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| Movie Store Database |
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| 12th August  CSE312:Database Management System Lab Final Project | Summer 2020 Daffodil International University  Project Done by:  MD: Ashrak Al Arif Shohas 182-15-2171 MD: Meherab Hossain 182-15-2143 MD: Mahedi Hasan Bijoy 182-15-2150 |

# Movie Store Database

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| Introduction  This document provides an information of Offline Movie Store Database developed by us for the final project of DBMS Lab Course. The document concludes with a reflection of the project. |
| *“The most efficient way to optimize an SQL query is to eliminate it”* |
| Purpose Of Choosing This Topic:  We choose this topic because storing movies with details can provide a wide idea about a movie which can interest someone to watch the movie too. Actually it is a common idea of storing movies but we want something new in this project by providing details about Bangladeshi movies which are rare in our country Bangladesh. If you like this project then we will improvise this project by providing more detailed information about Bangladeshi movies. |

What we applied in this Project:

The application developed in an offline movie store which stores several movies where people can search movies according to their choices. They can search movies by their country choices,can find movies by director of their choices. In this project we provided 5 entities and these 5 entities contains several attributes too. Brief description of those entities and attributes will be given below. We also provided search operation for this project.

Entities:

1.Country

Primary key: CountryId  
Attributes: CountryName

2.Director

Primary Key: directorId

Attributes: Director\_name

3.Movie

Primary key: movieId

Foreign Key: CountryId, DirectorId

Attributes: title, runtime, IMDBrating, year number, budget

4. movieCast

Primary Key: moviecastId

Foreign key: movieId

Attributes:CastName

5.MovieGenre

Primary Key: MovieId  
Foreign Key: MovieId

Attributes: genreName  
  
User Requirement

Country:  
1. Any people can search by unique countryId

2. Can view country name by using countryid or countryName

3. People can view countryname with movieTitle by join operation

Director:

1. Any people can search by unique directorId

2. Can view director’s name by using Directorid or Director\_Name

3. People can view Director\_name with movieTitle by join operation

Movie:  
1.Each movie has a unique id

2.Each movie has title ,genre,runtime,imdbrating,budget,year

3.Person can view MovieName with those details

4.Person can Sort movieName by year

MovieCast:

1.Each movie has unique movieCastID  
2.Can view castname

3.Can view castname with movietitle by join operation.

MovieGenre:

1.People can see the type of the movie by using search operation here.

RELATIONSHIPS

1.Country and movie has one to many relation

One country can have many movies but one movie can not have many countries together in this project.

2.Movie and moviegenre has one to many relation  
One movie can have many genre types.

3. Movie and director has many to one relation.

One director can have many movies in his direction.

4. Movie and movieCast has many to many relation

One movie can have many casts and one cast can have many movies too.

Normalization

Upon deciding the ER diagram and relational data model the process of normalization was adopted to asseses any deficiencies in the derived table. The goal is to develop third normal form for all tables. In order to achieve third normal form,each table must be free from multivalues attributes and transient dependencies and must have full function dependencies.This section outlines all the functional dependencies for the final relation.

COUNTRY

Countryid ​ ​→ ​CountryName

The ​ Country table​ ​ is​ ​ in​ ​ third​ ​ ​normal form.​​ ​The countryName​ attribute​ ​ is​ ​ uniquely​ identified ​ by​ the​ CountryId and​ ​​no transient​ dependencies​ exist.​

Director

directorID​ ​ ​→ ​ Director\_Name

The ​ Director table​​ is​ ​ in​ third​ normal form.​​ ​The Director\_name attribute​ ​ is​ ​ uniquely​ identified ​ by​ the​ directorId and​ ​​no transient​ dependencies​ exist.​

Movie

MovieID​ → budget

MovieID → runtime

MovieID → Year

MovieID → Imdbrating

MovieID → Title

The ​ Movie table​ is​ ​ in​ third​​ normal​ form.​All​ of ​the attributes​ are​ uniquely​ identified ​ by​ the​ movieID​ and​ ​no​​ ​transient dependencies​ exist.

MovieCast

MovieCastID → CastNAme

The ​ MovieCast table​​ is​ ​ in​ third​ normal form.​​ ​The Castname attribute​ is​ ​ uniquely​ identified ​ by​ the​ MovieCastId and​ ​​no transient​ dependencies​ exist.​

MovieGenre

MovieID → genreName

The ​ MovieGenre table​​ is​ ​ in​ third​ normal form.​​ ​The Genrename attribute​ is​ ​ uniquely​ identified ​ by​ the​ MovieId and​ ​​no transient​ dependencies​ exist.​

* Foreign ​ key:​CountryId,Directorid,MovieId

Project Brief

The ​ following​ section​ gives​ a​ ​​brief reflection​ on​ our​ journey​ towards​ building​ our​ database.

The ​ work​ distribution​ varied​ from​ time to​ ​time but everyone in​ the​ group​ worked ​ on​ certain​ aspect​ of​ ​the project.​ Our​​ ​weekly messenger meetings​ were​​ very​ productive ​ and​ made​ an ​agenda​ prior​ ​to meeting​ to​​ ​best optimize on​ time.​We finished 80% of our project before Eid.​ After​ the ​ meeting,​ we​ would​ adjourn​ ​ ​individual​ ​work that​ needed​​ ​to be​ done​ for​ every​ group ​member.​ All​ team​ ​ members​ ​were easily​ ​available ​​to meet up​ and our​ sessions ​ ranged​ from​ 1 -​ ​ ​2​ hours​​either once or twice​ a​ ​week.​

We ​ split​ the​ work​ into​ three main areas.​ One​ group member worked ​on​ the ​SQL Commands,​ one ​ on​ Schema​ and​ Er diagrams and lastly one on setting the operations.Lastly it can be said that doing this project ​was fun and we learned many new things from this project that will help us in the future.