R.S.KARTHIKEYAN
25/08/2025

Interface

```
using Day12.DTO;
using Day12.Models;

namespace Day12.Interfaces
{
    public interface IMovieService
    {
        string AddSales(SalesDTO salesDto);
        IEnumerable<NewMovie> GetAllNewMovies();
        IEnumerable<NewMovie> GetAllNewMoviesByDirector(string director);
        string AddDirector(Director director);
        string AddNewMovie(MovieDirectorEntry movieDirectorEntry);
        string AddMovie(Movie movie);
        IEnumerable<Movie> GetMovies();
        Movie? GetById(int movieId);
        string DeleteById(int movieId);
        IEnumerable<Movie> GetMoviesOrderedByCollection(bool isAscending);
        IEnumerable<Movie> GetTop5Collection();
        object GetCollectionDetails();
        IEnumerable<object> GetByJoin();
    }
}
```

Controller

```
using Day12.DTO;
using Day12.Interfaces;
using Day12.Models;
using Day12.Services;
using Microsoft.AspNetCore.Authorization;
using Microsoft.AspNetCore.Mvc;

namespace Day12.Controllers
{
    [ApiController]
    [Route("[controller]")]
    public class MovieController : ControllerBase
    {
        private readonly IMovieService _movieService;

        public MovieController(IMovieService movieService)
        {
            _movieService = movieService;
        }

        [HttpPost("AddNewMovieSales")]
        public IActionResult AddSales(SalesDTO sales_dto)
        {
            var result = _movieService.AddSales(sales_dto);
            if (result == "Movie Not found") return NotFound(result);
            return Ok(result);
        }

        [HttpGet("GetAllNewMovies")]
        public IActionResult GetAllNewMovies() => Ok(_movieService.GetAllNewMovies());

        [HttpGet("FetchAllNewMoviesByAuthor")]
        public IActionResult GetAllNewMoviesByAuthor(string director) =>
Ok(_movieService.GetAllNewMoviesByDirector(director));

        [HttpPost("AddDirector")]
        public IActionResult AddDirector(Director director) =>
Ok(_movieService.AddDirector(director));

        [HttpPost("AddNewMovie")]
        public IActionResult AddNewMovie(MovieDirectorEntry entry)
        {
            var result = _movieService.AddNewMovie(entry);
            if (result == "Invalid Director") return NotFound(result);
            return Ok(result);
        }

        [HttpPost("AddMovie")]
        public IActionResult AddMovie(Movie movie) => Ok(_movieService.AddMovie(movie));

        [HttpGet("GetMovies")]
        public IActionResult GetMovies() => Ok(_movieService.GetMovies());

        [HttpGet("GetbyID")]
        public IActionResult GetById(int movieId)
        {
            var movie = _movieService.GetById(movieId);
            if (movie == null) return NotFound("Movie not found");
            return Ok(movie);
        }
```

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```
        [HttpDelete("DeletebyId")]
        public IActionResult DeleteMovie(int movieId)
        {
            var result = _movieService.DeleteById(movieId);
            if (result == "Movie not found") return NotFound(result);
            return Ok(result);
        }

        [HttpPost("GetBooksOrderedByCollection")]
        public IActionResult GetMoviesOrderedByCollection([FromBody] bool isAscending) =>
            Ok(_movieService.GetMoviesOrderedByCollection(isAscending));

        [HttpGet("GetTop5Collection")]
        public IActionResult GetTop5Collection() => Ok(_movieService.GetTop5Collection());

        [HttpGet("GetCollectionDetails")]
        public IActionResult GetCollectionDetails() => Ok(_movieService.GetCollectionDetails());

        [HttpGet("GetByJoin")]
        public IActionResult GetByJoin() => Ok(_movieService.GetByJoin());
    }
}
```

Service

```
using Day12.Context;
using Day12.DTO;
using Day12.Interfaces;
using Day12.Models;
using Microsoft.EntityFrameworkCore;

namespace Day12.Services
{
    public class MovieService : IMovieService
    {
        private readonly MyAppDbContext _appDbContext;

        public MovieService(MyAppDbContext appDbContext)
        {
            _appDbContext = appDbContext;
        }

        public string AddSales(SalesDTO sales_dto)
        {
            var movie = _appDbContext.NewMovies.FirstOrDefault(x => x.NewMovieId ==
sales_dto.NewMovieId);
            if (movie == null) return "Movie Not found";

