

Lab 1: Fundamentals of JavaScript for MERN

Aim: Tasks:

- Create an array of movie objects, where each object has fields like title, genre, rating, and release year.
- Write functions to:
- Add a new movie to the collection.
- List all movies in a specific genre.
- Find the highest-rated movie in the collection.
- Use map() to create a list of all movie titles.
- Use filter() to find movies released after a specific year.
- Log the results to the console using template literals.

Input: // Create an array of movie objects

```
const movies = [  
  { title: "Chhichhore", genre: "Comedy", rating: 8.3, releaseYear: 2019 },  
  { title: "Fighter", genre: "Action", rating: 6.2, releaseYear: 2024 },  
  { title: "Jawan", genre: "Action", rating: 6.9, releaseYear: 2023 }  
];  
  
const addMovie = (collection, movie) => {  
  collection.push(movie);  
};  
  
addMovie(movies, { title: "Ram-Leela", genre: "Romance", rating: 6.4,  
releaseYear: 2013 });  
  
console.log("Movies after adding a new one:");  
console.log(movies);  
  
const listMoviesByGenre = (collection, genre) => {  
  return collection.filter(movie => movie.genre === genre);  
};  
  
console.log("Action movies:");  
console.log(listMoviesByGenre(movies, "Action"));
```

```
const findHighestRatedMovie = collection => {return
collection.reduce((highest, movie) => movie.rating > highest.rating ? movie :
highest);
};
console.log("Highest-rated movie:");
console.log(findHighestRatedMovie(movies));
const getMovieTitles = collection => {
return collection.map(movie => movie.title);
};
console.log("List of all movie titles:");
console.log(getMovieTitles(movies));
const moviesAfterYear = (collection, year) => {
return collection.filter(movie => movie.releaseYear > year);
};
console.log("Movies released after 2010:");
console.log(moviesAfterYear(movies, 2010));
console.log("Detailed movie list:");
movies.forEach(movie => {
  console.log(`${movie.title} (${movie.releaseYear}) is a ${movie.genre}
movie with a rating of
  ${movie.rating}.`);
});
```

Output:

Movies after adding a new one:

```
[
  {
    title: 'Chhichhore',
    genre: 'Comedy',
    rating: 8.3,
    releaseYear: 2019
  },
  { title: 'Fighter', genre: 'Action', rating: 6.2, releaseYear: 2024 },
  { title: 'Jawan', genre: 'Action', rating: 6.9, releaseYear: 2023 },
  {
    title: 'Ram-Leela',
    genre: 'Romance',
    rating: 6.4,
    releaseYear: 2013
  }
]
```

Action movies:

```
[
  { title: 'Fighter', genre: 'Action', rating: 6.2, releaseYear: 2024 },
  { title: 'Jawan', genre: 'Action', rating: 6.9, releaseYear: 2023 }
]
```

Highest-rated movie:

```
{
  title: 'Chhichhore',
  genre: 'Comedy',
  rating: 8.3,
  releaseYear: 2019
}
```

```
}
List of all movie titles:
[ 'Chhichhore', 'Fighter', 'Jawan', 'Ram-Leela' ]
Movies released after 2010:
[
  {
    title: 'Chhichhore',
    genre: 'Comedy',
    rating: 8.3,
    releaseYear: 2019
  },
  { title: 'Fighter', genre: 'Action', rating: 6.2, releaseYear: 2024 },
  { title: 'Jawan', genre: 'Action', rating: 6.9, releaseYear: 2023 },
  {
    title: 'Ram-Leela',
    genre: 'Romance',
    rating: 6.4,
    releaseYear: 2013
  }
]
```

Detailed movie list:

Chhichhore (2019) is a Comedy movie with a rating of 8.3.

Fighter (2024) is a Action movie with a rating of 6.2.

Jawan (2023) is a Action movie with a rating of 6.9.

Ram-Leela (2013) is a Romance movie with a rating of 6.4.

Learning outcome:

- List of all movies filtered by genre.
- Title of the highest-rated movie.
- List of all movie titles.
- Movies released after a specific year.
- Detailed log of all movies using template literals.