

# Project: Database Driven Application

Using a topic of your choosing and instructor approval, create a data-driven, Windows Forms desktop application that will create, manipulate, search and browse records within a SQL Server database. The database design will contain three tables. Two tables will be related through a many-to-many relationship.

The minimum application requirements will contain the following forms

- An MDI form container
  - Complete with status strip updated by child forms
  - Menu for launching all child forms
  - Tool strip for common application functions
- About form
  - List all Application Properties
  - Open from the MDI Toolstrip and Menu
- Splash Screen
  - Displayed at launch
  - Application name
  - Current Version number
- Login form
  - Create a Login database table with pre-populated login accounts. A user cannot access the application unless successfully logged in.
    - Fields
      - User
      - Password
- Database Script
  - You will be expected to have a database script that builds all your tables, and relationships as well as creates any seed data you need to demonstrate your applications functionality.
- Maintenance form for each entity in the database. This form must accomplish the following
  - Present all database entity attributes with an appropriate Windows form control
  - Allow navigation forward, back, first and last records within the database table
  - Buttons for Create, Update and Delete, with enable property managed according to the current state of the form
  - Child form will update the MDI status label according to the current action (See attached screenshots for examples) Examples include but not limited to
    - Adding...
    - 1 of 50 records
    - Ready...
    - Maintenance form for the many-to-many relationship

- Two Browse forms
  - Allow browsing of each entity and show the related records within a DataGridView
  - Update mdi status strip label (See attached screenshots)
- Create two business rules that are enforced within the system (Requires instructor approval). Single Field validation or enforcing foreign key integrity doesn't count as business rules.

## Submission Requirements

- Private GitHub Repository (Instructor added as collaborator) with project source code and artifacts
- Database creation script added to GitHub project repository
- Database seed data added to GitHub project repository
  - Clean test data included for all tables
- OneClick Deployment for installation
- Product Presentation and Demonstration
  - Introduce the product with a short PowerPoint presentation.
    - Include business rules
  - Product walkthrough demonstrating all features (Not a code review)

## Deliverable Schedule

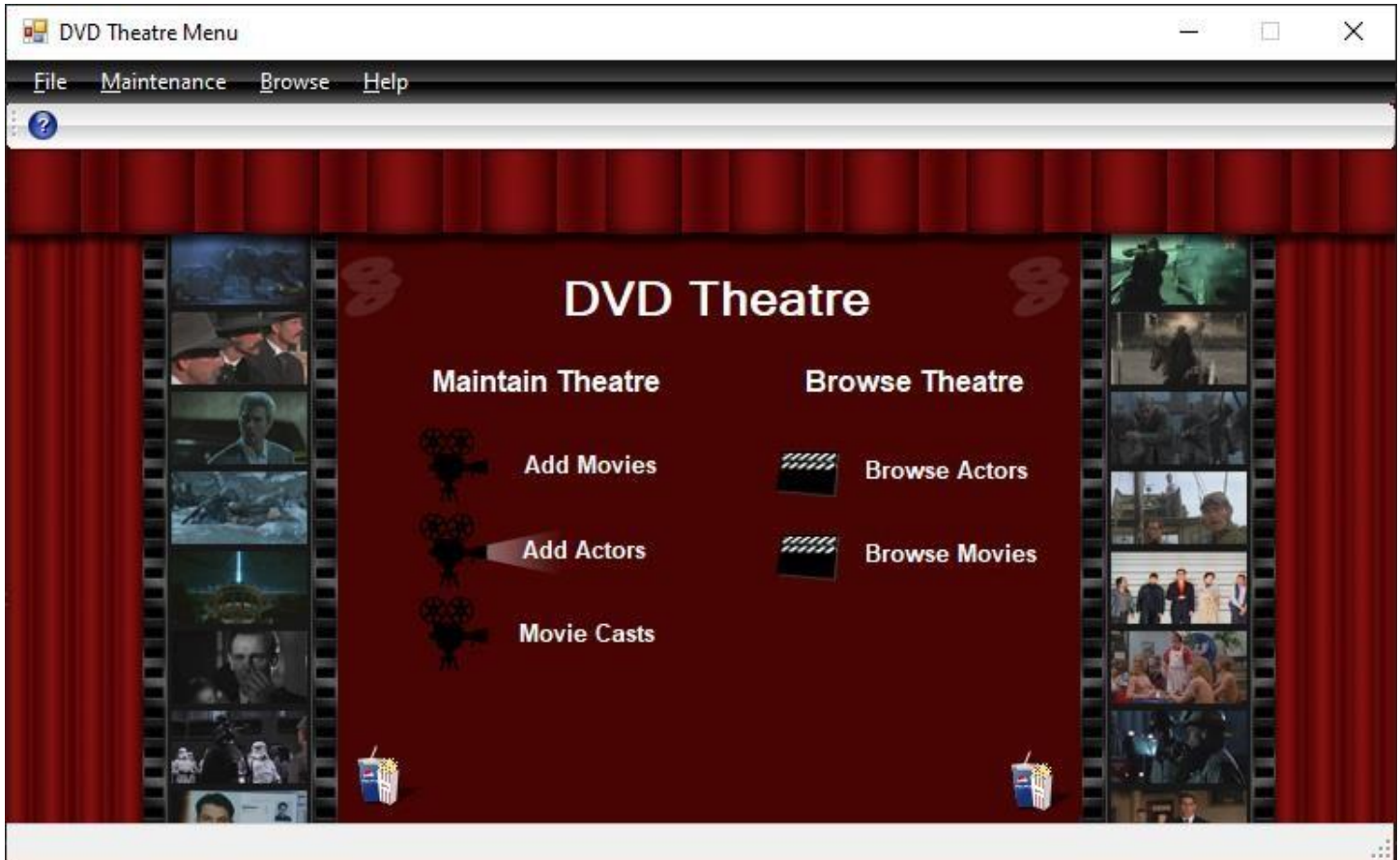
- Project GitHub repository
  - May 21<sup>st</sup> 11:59pm Instructor added as collaborator.
- Project topic and business rules
  - May 21<sup>st</sup> 11:59pm Word document **memo format** checked into GitHub in a folder called **ProjectArtifacts**. If someone already submitted an idea too similar to yours, you will be given a second opportunity to submit before May 22<sup>nd</sup> at 11:59pm. You will need to post a link to this github document on Brightspace.
- ER Diagram version 1
  - May 24 11:59pm checked into GitHub in the **Artifacts** folder. Ensure the ERD is clearly versioned in its naming (Example **CollegeCodeDirectoryERD\_V1.drawio**, **CollegeCodeDirectoryERD\_V1.vpp**, **CollegeCodeDirectoryERD\_V1.pdf**). Use design software of your choosing. Ensure the repository has your native format file and a pdf version.
  - Must include Login table in ERD
- ER Diagram version 2
  - May 28<sup>th</sup> 11:59pm revised database design based on instructor feedback, checked into GitHub in the **Artifacts** folder. Ensure the ERD is clearly versioned in its naming (Example **CollegeCodeDirectoryERD\_V2.drawio**, **CollegeCodeDirectoryERD\_V2.pdf**).
- Mid Project Check In and Progress Review
  - June 3<sup>rd</sup> instructor meeting to review current progress of the project.
- Final Code Check in: **June 7<sup>th</sup> 11:59pm**

