

User Manual

Database Management Systems - Assignment 3

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1. Application Overview

MovieFinder is a web application designed for **movie enthusiasts** who want to discover and explore films based on various criteria such as plot themes, actors, directors, genres, and ratings. The application provides powerful search and analysis tools to help users find their next favorite movie.

Key Capabilities

- Search movies by plot keywords and themes
- Find movies by title
- Analyze genre trends and ratings
- Discover actor collaborations
- Explore director filmographies

2. Application Features

Feature 1 — Plot Keyword Search

Search movies by keywords in the plot overview using MySQL FULLTEXT. Example inputs: "space exploration", "time travel", "artificial intelligence". Results are ranked by match relevance and then by rating.

Example: search for "*space*" returns Interstellar, WALL·E, The Martian, etc.

Use Case: Discover themed movies (e.g., sci-fi about space).

```
Backend Query: query_1(connection, keywords)
```

Feature 2 — Title Search

Full-text search over `movies.title` to find exact or partial title matches. Useful for quick lookups and fuzzy title matching.

Example: search for "*Star*" returns Star Wars, Star Trek, etc.

```
Backend Query: query_2(connection, search_term)
```

Feature 3 — Genre Analytics

Aggregated metrics per genre: average rating, movie count, total and average revenue. Can filter to genres with at least N movies to avoid small-sample noise.

Use Case: Rank genres by average rating or revenue to identify top-performing categories.

```
Backend Query: query_3(connection, min_movies)
```

Feature 4 — Actor Collaboration Finder

Find actors who co-appear frequently with a given actor. The query uses self-joins on `movie_cast` and groups by co-actor to count shared movies.

Use Case: List actors who worked with "Tom Hanks" at least 2 times.

```
Backend Query: query_4(connection, actor_name, min_collaborations)
```

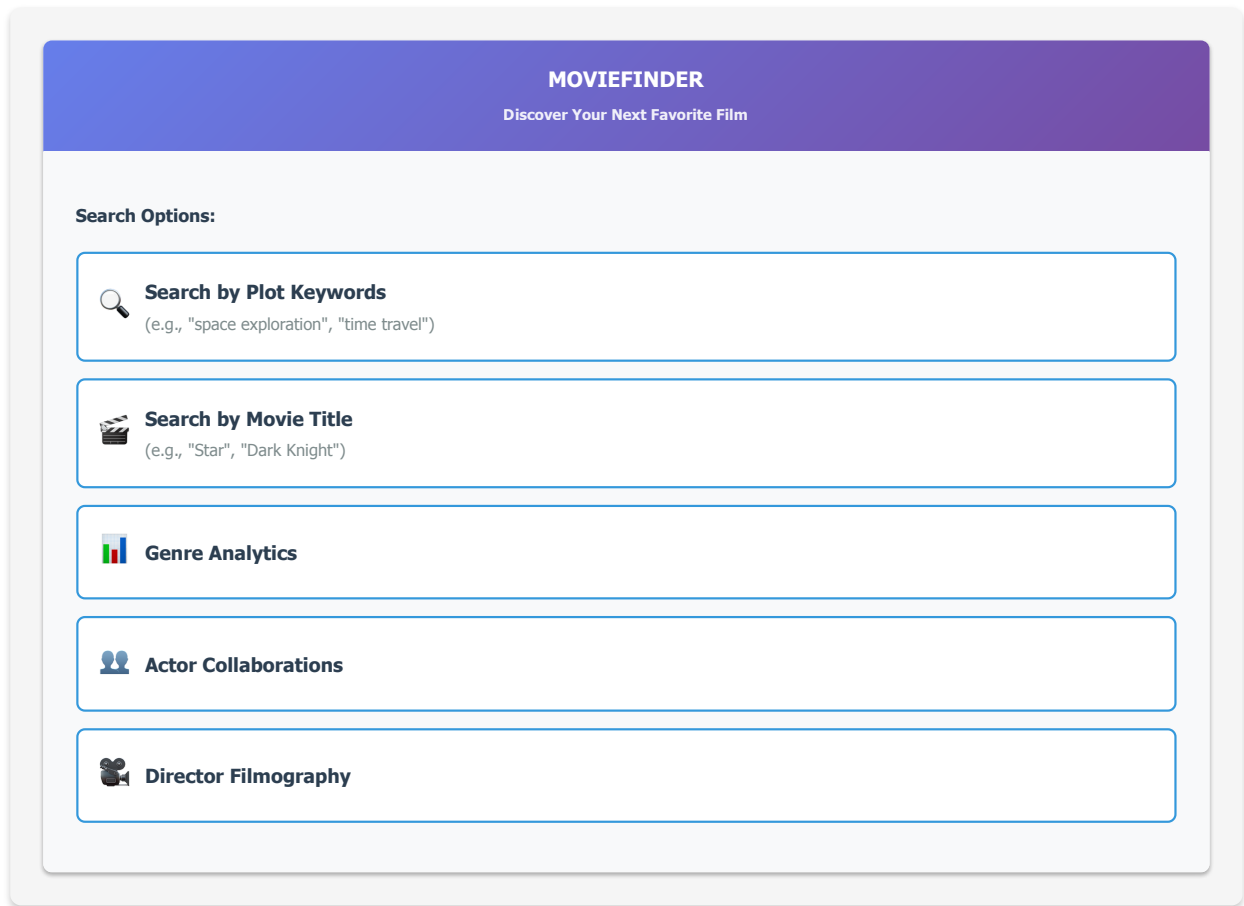
Feature 5 — Director Filmography Explorer

List a director's films meeting a minimum rating threshold and include top-billed cast. Uses joins between `movies`, `movie_crew` (filtered by job = 'Director') and a nested subquery on `movie_cast` to collect lead actors.

