

# Arrays of Objects

array of objects

```
const songList3 = [  
  {  
    title: 'Piano Sonata No. 3',  
    artist: 'Beethoven',  
  },  
  {  
    title: 'Piano Sonata No. 7',  
    artist: 'Beethoven',  
  },  
  {  
    title: 'Piano Sonata No. 10',  
    artist: 'Beethoven',  
  },  
];
```

Array of 3 objects

array of objects

```
const songList3 = [
```

```
{  
  title: 'Piano Sonata No. 3',  
  artist: 'Beethoven',  
},  
{  
  title: 'Piano Sonata No. 7',  
  artist: 'Beethoven',  
},  
{  
  title: 'Piano Sonata No. 10',  
  artist: 'Beethoven',  
},  
];
```

single object

```
{  
  title: 'Piano Sonata No. 3',  
  artist: 'Beethoven',  
},
```

Song object:

- title
- artist

```
const songList3 = [  
  {  
    title: 'Piano Sonata No. 3',  
    artist: 'Beethoven',  
  },  
  {  
    title: 'Piano Sonata No. 7',  
    artist: 'Beethoven',  
  },  
  {  
    title: 'Piano Sonata No. 10',  
    artist: 'Beethoven',  
  },  
];
```

array of objects

```
for (let j = 0; j < songList3.length; j++) {  
  console.log('Song ' + j + ': Title: ' + songList3[j].title +  
              ': Artist: ' + songList3[j].artist);  
}
```



Song 0: Title: Piano Sonata No. 3: Artist: Beethoven  
Song 1: Title: Piano Sonata No. 7: Artist: Beethoven  
Song 2: Title: Piano Sonata No. 10: Artist: Beethoven

```
const playlistCollection = [
  {
    id: "01",
    title: "Beethoven Sonatas",
    songs: [
      {
        id: "04",
        title: "Piano Sonata No. 3",
        artist: "Beethoven",
      },
      {
        id: "05",
        title: "Piano Sonata No. 7",
        artist: "Beethoven",
      },
      {
        id: "06",
        title: "Piano Sonata No. 10",
        artist: "Beethoven",
      }
    ]
  },
  {
    id: "02",
    title: "Beethoven Concertos",
    songs: [
      {
        id: "07",
        title: "Piano Concerto No. 0",
        artist: "Beethoven",
      },
      {
        id: "08",
        title: "Piano Concerto No. 4",
        artist: "Beethoven",
      },
      {
        id: "09",
        title: "Piano Concerto No. 6",
        artist: "Beethoven",
      }
    ]
  },
  {
    id: "03",
    title: "Beethoven Variations",
    songs: [
      {
        id: "10",
        title: "Opus 34: Six variations on a theme in F major",
        artist: "Beethoven",
      },
      {
        id: "11",
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C majo",
        artist: "Beethoven",
      }
    ]
  }
]
];
```

## array of objects

## Array of 3 Objects

```
const playlistCollection = [
  {
    id: "01",
    title: "Beethoven Sonatas",
    songs: [
      {
        id: "04",
        title: "Piano Sonata No. 3",
        artist: "Beethoven",
      },
      {
        id: "05",
        title: "Piano Sonata No. 7",
        artist: "Beethoven",
      },
      {
        id: "06",
        title: "Piano Sonata No. 10",
        artist: "Beethoven",
      }
    ]
  },
  {
    id: "02",
    title: "Beethoven Concertos",
    songs: [
      {
        id: "07",
        title: "Piano Concerto No. 0",
        artist: "Beethoven",
      },
      {
        id: "08",
        title: "Piano Concerto No. 4",
        artist: "Beethoven",
      },
      {
        id: "09",
        title: "Piano Concerto No. 6",
        artist: "Beethoven",
      }
    ]
  },
  {
    id: "03",
    title: "Beethoven Variations",
    songs: [
      {
        id: "10",
        title: "Opus 34: Six variations on a theme in F major",
        artist: "Beethoven",
      },
      {
        id: "11",
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C majo",
        artist: "Beethoven",
      }
    ]
  }
];
```

## array of objects

## Array of 3 Objects

```
{
  id: "01",
  title: "Beethoven Sonatas",
  songs: [
    {
      id: "04",
      title: "Piano Sonata No. 3",
      artist: "Beethoven",
    },
    {
      id: "05",
      title: "Piano Sonata No. 7",
      artist: "Beethoven",
    },
    {
      id: "06",
      title: "Piano Sonata No. 10",
      artist: "Beethoven",
    }
  ]
}
```