- **Presentation**

- Week of June 10<sup>th</sup> - June 14<sup>th</sup>
- Presentations will be 20 minutes in duration and will be done over teams, one person at a time as a one-on-one meeting with your instructor.
- Meetings will be scheduled beforehand, but you will be expected to be ready and available at least 15 minutes before your scheduled time in case the previous meeting finishes early.
- You will be required to demonstrate recreating your database from your script at the beginning of the presentation.
- You will be expected to know what to present with minimal guidance and feedback. It is not acceptable to ask “What do you want to see” during the presentation.
- You will be expected to go over your power point to explain your application at the start of the presentation.
- You will be expected to do your presentation using your **one click install** and you will not be permitted to run your application from visual studio for the presentation.
- No code will be demonstrated during the presentation unless it is specifically requested during the presentation.

## Examples

### MDI Container



## Entity Maintenance Form

 Add Movies ×

## Movies

Movie Name:

Genre:

Media Format

☒ DVD 

☐ HD DVD 

☐ VHS 

Screen Ratio

☒ 16:9 Widescreen

☐ 4:3 Full Screen

Disc Details

Boxset: ☐

On loan: ☐

☒ Movie

Number of Discs:

☐ TV

Purchase price:

Purchase date:

Movie Details

Year released:

Production budget:

MPAA rating:


Synopsis:



AddDeleteUpdateCancelExit



1 of 3 records.


 Add Movies ×


## Movies


Movie Name:

Genre:

Media Format

☐ DVD 

☐ HD DVD 

☐ VHS 

Screen Ratio

☐ 16:9 Widescreen

☐ 4:3 Full Screen

Disc Details

Boxset: ☐

On loan: ☐

☐ Movie

☐ TV

Number of Discs:

Purchase price:

Purchase date:


Movie Details

Year released:


Production budget:

MPAA rating:

Synopsis:



AddDeleteUpdateCancelExit



Adding entry.....




 Add Movies ×


## Movies


Movie Name:

Genre:

Media Format

☐ DVD 

☐ HD DVD 

☐ VHS 

Screen Ratio

☐ 16:9 Widescreen

☐ 4:3 Full Screen

Disc Details

Boxset: ☒

On loan: ☐

☐ Movie

Number of Discs:

☐ TV

Purchase price:

Purchase date:


Movie Details

Year released:

Production budget:

MPAA rating:

Synopsis:



Add

Delete

Update

Cancel

Exit

⏮ ⏪ ⏩ ⏭

Adding entry..... 3 of 3 records.


Add Movies


## Movies


Movie Name:

Genre:

Media Format:

☐ DVD 

☐ HD DVD 

☐ VHS 

Screen Ratio:

☐ 16:9 Widescreen

☐ 4:3 Full Screen

Disc Details:

Boxset: ☒ On loan: ☐ ☐ Movie ☐ TV

Number of Discs:

Purchase price:

Purchase date:


Movie Details:

Year released:

Production budget:

MPAA rating:

Synopsis:



Progress

Data updated

OK

Loading..... 3 of 3 records.



## Browse Forms

**Browse Actors**

Choose an Actor or Actress

Name:

Movie Title	CharacterName	ActorRoll	Award
Bourne Identity (The)	Jason Bourne	Lead Actor	
Bourne Supremacy (The)	Jason Bourne	Lead Actor	

Ready..... Current Records= 2

**Browse Movies**

Choose a Movie

Name:

Movie Title: Bourne Identity (The)  
Genre: Action  
Media Format: DVD  
Screen Ratio: 16:9  
Film Budget: 15000000.0000  
MPAA: PG-13

Actors	CharacterName	ActorRoll	Award
Brian Cox	Ward Abbott	Supporting Actor	
Matt Damon	Jason Bourne	Lead Actor	

Ready..... Current Records= 1 with 2 cast members