisco', state: 'ca' }  
}
```

solution:

```
var obj={ name1:'john',age:30,address:{  
  city:'los angeles',state:'ca'  
}  
}
```

```
obj.address.city="san francisco";
```

```
console.log(obj);
```

Explanation: Here at first we created a object obj with one nested object address and then we want to update the value of key city in nested object so we used obj.address.city="san francisco" so the value of city is updated to san francisco.

5. Update the model and year here.

```
i/p: var car1={brand:'Toyota',model:'corolla',year:2020}
```

```
o/p: { brand: 'Toyota', model: 'camry', year: 2022 }
```

solution:

```
var car1={brand:'Toyota',model:'corolla',year:2020}
```

```
car1.model="camry";
```

```
car1.year=2022;
```

```
console.log(car1);
```

Explanation: At first we taken one object car1 with some properties then we want to update values of model and year so we used car1.model="camry" and car1.year=2022. So if we want to print object then it will print the updated values.

6. Add an ingredient here.

```
i/p: var recipe={name:'pasta',servings:2,ingredients:['noodles','sauce']};
```

```
o/p: {
```

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

solution:

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

Explanation: Here at first we created one object inside that object we added some properties among them one property ingredients is array now we want to add one more value to the ingredients at the end of array so we used push method i.e:
recipe.ingredients.push('cheese').