Each object consists of

- id
- title
- songs - array of objects



```
{
  id: "01",
  title: "Beethoven Sonatas",
  songs: [
    {
      id: "04",
      title: "Piano Sonata No. 3",
      artist: "Beethoven",
    },
    {
      id: "05",
      title: "Piano Sonata No. 7",
      artist: "Beethoven",
    },
    {
      id: "06",
      title: "Piano Sonata No. 10",
      artist: "Beethoven",
    }
  ]
}
```

Each object consists of

- id
- title
- songs - array of objects

```
{  
  id: "04",  
  title: "Piano Sonata No. 3",  
  artist: "Beethoven",  
},
```

Song

- id
- title
- artist

```
const playlistCollection = [  
  ...  
];  
  
console.log (playlistCollection);
```



```
► [Object, Object, Object]
```

chrome console

```
const playlistCollection = [  
  {  
    id: "01",  
    title: "Beethoven Sonatas",  
    songs: [  
      {  
        id: "04",  
        title: "Piano Sonata No. 3",  
        artist: "Beethoven",  
      },  
      {  
        id: "05",  
        title: "Piano Sonata No. 7",  
        artist: "Beethoven",  
      },  
      {  
        id: "06",  
        title: "Piano Sonata No. 10",  
        artist: "Beethoven",  
      }  
    ]  
  },  
  {  
    id: "02",  
    title: "Beethoven Concertos",  
    songs: [  
      {  
        id: "07",  
        title: "Piano Concerto No. 0",  
        artist: "Beethoven",  
      },  
      {  
        id: "08",  
        title: "Piano Concerto No. 4",  
        artist: "Beethoven",  
      },  
      {  
        id: "09",  
        title: "Piano Concerto No. 6",  
        artist: "Beethoven",  
      }  
    ]  
  },  
  {  
    id: "03",  
    title: "Beethoven Variations",  
    songs: [  
      {  
        id: "10",  
        title: "Opus 34: Six variations on a theme in F major",  
        artist: "Beethoven",  
      },  
      {  
        id: "11",  
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major",  
        artist: "Beethoven",  
      }  
    ]  
  }  
];
```

```
const playlistCollection = [
  ...
];

for (let i = 0; i < playlistCollection.length; i++) {
  console.log(playlistCollection[i]);
}
```

```
const playlistCollection = [
  {
    id: "01",
    title: "Beethoven Sonatas",
    songs: [
      {
        id: "04",
        title: "Piano Sonata No. 3",
        artist: "Beethoven",
      },
      {
        id: "05",
        title: "Piano Sonata No. 7",
        artist: "Beethoven",
      },
      {
        id: "06",
        title: "Piano Sonata No. 10",
        artist: "Beethoven",
      },
    ],
  },
  {
    id: "02",
    title: "Beethoven Concertos",
    songs: [
      {
        id: "07",
        title: "Piano Concerto No. 0",
        artist: "Beethoven",
      },
      {
        id: "08",
        title: "Piano Concerto No. 4",
        artist: "Beethoven",
      },
      {
        id: "09",
        title: "Piano Concerto No. 6",
        artist: "Beethoven",
      },
    ],
  },
  {
    id: "03",
    title: "Beethoven Variations",
    songs: [
      {
        id: "10",
        title: "Opus 34: Six variations on a theme in F major",
        artist: "Beethoven",
      },
      {
        id: "11",
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major",
        artist: "Beethoven",
      },
    ],
  },
],
];
```



```
► Object {id: "01", title: "Beethoven Sonatas", songs: Array(3)}
► Object {id: "02", title: "Beethoven Concertos", songs: Array(3)}
► Object {id: "03", title: "Beethoven Variations", songs: Array(2)}
```

chrome console

```
const playlistCollection = [  
  ...  
];
```

```
for (let i = 0; i < playlistCollection.length; i++) {  
  console.log(playlistCollection[i].title)  
}
```

```
const playlistCollection = [  
  {  
    id: "01",  
    title: "Beethoven Sonatas",  
    songs: [  
      {  
        id: "04",  
        title: "Piano Sonata No. 3",  
        artist: "Beethoven",  
      },  
      {  
        id: "05",  
        title: "Piano Sonata No. 7",  
        artist: "Beethoven",  
      },  
      {  
        id: "06",  
        title: "Piano Sonata No. 10",  
        artist: "Beethoven",  
      },  
    ],  
  },  
  {  
    id: "03",  
    title: "Beethoven Variations",  
    songs: [  
      {  
        id: "10",  
        title: "Opus 34: Six variations on a theme in F major",  
        artist: "Beethoven",  
      },  
      {  
        id: "11",  
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major",  
        artist: "Beethoven",  
      },  
    ],  
  },  
];
```

