

**Database Design & Information Management
DBT1117C
Resit Coursework**

Issue Date: 17/07/2023

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COHORT: BIS/21B/FT

TITLE OF PROJECT: MOVIE RENTAL SYSTEM

GOOGLE CLASSROOM: <https://classroom.google.com/c/NjMzMjc3NzlyMDA3?cjc=uaqow6y>

This is an individual assignment to design and construct a database to administer a small system.

Given the following Business Rules, draw the Logical and Physical Data Model for the system using Oracle Data Modeler. Create the Data Dictionary of the system. Provide sample data for each table and then create the SQL Script for the system. Make use of sequence to automatically increment the Primary Key value for each table. Finally, write SQL Code to answer the queries given in table 1.

MOVIE RENTAL SYSTEM

Given the following business rules for a Movie Rental System, draw the Logical Data Model and then generate the Relational Schema for the system.

1. A Movie has one Rating (PG, 10, 16, 18 etc) and a Rating may be associated with many Movies. The identifier for Movie is Movie_ID and other attributes include Movie Title, Synopsis, Year Released and Duration. The identifier for Rating is Rating_Id and other attribute include Rating Name.
2. The Movie has many Actors and an Actor may plays in many Movies. The identifier for Actor is Ac_ID and other attributes include Last Name, First Name.
3. A Movie has one original Language and a Language may be associated with many Movies. The identifier for Language is Lang_ID and another attribute is Language Name.
4. A Movie may have many Language as subtitle and a Language may be associated with many Movies for the subtitle.
5. A Movie must belong to one or many Category (Action, Thriller, Romance etc) and a Category may be associated with many Movies. The identifier for Category is Cat_ID and another attribute is Cat_Name.

6. A Movie can have many Copies but a copy must be associated with only one Movie. The identifier for Copy is Copy_ID and other attributes include Media Type (DVD, CD or Blue Ray), Copy Status (Good, Lost, Damaged), Rental Price.
7. A Client does many Rental and a Rental is done by only one Client. The identifier for Client is Client_ID and other attributes include Last Name, First Name, Date of Birth, NIC, Mobile, Email, Street, Town, District, Post Code, Driving License Number, Gender and Status (Active or Suspended). The identifier for Rental is Rental_Id and another attribute includes Rental date.
8. A Rental must have one or many Copies of Movies and a Copy may be found in many Rental. The following attributes are associated with the relationship Date Taken, Date Due and Date Returned.
9. A Rental may generate many Payments and a Payment is for one Rental. The identifier for payment is Payment ID and other attributes include Payment Date, Payment Amount and Payment Method.

Marking Scheme

Components	Value
1. Logical Data Model	20%
2. Physical Data Model	20%
3. Data Dictionary	5%
4. Sample Data for each Table	5%
5. SQL Script	20%
6. Implementation of Queries using SQL	30%
	<hr/>
	100%

SQL CODE

Queries Implementation (SQL) 3 Marks for each query
<ol style="list-style-type: none">1. To List all books belonging to a specific category2. To list all books written by a specific author.3. To list all books published by a specific publisher.4. To list all books published between two specified dates.5. To list all books that were returned late.6. To list all books that are on loan (not returned yet).7. To list all copies of a specific book available for rental.8. To list all payments received between two specified date.9. To list the title of movies rented by a specific customer.10. To list all Title of movies that have Spanish Language as subtitle.

You need to submit a zip folder with the following items:

1. A PDF Report to include the business rules, Logical and Physical Data Model (Screenshot) using Oracle Data Modeler.
2. A folder for your SQL Script, data dictionary and Sample Data for each table.
3. A folder containing all the SQL code for the queries.
4. **THE ZIP FILE SHOULD BE SUBMITTED IN GOOGLE CLASSROOM. AN INVITATION WILL BE SENT TO YOUR UMAIL ADDRESS TO JOIN THE CLASS SO THAT YOU CAN SUBMIT YOUR WORK.**

LATE SUBMISSION WILL NOT BE ACCEPTED