            Sales sale = new Sales() { NewMovieId = movie.NewMovieId, Num_of_Days =
sales_dto.Num_Of_Days, year = sales_dto.Year };
            _appDbContext.MovieSaless.Add(sale);
            _appDbContext.SaveChanges();
            return "Sales Details Added Successfully";
        }

        public IEnumerable<NewMovie> GetAllNewMovies()
        {
            return _appDbContext.NewMovies.Include(x => x.director).ToList();
        }

        public IEnumerable<NewMovie> GetAllNewMoviesByDirector(string director)
        {
            return _appDbContext.NewMovies.Include(x => x.director)
                                .Where(y => y.director.DirectorName == director)
                                .ToList();
        }

        public string AddDirector(Director director)
        {
            _appDbContext.Directors.Add(director);
            _appDbContext.SaveChanges();
            return "Director Added";
        }

        public string AddNewMovie(MovieDirectorEntry movieDirectorEntry)
        {
            var dir = _appDbContext.Directors.FirstOrDefault(x => x.DirectorName ==
movieDirectorEntry.DirectorName);
            if (dir == null) return "Invalid Director";

            NewMovie newMovie = new NewMovie()
            {
                MovieName = movieDirectorEntry.MovieName,
                Collection = movieDirectorEntry.Collection,
                DirectorId = dir.DirectorId
            };
            _appDbContext.NewMovies.Add(newMovie);
```

```
    _appDbContext.SaveChanges();
    return "Movie Added";
}

public string AddMovie(Movie movie)
{
    _appDbContext.Movies.Add(movie);
    _appDbContext.SaveChanges();
    return "Movie Added";
}

public IEnumerable<Movie> GetMovies()
{
    return _appDbContext.Movies.ToList();
}

public Movie? GetById(int movieId)
{
    return _appDbContext.Movies.FirstOrDefault(x => x.Id == movieId);
}

public string DeleteById(int movieId)
{
    var movie = _appDbContext.Movies.FirstOrDefault(x => x.Id == movieId);
    if (movie == null) return "Movie not found";

    _appDbContext.Movies.Remove(movie);
    _appDbContext.SaveChanges();
    return "Movie Deleted";
}

public IEnumerable<Movie> GetMoviesOrderedByCollection(bool isAscending)
{
    return isAscending
        ? _appDbContext.Movies.OrderBy(m => m.Collection).ToList()
        : _appDbContext.Movies.OrderByDescending(m => m.Collection).ToList();
}

public IEnumerable<Movie> GetTop5Collection()
{
    return _appDbContext.Movies.OrderByDescending(m => m.Collection).Take(5).ToList();
}

public object GetCollectionDetails()
```

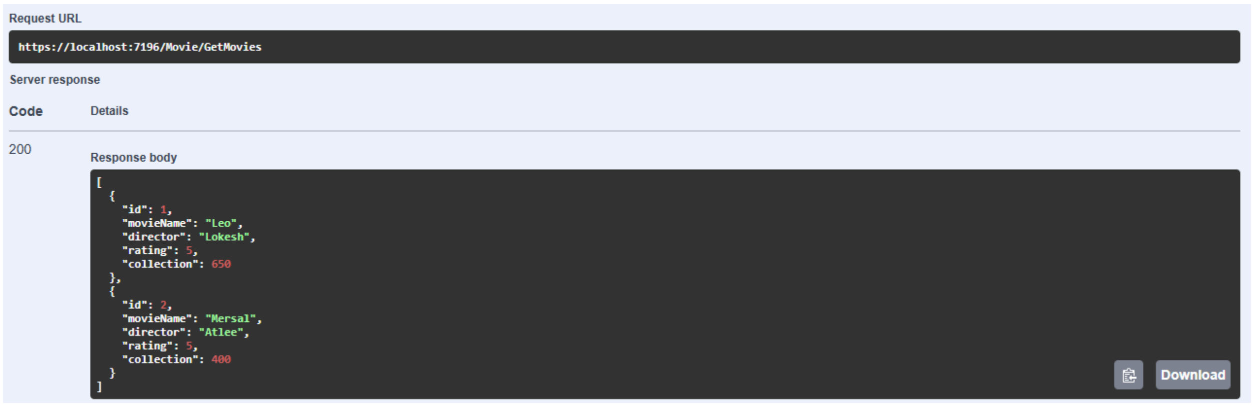
```
        {
            var totalCollection = _appDbContext.Movies.Sum(m => m.Collection);
            var avgCollection = _appDbContext.Movies.Any() ?
Math.Round(_appDbContext.Movies.Average(m => m.Collection), 2) : 0;

