Destructuring Objects and Arrays

Variable names must be similar to the name defined in the list of objects to access.

const data = [

  {

    id: 1,

    title: "The Lord of the Rings",

    publicationDate: "1954-07-29",

    author: "J. R. R. Tolkien",

    genres: [

      "fantasy",

      "high-fantasy",

      "adventure",

      "fiction",

      "novels",

      "literature",

    ],

    hasMovieAdaptation: true,

    pages: 1216,

    translations: {

      spanish: "El señor de los anillos",

      chinese: "魔戒",

      french: "Le Seigneur des anneaux",

    },

    reviews: {

      goodreads: {

        rating: 4.52,

        ratingsCount: 630994,

        reviewsCount: 13417,

      },

      librarything: {

        rating: 4.53,

        ratingsCount: 47166,

        reviewsCount: 452,

      },

    },

  },

  {

    id: 2,

    title: "The Cyberiad",

    publicationDate: "1965-01-01",

    author: "Stanislaw Lem",

    genres: [

      "science fiction",

      "humor",

      "speculative fiction",

      "short stories",

      "fantasy",

    ],

    hasMovieAdaptation: false,

    pages: 295,

    translations: {},

    reviews: {

      goodreads: {

        rating: 4.16,

        ratingsCount: 11663,

        reviewsCount: 812,

      },

      librarything: {

        rating: 4.13,

        ratingsCount: 2434,

        reviewsCount: 0,

      },

    },

  },

  {

    id: 3,

    title: "Dune",

    publicationDate: "1965-01-01",

    author: "Frank Herbert",

    genres: ["science fiction", "novel", "adventure"],

    hasMovieAdaptation: true,

    pages: 658,

    translations: {

      spanish: "",

    },

    reviews: {

      goodreads: {

        rating: 4.25,

        ratingsCount: 1142893,

        reviewsCount: 49701,

      },

    },

  },

  {

    id: 4,

    title: "Harry Potter and the Philosopher's Stone",

    publicationDate: "1997-06-26",

    author: "J. K. Rowling",

    genres: ["fantasy", "adventure"],

    hasMovieAdaptation: true,

    pages: 223,

    translations: {

      spanish: "Harry Potter y la piedra filosofal",

      korean: "해리 포터와 마법사의 돌",

      bengali: "হ্যারি পটার এন্ড দ্য ফিলোসফার্স স্টোন",

      portuguese: "Harry Potter e a Pedra Filosofal",

    },

    reviews: {

      goodreads: {

        rating: 4.47,

        ratingsCount: 8910059,

        reviewsCount: 140625,

      },

      librarything: {

        rating: 4.29,

        ratingsCount: 120941,

        reviewsCount: 1960,

      },

    },

  },

  {

    id: 5,

    title: "A Game of Thrones",

    publicationDate: "1996-08-01",

    author: "George R. R. Martin",

    genres: ["fantasy", "high-fantasy", "novel", "fantasy fiction"],

    hasMovieAdaptation: true,

    pages: 835,

    translations: {

      korean: "왕좌의 게임",

      polish: "Gra o tron",

      portuguese: "A Guerra dos Tronos",

      spanish: "Juego de tronos",

    },

    reviews: {

      goodreads: {

        rating: 4.44,

        ratingsCount: 2295233,

        reviewsCount: 59058,

      },

      librarything: {

        rating: 4.36,

        ratingsCount: 38358,

        reviewsCount: 1095,

      },

    },

  },

];

function getBooks() {

  return data;

}

function getBook(*id*) {

  return data.find((*d*) => d.id === id);

}

//Destructuring Data

//General way

const books = getBooks();

const book = getBook(2);

// const author = book.author;

// const title = book.title;

// console.log(author, title);

// Destructiring way of Objects

const { title, author, pages, publicationDate, genres } = book;

console.log(author, title, pages, publicationDate, genres);

//General way for array

// const primaryGenres= genres[0];

// const secondaryGenres= genres[1];

// console.log(primaryGenres,secondaryGenres);

// Destructuring of arrays

const [primaryGenres, secondaryGenres] = genres;

console.log(primaryGenres, secondaryGenres);

Output:



Rest and Spread Operator

//Rest Operator

const [primaryGenres, secondaryGenres, ...otherGenres] = genres;

console.log(primaryGenres, secondaryGenres, otherGenres);

//Spread Operator

const newGenres= [...genres, "epic fantasy"];

console.log(newGenres);

Output: 

//Example-2

const updatedBook = {

  ...book,

  //Adding a new property

  moviePublicationDate: "19-12-2001",

  //Overiding the property

  pages: 230,

};

Template Literal

//Template Literals//Template Literals

const summary = ` ${title}, a ${pages}-page long book which is written by ${author} and published on ${

  publicationDate.split("-")[0]

}`;

Output:



Ternary Operator:

//Ternary Operator

const pagesRanges = pages > 1000 ? "over a thousand" : "less than 1000";

console.log(pagesRanges);

console.log(`the book has ${pagesRanges} pages`);

Output:



Arrow Functions:

// Arrow functions

//old way

function getYear(*str*) {

  return str.split("-")[0];

}

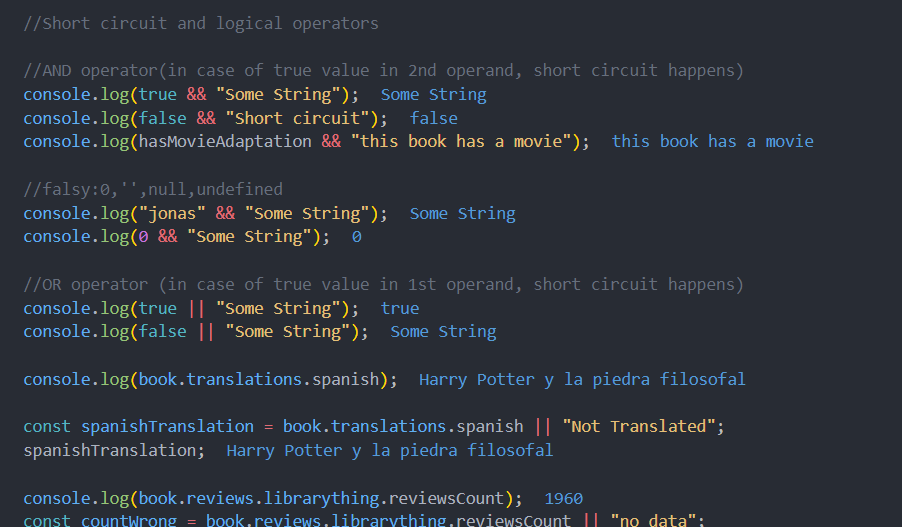
console.log(getYear(publicationDate));

//Arrow function way

const getYear\_1 = (*str*) => str.split("-")[0];

console.log(getYear\_1(publicationDate));

Short Circuiting and logical operations

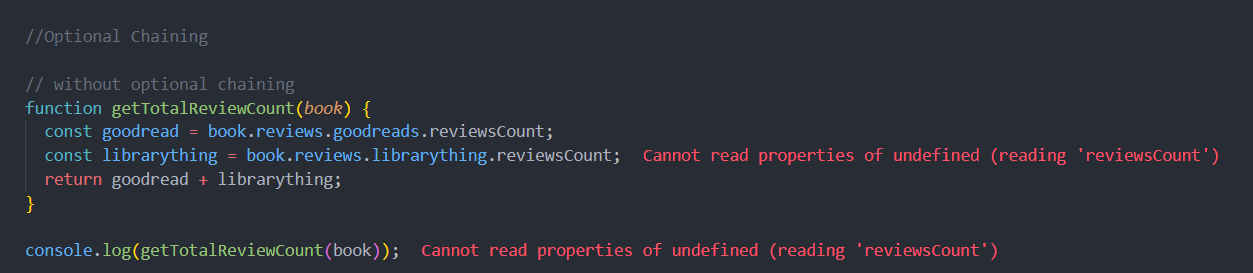


A computer screen with text on it

Description automatically generated

Optional Chaining

Without optional Chaining



With Optional Chaining

A screen shot of a computer program

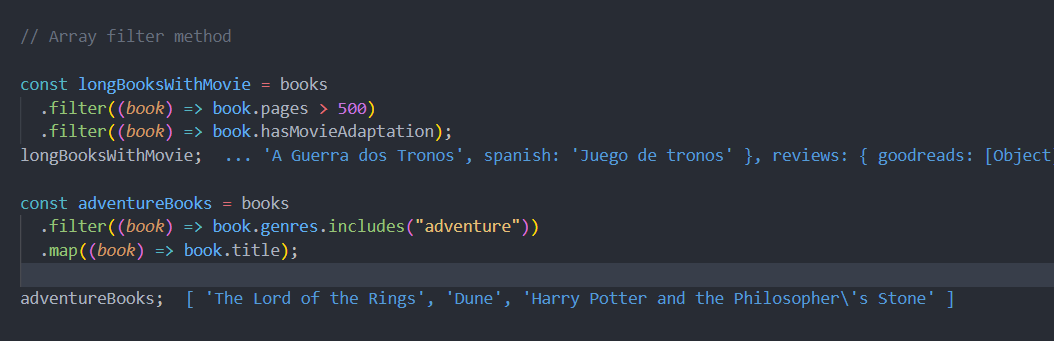
Description automatically generated

The Array Map Method

A computer screen shot of text

Description automatically generated

The Array Filter Method



The Array Reduce Method

A screen shot of a computer

Description automatically generated

The Array Sort Method

Unlike map, reduce and filter method, sort method is a mutable method where the original gets modified. (Explore slice()).

A computer screen shot of numbers and symbols

Description automatically generated

A computer screen shot of a program code

Description automatically generated

A black screen with white text

Description automatically generated

Working with Immutable arrays

A computer screen shot of a computer screen

Description automatically generated

A screen shot of a computer

Description automatically generated

JavaScript Promises

A screen shot of a computer

Description automatically generated

JavaScript Aync and Await

A screen shot of a computer

Description automatically generated