**Database Project Final Report**

**CSE 3241 – Introduction to Database Systems**

**Leon Madrid**

**Tuesday/Thursday, 9:35-10:55 am**

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(Start of Section 1: Database Description)

Add ER diagram and relational schema on this page

**Figure 1: Entity-Relation Diagram**

**Figure 2: Relational Schema**

For each table, give a brief description of the level of normalization achieved for the table, if it is not in BCNF, explain why.

**Normalization achieved for each table:**

Media Item –

Media Genres –

Artist Genres –

Branch – Because this table only has two attributes which make its key it is in BCNF

Order –

Patron –

Chapter –

Author – This table only has two attributes, one of which is the key, and the other of which is dependent on the key, meaning this table is in BCNF

Actor –

Game Studio – Because this table only has one attribute (Name) it is in BCNF

Artist – Because this table only has one attribute (Name) it is in BCNF

Track –

Author Writes –

Actor Stars –

Studio Creates –

Artist Authors –

Album Contains –

Description of at least three indexes added and rational for each

**Indexes included:**

1. [Index 1]
2. [Index 2]
3. [Index 3]

For each view implemented, provide the following:

* A brief description in English of what this view produces, and why it would be useful
* Relational algebra expression to produce this view
* SQL statements to produce this view
* Sample output from the view, with 5-10 lines of data records shown

**Views included:**

1. [View 1]
2. [View 2]
3. [View 3]
4. [View X+]

Description of three sample transactions useful for our database. Should include sample SQL code for each as well as English description of what “unit of work” the transaction represents.

**Transaction samples:**

1. [Transaction 1]
2. [Transaction 2]
3. [Transaction 3]

(Start of Section 2: User Manual)

For each table, explain what real world entity it represents. Provide description of each entity and each attribute, including its data type and any constraints you have built in.

**Table descriptions:**

Media Item –

Media Genres –

Artist Genres –

Branch –

Order –

Patron –

Chapter –

Author –

Actor –

Game Studio –

Track –

Author Writes –

Actor Stars –

Studio Creates –

Artist Authors –

Album Contains –

The sample SQL queries you provided in different checkpoints (8 from CP4, 8 from CP5). Each query should include:

* English description of what the query should be returning
* The correct relational algebra syntax of the query
* The equivalent SQL query

**Sample SQL Queries:**

INSERT statement syntax for adding new tracks, albums, movies/videos, audiobooks, artists, and patrons to your system. Indicate any dependencies that require entities to be added in a specific order. Provide an example of INSERT statements for each entity in your database.

**INSERT Statement descriptions/examples**

Albums

Syntax –

Dependencies –

Example –

Movies/Videos

Syntax –

Dependencies –

Example –

Audiobooks

Syntax –

Dependencies –

Example –

Artists

Syntax –

Dependencies –

Example –

Patrons

Syntax –

Dependencies –

Example –

DELETE statements syntax for removing tracks, albums, movies/videos, audiobooks, artists, and patrons from your system. Indicate dependencies. Provide an example of a DELETE statement for each entity in the database.

**DELETE Statement descriptions/examples**

Albums

Syntax –

Dependencies –

Example –

Movies/Videos

Syntax –

Dependencies –

Example –

Audiobooks

Syntax –

Dependencies –

Example –

Artists

Syntax –

Dependencies –

Example –

Patrons

Syntax –

Dependencies –

Example –