

API Documentation

Overview

The Movie App uses the [TMDB \(The Movie Database\) API](#) to fetch movie and TV show data. This document describes the API integration layer implemented in `app/lib/util/api.dart`.

APIRunner Class

The `APIRunner` class provides methods to interact with the TMDB API.

Configuration

```
class APIRunner {  
    static const String apiKey = 'YOUR_API_KEY';  
    static const String baseUrl = 'https://api.themoviedb.org/3';  
}
```

Movie Endpoints

Get Upcoming Movies

Fetches a list of upcoming movies.

```
Future<List<Movie>?> getUpcomingMovies()
```

Returns: List of `Movie` objects or `null` on error.

API Endpoint: GET /movie/upcoming

Get Action Movies

Fetches action movies (genre ID: 28).

```
Future<List<Movie>> getActionMovies()
```

Returns: List of `Movie` objects.

API Endpoint: GET /discover/movie?with_genres=28

Get Comedy Movies

Fetches comedy movies (genre ID: 35).

```
Future<List<Movie>> getComedyMovies()
```

Returns: List of `Movie` objects.

API Endpoint: GET /discover/movie?with_genres=35

Get Horror Movies

Fetches horror movies (genre ID: 27).

```
Future<List<Movie>> getHorrorMovies()
```

Returns: List of Movie objects.

API Endpoint: GET /discover/movie?with_genres=27

Get Drama Movies

Fetches drama movies (genre ID: 18).

```
Future<List<Movie>> getDramaMovies()
```

Returns: List of Movie objects.

API Endpoint: GET /discover/movie?with_genres=18

Get Animation Movies

Fetches animation movies (genre ID: 16).

```
Future<List<Movie>> getAnimationMovies()
```

Returns: List of Movie objects.

API Endpoint: GET /discover/movie?with_genres=16

Get Romance Movies

Fetches romance movies (genre ID: 10749).

```
Future<List<Movie>> getRomanceMovies()
```

Returns: List of Movie objects.

API Endpoint: GET /discover/movie?with_genres=10749

Search Movies

Searches for movies by query string.

```
Future<List<Movie>> searchMovie(String query)
```

Parameters:

- `query` - Search term (URL encoded automatically)

Returns: List of matching `Movie` objects or `null` on error.

API Endpoint: GET /search/movie?query={query}

TV Show Endpoints

Get Popular Shows

Fetches popular TV shows.

```
Future<List<Movie>?> getPopularShows()
```

Returns: List of `Movie` objects (using `Movie` model for consistency).

API Endpoint: GET /tv/popular

Get Top Rated TV

Fetches top-rated TV shows.

```
Future<List<Movie>?> getTopRatedTV()
```

Returns: List of `Movie` objects.

API Endpoint: GET /tv/top_rated

Get Action Shows

Fetches action & adventure TV shows (genre ID: 10759).

```
Future<List<Movie>> getActionShows()
```

Returns: List of `Movie` objects.

API Endpoint: GET /discover/tv?with_genres=10759

Get Comedy Shows

Fetches comedy TV shows (genre ID: 35).

```
Future<List<Movie>> getComedyShows()
```

Returns: List of `Movie` objects.

API Endpoint: GET /discover/tv?with_genres=35

Get Drama Shows

Fetches drama TV shows (genre ID: 18).

```
Future<List<Movie>> getDramaShows()
```

Returns: List of `Movie` objects.

API Endpoint: GET /discover/tv?with_genres=18

Get Animation Shows

Fetches animation TV shows (genre ID: 16).

```
Future<List<Movie>> getAnimationShows()
```

Returns: List of `Movie` objects.

API Endpoint: GET /discover/tv?with_genres=16

Get Romance Shows

Fetches romance TV shows (genre ID: 10749).

```
Future<List<Movie>> getRomanceShows()
```

Returns: List of `Movie` objects.

API Endpoint: GET /discover/tv?with_genres=10749

Search TV Shows

Searches for TV shows by query string.

```
Future<List<Movie>> searchTVShow(String query)
```

Parameters:

- `query` - Search term (URL encoded automatically)

Returns: List of matching `Movie` objects or `null` on error.

API Endpoint: GET /search/tv?query={query}

Data Models

Movie Model

The `Movie` class represents both movies and TV shows.

```
class Movie {  
    final int id;  
    final String title;  
    final double voteAverage;
```

```
    final String releaseDate;
    final String overview;
    final String posterPath;
}
```

JSON Mapping:

Property	Movie JSON Field	TV Show JSON Field
id	id	id
title	title	name
voteAverage	vote_average	vote_average
releaseDate	release_date	first_air_date
overview	overview	overview
posterPath	poster_path	poster_path

Review Model

The `Review` class represents user reviews.

```
class Review {
    final int? id;
    final String movie;
    final String? user_id;
    final String? username;
    final String comment;
    final int? rating;
}
```

Image URLs

Poster images are constructed using the TMDB image base URL:

```
String getPosterUrl(String posterPath) {
    return 'https://image.tmdb.org/t/p/w500$posterPath';
}
```

Available sizes: w92 , w154 , w185 , w342 , w500 , w780 , original

Error Handling

All API methods handle errors gracefully:

- Network errors return `null` or empty list
- Invalid JSON responses are caught and logged

- Missing fields use default values (empty string, 0, etc.)

```
try {
    final response = await http.get(Uri.parse(url));
    if (response.statusCode == 200) {
        // Parse response
    } else {
        print('Request failed with status: ${response.statusCode}');
    }
} catch (e) {
    print('Error: $e');
    return null;
}
```

Rate Limiting

TMDB API has rate limits:

- 40 requests per 10 seconds per IP address

The app handles this gracefully by:

- Caching results where appropriate
- Showing loading states during API calls
- Displaying error messages on failure

Genre IDs Reference

Movie Genres

Genre	ID
Action	28
Comedy	35
Drama	18
Horror	27
Animation	16
Romance	10749

TV Show Genres

Genre	ID
Action & Adventure	10759
Comedy	35
Drama	18

Animation	16
Romance	10749
Mystery	9648