

# Context: A Movie List

In this chapter, we'll start with an example program and improve it little by little, without adding any new functionality. This important programming task is called refactoring.

Our initial program is about recent Batman movies. The data comes under the form of an array of objects, with each object describing a movie.

```
const movieList = [  
  {  
    title: "Batman",  
    year: 1989,  
    director: "Tim Burton",  
    imdbRating: 7.6  
  },  
  {  
    title: "Batman Returns",  
    year: 1992,  
    director: "Tim Burton",  
    imdbRating: 7.0  
  },  
  {  
    title: "Batman Forever",  
    year: 1995,  
    director: "Joel Schumacher",  
    imdbRating: 5.4  
  },  
  {  
    title: "Batman & Robin",  
    year: 1997,  
    director: "Joel Schumacher",  
    imdbRating: 3.7  
  },  
  {  
    title: "Batman Begins",  
    year: 2005,  
    director: "Christopher Nolan",  
    imdbRating: 8.3  
  },  
  {  
    title: "The Dark Knight",  
    year: 2008,  
    director: "Christopher Nolan",  
    imdbRating: 9.0  
  },  
  {  
    title: "The Dark Knight Rises",  
    year: 2012,  
    director: "Christopher Nolan",  
    imdbRating: 8.5  
  }  
]
```



```
    imdbRating: 8.5  
  }  
];
```

And here is the rest of the program that uses this data to show some results about the movies. Check it out, it should be pretty self-explanatory.

```
// Get movie titles  
const titles = [];  
for (const movie of movieList) {  
  titles.push(movie.title);  
}  
console.log(titles);  
  
// Count movies by Christopher Nolan  
const nolanMovieList = [];  
for (const movie of movieList) {  
  if (movie.director === "Christopher Nolan") {  
    nolanMovieList.push(movie);  
  }  
}  
console.log(nolanMovieList.length);  
  
// Get titles of movies with an IMDB rating greater or equal to 7.5  
const bestTitles = [];  
for (const movie of movieList) {  
  if (movie.imdbRating >= 7.5) {  
    bestTitles.push(movie.title);  
  }  
}  
console.log(bestTitles);  
  
// Compute average movie rating of Christopher Nolan's movies  
let ratingSum = 0;  
let averageRating = 0;  
for (const movie of nolanMovieList) {  
  ratingSum += movie.imdbRating;  
}  
averageRating = ratingSum / nolanMovieList.length;  
console.log(averageRating);
```

