

JS Objects

What are Objects?

- Objects are unordered
- They are similar to dictionaries
- They are a collection of key-value pairs
 - Like a word and a definition in a dictionary
- They can store any data types

Why use Objects?

- Encapsulation and modularity
 - Ways to group functionality
 - Makes sharing your code easier (e.g. as a library)
- Give names to values
- Work with large amounts of data effectively

Creating Objects

```
var emptyObject = {};  
  
var movie = {  
  name: "Satantango",  
  director: "Bela Tarr",  
  duration: 432  
};
```

Creating Objects

```
var bookSeries = {  
  name: "In Search of Lost Time",  
  author: "Marcel Proust",  
  books: [  
    "Swann's Way",  
    "In the Shadow of Young Girls in Flower",  
    "The Guermites Way",  
    "Sodom and Gomorrah",  
    "The Prisoner",  
    "The Fugitive",  
    "Time Regained"  
  ]  
};
```

Accessing Values in an Object

```
var movie = {  
  name: "Satantango",  
  director: "Bela Tarr",  
  duration: 432  
};  
  
var movieName = movie.name;  
var movieDirector = movie.director;  
var movieDuration = movie.duration;
```

Accessing Values in an Object

```
var movie = {  
  name: "Satantango",  
  director: "Bela Tarr",  
  duration: 432  
};  
  
var movieName = movie["name"];  
var movieDirector = movie["director"];  
var movieDuration = movie["duration"];
```

Changing Values in an Object

```
var movie = {  
  name: "Satantango",  
  director: "Bela Tarr",  
  duration: 432  
};  
  
movie.name = "Sátántangó";  
movie.director = "Béla Tarr";  
movie.duration = 534;
```


Adding new values to an Object

```
var movie = {  
  name: "Satantango",  
  director: "Bela Tarr",  
  duration: 432  
};  
  
movie.language = "Hungarian";  
movie.rating = 21412523224616982; // Out of 5  
movie.parts = 12;
```

Methods

```
var person = {  
  firstName: "Jacques",  
  lastName: "Cousteau",  
  sayHi: function () {  
    console.log("Hi, I'm Jacques");  
  }  
};  
  
person.sayHi();
```

Nested Objects

```
var explorer = {  
  firstName: "Jacques",  
  lastName: "Cousteau",  
  birth: {  
    day: 11,  
    month: 6,  
    year: 1910  
  }  
};  
  
var birthDay = explorer.birth.day;  
var birthMonth = explorer.birth.month;  
var birthYear = explorer.birth.year;
```

Nested Objects

```
var marxFamily = [  
  { name: "Groucho", birthYear: 1890 },  
  { name: "Harpo", birthYear: 1888 },  
  { name: "Chico", birthYear: 1887 },  
  { name: "Zeppo", birthYear: 1901 },  
  { name: "Gummo", birthYear: 1893 }  
];  
  
for ( var i = 0; i < marxFamily.length; i++ ) {  
  var brother = marxFamily[ i ];  
  console.log( brother.name, brother.birthYear );  
}
```

In-class Exercise / Homework

Do the exercises found [here](#)

Resources

- [JavaScript.info](#)
- [Codecademy](#)
- [Speaking JavaScript](#)
- [Eloquent JavaScript](#)
- [Sitepoint](#)