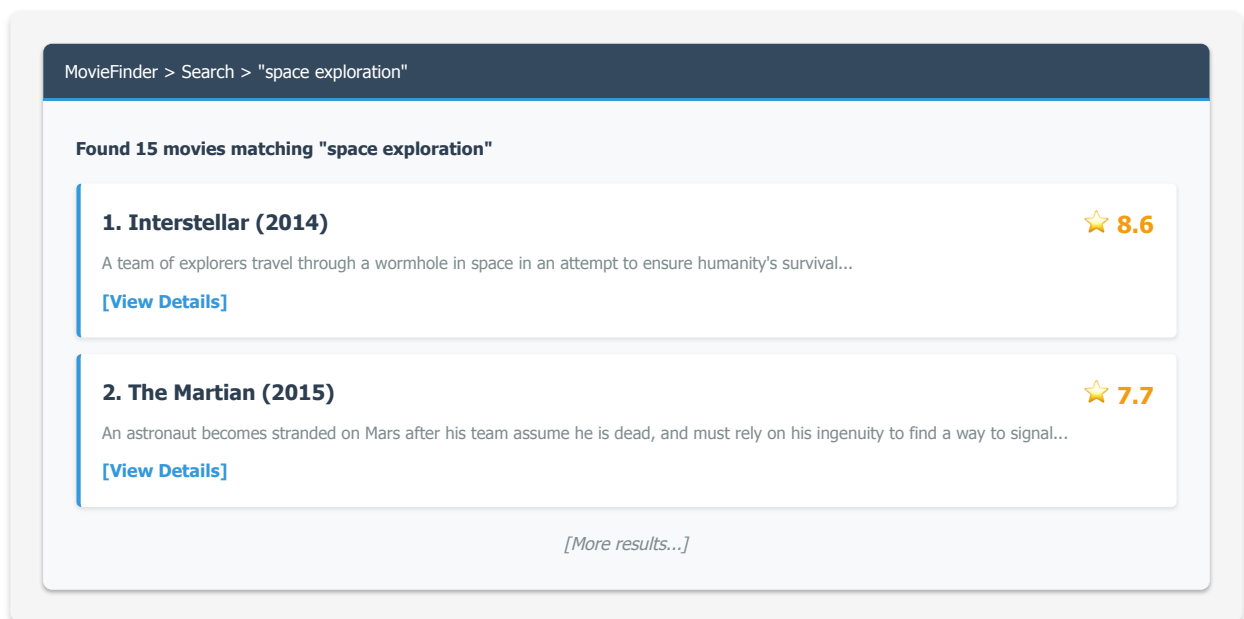
Use Case: Show Christopher Nolan's films rated ≥ 7.0 with top 3 cast members.

3. User Interface Mockups

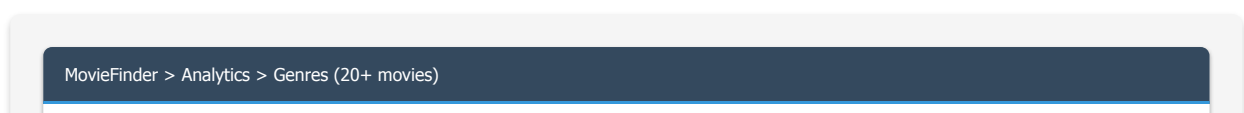
Page 1: Home Page



Page 2: Plot Keyword Search Results



Page 3: Genre Analytics Dashboard



Genre Performance Analysis

Genre	Avg Rating	Movies	Total Revenue
Animation	7.2	156	\$45.2B
Drama	6.8	892	\$32.1B
Adventure	6.7	234	\$58.9B
Thriller	6.5	189	\$28.7B
Comedy	6.3	312	\$22.4B

Filter:

Minimum Movies: 20

Apply

Page 4: Actor Collaboration Finder

MovieFinder > Collaborations > "Tom Hanks"

Actors who frequently worked with Tom Hanks:

- Meg Ryan

Movies: Sleepless in Seattle, You've Got Mail, Joe Versus the Volcano, ...

4 collaborations
- Gary Sinise

Movies: Forrest Gump, Apollo 13, The Green Mile

3 collaborations

[Show more...]

Minimum collaborations:

2

Search another actor

Page 5: Director Filmography

MovieFinder > Directors > "Christopher Nolan"

Christopher Nolan's Highest-Rated Films (Rating ≥ 8.0)

- The Dark Knight (2008)

Revenue: \$1.00B

Starring: Christian Bale, Heath Ledger, Aaron Eckhart

[View Details]

★ 9.0
- Inception (2010)


Revenue: \$829M

Starring: Leonardo DiCaprio, Joseph Gordon-Levitt, Elliot Page

[View Details]

★ 8.8

Minimum rating:

8.0 

Search another director