

# Music Player

## Array methods

Required methods for the following exercises: `map`, `filter`, `sort`, `reduce`, `spread`.

### 1. Retrieve Song Titles

- **Input:** An array of song objects.
- **Task:** Return a new array that contains only the titles of each song.
- **Example:**

- Input:

```
[{ title: "Bohemian Rhapsody" }, { title: "Hotel California" }, { title: "Imagine" }]
```

- Expected Output:

```
["Bohemian Rhapsody", "Hotel California", "Imagine"]
```

### 2. Filter Songs by Artist

- **Input:** An array of song objects, an artist name.
- **Task:** Return a new array containing only songs by the specified artist.
- **Example:**

- Input:

```
[{ title: "Bohemian Rhapsody", artist: "Queen" }, { title: "Hotel California", artist: "Eagles" }, { title: "Imagine", artist: "John Lennon" }], artist = "Queen"
```

- Expected Output: `[{ title: "Bohemian Rhapsody", artist: "Queen" }]`

### 3. Calculate Total Song Duration

- **Input:** An array of song objects.
- **Task:** Calculate and return the total duration of all songs.
- **Example:**

- Input:

```
[{ duration: "5:55" }, { duration: "6:30" }, { duration: "3:02" }]
```

- Expected Output: `908` (total duration in seconds)

## > Helper function for Exercise 3: Get Song Duration in Seconds

```
const getSongDurationInSeconds = (duration) => {  
  const [minutes, seconds] = duration.split(':');  
  return (parseInt(minutes) * 60 + parseInt(seconds));  
};
```

### 4. Combine Song Titles and Artists

- **Input:** An array of song objects.
- **Task:** Return a new array with strings combining the song title and its artist. Each string should be formatted as "{title} - {artist}".

- **Example:**

- Input:

```
[{ title: "Bohemian Rhapsody", artist: "Queen" }, { title: "Hotel  
California", artist: "Eagles" }]
```

- Expected Output:

```
["Bohemian Rhapsody - Queen", "Hotel California - Eagles"]
```

### 5. Update Song Duration

- **Input:** An array of song objects, a new duration value, and a song title.
- **Task:** Update the duration of the specified song in the array and return the updated array.

- **Example:**

- Input:

```
[{ title: "Bohemian Rhapsody", duration: "5:55" }, { title:  
"Hotel California", duration: "6:30" }], newDuration = "4:15",  
title = "Bohemian Rhapsody"
```

- Expected Output:

```
[{ title: "Bohemian Rhapsody", duration: "4:15" }, { title:  
"Hotel California", duration: "6:30" }]
```

### 6. Filter Songs by Duration

- **Input:** An array of song objects, a minimum duration value.

- **Task:** Return a new array containing only songs with a duration equal to or greater than the provided value.
- **Example:**
  - Input:

```
[{ duration: "5:55" }, { duration: "6:30" }, { duration: "3:02" }], minDuration = 4
```
  - Expected Output: 

```
[{ duration: "5:55" }, { duration: "6:30" }]
```

## 7. Retrieve Song Artists

- **Input:** An array of song objects.
- **Task:** Return a new array that contains all the artists of the songs.
- **Example:**
  - Input:

```
[{ artist: "Queen" }, { artist: "Eagles" }, { artist: "John Lennon" }]
```
  - Expected Output: 

```
["Queen", "Eagles", "John Lennon"]
```

## 8. Sort Songs by Duration

- **Input:** An array of song objects.
- **Task:** Return a new array sorted by song duration in ascending order.
- **Example:**
  - Input:

```
[{ duration: "5:55" }, { duration: "6:30" }, { duration: "3:02" }]
```
  - Expected Output:

```
[{ duration: "3:02" }, { duration: "5:55" }, { duration: "6:30" }]
```

## 9. Retrieve Song Lyrics

- **Input:** An array of song objects.
- **Task:** Return a new array that contains all the lyrics of the songs.
- **Example:**
  - Input:

```
[{ lyrics: "Is this the real life? Is this just fantasy?" }, { lyrics: "On a dark desert highway, cool wind in my hair" }]
```

- Expected Output:

```
["Is this the real life? Is this just fantasy?", "On a dark  
desert highway, cool wind in my hair"]
```