



@pyplane_code

Advanced work with objects

JS



Introduction

In this tutorial we will modify the data object (as a copy) presented below in various ways

```
const data = {  
  user: {  
    isLoggedIn: true,  
    username: 'js1223',  
    avatar: 'puppy',  
    favourites: ['python', 'javascript', 'java']  
  },  
  topResults: {  
    amount: 3,  
    scores: [120, 100, 99]  
  }  
}
```



Change isLoggedIn

First let's change the isLoggedIn property from true to false



```
const d = {  
  ...data,  
  ['user']: {  
    ...data['user'],  
    isLoggedIn : false,  
  }  
}  
  
console.log(d)
```

Output:

```
{  
  user:  
    {  
      isLoggedIn: false,  
      username: 'js1223',  
      avatar: 'puppy',  
      favourites: [ 'python', 'javascript', 'java' ]  
    },  
  topResults: { amount: 3, scores: [ 120, 100, 99 ] }  
}
```

Change isLoggedIn and avatar

Now let's have a look how to modify not only isLoggedIn but also the avatar

```
const d = {
  ...data,
  ['user']: {
    ...data['user'],
    isLoggedIn: false,
    avatar: 'kitty'
  }
}

console.log(d)
```

Output:

```
{
  user: {
    isLoggedIn: false,
    username: 'js1223',
    avatar: 'kitty',
    favourites: [ 'python', 'javascript', 'java' ]
  },
  topResults: { amount: 3, scores: [ 120, 100, 99 ] }
}
```


Change username and topResults amount

The next step is to change the username under the key user and amount under the key topResults

```
const d = {
  ...data,
  ['user']: {
    ...data['user'],
    username : 'helloworld99',
  },
  ['topResults']: {
    ...data['topResults'],
    amount: 4
  }
}

console.log(d)
```

Output:

```
{
  user: {
    isLoggedIn: false,
    username: 'helloworld99',
    avatar: 'puppy',
    favourites: [ 'python', 'javascript', 'java' ]
  },
  topResults: { amount: 4, scores: [ 120, 100, 99 ] }
}
```

Add score to scores

On this slide - let's extend the scores array by a new value at the end



```
const s = data['topResults']['scores']

const d = {
  ...data,
  ['topResults']: {
    ...data['topResults'],
    scores: [...s, 77]
  }
}

console.log(d)
```

Output:

```
{
  user: {
    isLoggedIn: true,
    username: 'js1223',
    avatar: 'puppy',
    favourites: [ 'python', 'javascript', 'java' ]
  },
  topResults: { amount: 4, scores: [ 120, 100, 99, 77 ] }
}
```

Delete scores and remove python from favourites

Now let's make the scores array empty and remove python from the favourites array

```
const favs = [...data['user']]['favourites']
const idx = favs.findIndex(el => el === 'python')
favs.splice(idx, 1)
```

```
const d = {
  ...data,
  ['user']: {
    ...data['user'],
    favourites: favs,
  },
  ['topResults']: {
    ...data['topResults'],
    scores: []
  }
}
```

```
console.log(d)
```

Output:

```
{
  user: {
    isLoggedIn: true,
    username: 'js1223',
    avatar: 'puppy',
    favourites: [ 'javascript', 'java' ]
  },
  topResults: { amount: 4, scores: [] }
}
```

Add info object

Let's add a new key next to the user and top results which will store some additional information

```
const d = {  
  ...data,  
  ['info']: {  
    date: '04-07-2022',  
    text: 'hello world'  
  }  
}
```

```
console.log(d)
```

Output:

```
{  
  user:  
    {  
      isLoggedIn: true,  
      username: 'js1223',  
      avatar: 'puppy',  
      favourites: [ 'python', 'javascript', 'java' ]  
    },  
  topResults: { amount: 4, scores: [ 120, 100, 99 ] },  
  info: {date: "04-07-2022", text: "hello world"}  
}
```


Delete top results

Finally let's delete the top results so that we can see only the user information

```
const d = {...data}
delete d['topResults']

console.log(d)
```

Output:

```
{
  user: {
    isLoggedIn: true,
    username: 'js1223',
    avatar: 'puppy',
    favourites: [ 'python', 'javascript', 'java' ]
  }
}
```