...",  
No. 0",  
No. 4",  
No. 6",

```
  },  
  {  
    id: "03",  
    title: "Beethoven Variations",  
    songs: [  
      {  
        id: "10",  
        title: "Opus 34: Six variations on a theme in F major",  
        artist: "Beethoven",  
      },  
      {  
        id: "11",  
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major",  
        artist: "Beethoven",  
      },  
    ],  
  },  
];
```

Beethoven Sonatas

Beethoven Concertos

Beethoven Variations

chrome console

```
const playlistCollection = [
  {
    id: "01",
    title: "Beethoven Sonatas",
    songs: [
      {
        id: "04",
        title: "Piano Sonata No. 3",
        artist: "Beethoven",
      },
      {
        id: "05",
        title: "Piano Sonata No. 7",
        artist: "Beethoven",
      },
    ],
  },
  {
    id: "03",
    title: "Beethoven Variations",
    songs: [
      {
        id: "10",
        title: "Opus 34: Six variations on a theme in F major",
        artist: "Beethoven",
      },
      {
        id: "11",
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major",
        artist: "Beethoven",
      },
    ],
  },
  {
    id: "06",
    title: "Beethoven Concertos",
    songs: [
      {
        id: "07",
        title: "Piano Concerto No. 0",
        artist: "Beethoven",
      },
      {
        id: "08",
        title: "Piano Concerto No. 4",
        artist: "Beethoven",
      },
      {
        id: "09",
        title: "Piano Concerto No. 6",
        artist: "Beethoven",
      },
    ],
  },
]
```

```
const playlistCollection = [
  ...
];

for (let i = 0; i < playlistCollection.length; i++) {
  console.log(playlistCollection[i].title)
  for (let j=0; j < playlistCollection[i].songs.length; j++) {
    console.log(playlistCollection[i].songs[j]);
  }
}
```

```
{
  id: "03",
  title: "Beethoven Variations",
  songs: [
    {
      id: "10",
      title: "Opus 34: Six variations on a theme in F major",
      artist: "Beethoven",
    },
    {
      id: "11",
      title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major",
      artist: "Beethoven",
    },
  ],
}
```

Beethoven Sonatas

► Object {id: "04", title: "Piano Sonata No. 3", artist: "Beethoven"}

► Object {id: "05", title: "Piano Sonata No. 7", artist: "Beethoven"}

► Object {id: "06", title: "Piano Sonata No. 10", artist: "Beethoven"}

Beethoven Concertos

► Object {id: "07", title: "Piano Concerto No. 0", artist: "Beethoven"}

► Object {id: "08", title: "Piano Concerto No. 4", artist: "Beethoven"}

► Object {id: "09", title: "Piano Concerto No. 6", artist: "Beethoven"}

Beethoven Variations

► Object {id: "10", title: "Opus 34: Six variations on a theme in F major", artist: "Beethoven"}

► Object {id: "11", title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major", artist: "Beethoven"}

chrome console

```
const playlistCollection = [
  {
    id: "01",
    title: "Beethoven Sonatas",
    songs: [
      {
        id: "04",
        title: "Piano Sonata No. 3",
        artist: "Beethoven",
      },
      {
        id: "05",
        title: "Piano Sonata No. 7",
        artist: "Beethoven",
      },
    ],
  },
  {
    id: "02",
    title: "Beethoven Concertos",
    songs: [
      {
        id: "06",
        title: "Piano Concerto No. 1",
        artist: "Beethoven",
      },
      {
        id: "07",
        title: "Piano Concerto No. 2",
        artist: "Beethoven",
      },
      {
        id: "08",
        title: "Piano Concerto No. 3",
        artist: "Beethoven",
      },
      {
        id: "09",
        title: "Piano Concerto No. 4",
        artist: "Beethoven",
      },
      {
        id: "10",
        title: "Piano Concerto No. 5",
        artist: "Beethoven",
      },
    ],
  },
  {
    id: "03",
    title: "Beethoven Variations",
    songs: [
      {
        id: "11",
        title: "Opus 34: Six variations on a theme in F major",
        artist: "Beethoven",
      },
      {
        id: "12",
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C major",
        artist: "Beethoven",
      },
    ],
  },
];
```

```
const playlistCollection = [
  ...
];

for (let i = 0; i < playlistCollection.length; i++) {
  console.log(playlistCollection[i].title)
  for (let j=0; j < playlistCollection[i].songs.length; j++) {
    console.log(playlistCollection[i].songs[j].title);
    console.log(playlistCollection[i].songs[j].artist);
  }
}
```