            return new
            {
                TotalCollection = totalCollection + " Cr",
                AverageCollection = avgCollection
            };
        }

        public IEnumerable<object> GetByJoin()
        {
            var joined = _appDbContext.NewMovies.Join(_appDbContext.Directors,
                m => m.DirectorId,
                d => d.DirectorId,
                (m, d) => new { m.MovieName, d.DirectorName });

            return joined.ToList();
        }
    }
}
```

Output



```
https://localhost:7196/Movie/GetMovies
```

```
[
  {
    "id": 1,
    "movieName": "Leo",
    "director": "Lokesh",
    "rating": 5,
    "collection": 650
  },
  {
    "id": 2,
    "movieName": "Mersal",
    "director": "Atlee",
    "rating": 5,
    "collection": 400
  }
]
```

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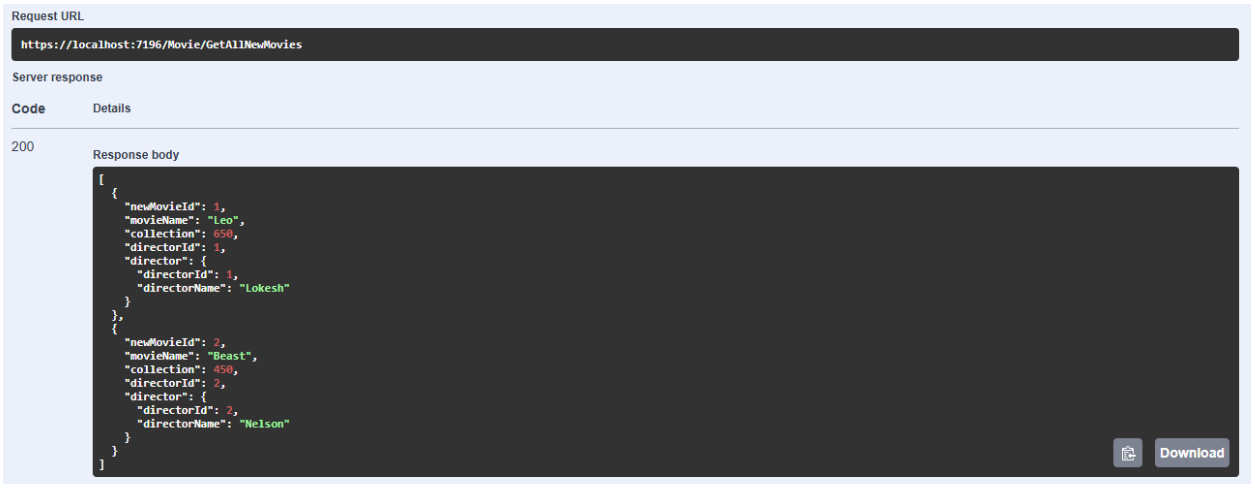
Request URL

```
https://localhost:7196/Movie/GetAllNewMovies
```

Server response

Code Details

200

Response body

```
[
  {
    "newMovieId": 1,
    "movieName": "Leo",
    "collection": 650,
    "directorId": 1,
    "director": {
      "directorId": 1,
      "directorName": "Lokesh"
    }
  },
  {
    "newMovieId": 2,
    "movieName": "Beast",
    "collection": 450,
    "directorId": 2,
    "director": {
      "directorId": 2,
      "directorName": "Nelson"
    }
  }
]
```