Beethoven Sonatas	Beethoven
Piano Sonata No. 3	Beethoven
Beethoven	Beethoven
Piano Sonata No. 7	Beethoven
Beethoven	Beethoven
Piano Sonata No. 10	Beethoven
Beethoven	Beethoven
Beethoven Concertos	Beethoven
Piano Concerto No. 0	Beethoven
Beethoven	Beethoven
Piano Concerto No. 4	Beethoven
Beethoven	Beethoven
Piano Concerto No. 6	Beethoven
Beethoven	Beethoven
Beethoven Variations	Beethoven
Opus 34: Six variations on a theme in F major	Beethoven
Beethoven	Beethoven
Opus 120: Thirty-three variations on a waltz by Diabelli in C major	Beethoven
Beethoven	Beethoven



```
const playlistCollection = [
  {
    id: "01",
    title: "Beethoven Sonatas",
    songs: [
      {
        id: "04",
        title: "Piano Sonata No. 3",
        artist: "Beethoven",
      },
      {
        id: "05",
        title: "Piano Sonata No. 7",
        artist: "Beethoven",
      },
      {
        id: "06",
        title: "Piano Sonata No. 10",
        artist: "Beethoven",
      }
    ]
  },
  {
    id: "02",
    title: "Beethoven Concertos",
    songs: [
      {
        id: "07",
        title: "Piano Concerto No. 0",
        artist: "Beethoven",
      },
      {
        id: "08",
        title: "Piano Concerto No. 4",
        artist: "Beethoven",
      },
      {
        id: "09",
        title: "Piano Concerto No. 6",
        artist: "Beethoven",
      }
    ]
  },
  {
    id: "03",
    title: "Beethoven Variations",
    songs: [
      {
        id: "10",
        title: "Opus 34: Six variations on a theme in F major",
        artist: "Beethoven",
      },
      {
        id: "11",
        title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C majo",
        artist: "Beethoven",
      }
    ]
  }
];
```

```
▼ Array[3] ⓘ
  ▼ 0: Object
    id: "01"
    ▼ songs: Array[3]
      ▼ 0: Object
        artist: "Beethoven"
        id: "04"
        title: "Piano Sonata No. 3"
        ▶ __proto__: Object
      ▼ 1: Object
        artist: "Beethoven"
        id: "05"
        title: "Piano Sonata No. 7"
        ▶ __proto__: Object
      ▼ 2: Object
        artist: "Beethoven"
        id: "06"
        title: "Piano Sonata No. 10"
        ▶ __proto__: Object
        length: 3
        ▶ __proto__: Array[0]
        title: "Beethoven Sonatas"
        ▶ __proto__: Object
    ▼ 1: Object
      id: "02"
      ▼ songs: Array[3]
        ▼ 0: Object
          artist: "Beethoven"
          id: "07"
          title: "Piano Concerto No. 0"
          ▶ __proto__: Object
        ▼ 1: Object
          artist: "Beethoven"
          id: "08"
          title: "Piano Concerto No. 4"
          ▶ __proto__: Object
        ▼ 2: Object
          artist: "Beethoven"
          id: "09"
          title: "Piano Concerto No. 6"
          ▶ __proto__: Object
          length: 3
          ▶ __proto__: Array[0]
          title: "Beethoven Concertos"
          ▶ __proto__: Object
      ▼ 2: Object
        id: "03"
        ▼ songs: Array[2]
          ▼ 0: Object
            artist: "Beethoven"
            id: "10"
            title: "Opus 34: Six variations on a theme in F major"
            ▶ __proto__: Object
          ▼ 1: Object
            artist: "Beethoven"
            id: "11"
            title: "Opus 120: Thirty-three variations on a waltz by Diabelli in C majo"
            ▶ __proto__: Object
            length: 2
            ▶ __proto__: Array[0]
            title: "Beethoven Variations"
            ▶ __proto__: Object
          length: 3
          ▶ __proto__: Array[0]
```