

Project Details

Overview:

This document is meant to serve as a rough draft of the database. It contains examples of each table with correct primary keys, fields, and an explanation of what foreign keys connect to which tables. There is also a schema at the bottom after the table details section.

Database Requirement:

- Database should support tasks such as:
 - tracking rentals by title and by customer;
 - producing reports, such as rentals due on a certain date;
 - categorizing rentals by media type (e.g., Blu-Ray, DVD, Game).
- The initial field list does not include all of the appropriate key fields for the tables that will be created, so suitable key fields should be added to the tables as required.
- (Since I am not using MS Access): In place of applying the extra DBMS functions (forms, queries, or field attributes) listed as part of the project requirements, students pursuing this approach will submit three SQL statements; each documented or annotated to describe the expected query results.
- Instead of using MS Access, I used both Google Docs (to create tables, but also as a rough draft for a real SQLite3 database) and SQLite3 for actually creating the database.

Customers Table

Requirements:

- At least 10 Customers
- Customer FirstName, LastName, Address, and ID tables were created.
- ID is the primary key** since they all represent exactly one customer account with a unique number.
- ID can also act as a foreign key** (For example, each rental can have a customer ID which can connect each customer to each purchase)
- (ID = CustomerID)** connects Customers table to Rentals table

| ID (Primary Key) | FirstName | LastName | Address |
|------------------|-----------|----------------|-----------------------|
| 101 | Skyla | Scrumplesworth | 2113 Dimble Street |
| 102 | Finnigan | Whistlebop | 2045 Dimble Street |
| 103 | Lila | Scrumplescopy | 9034 Scrumple Lane |
| 104 | Jasper | Snickernoodle | 5052 Scooba Avenue |
| 105 | Willow | Scrumplesnack | 808 Dimble Street |
| 106 | Milo | Wobblewhisk | 7892 Stabbington Road |
| 107 | Poppy | Scrumplespout | 777 Fortune Avenue |
| 108 | Ziggy | Whifflefluff | 909 Sizzlebob Drive |
| 109 | Daisy | Scrumplesnug | 778 Petunia Street |
| 110 | Max | Scrumplespark | 567 West Farthington |

Categories:

Requirements:

- **Category code is a Primary and Foreign key** since it both uniquely identifies each category description and can also be used to connect the Media table (CategoryCode = MedialtemCategory)
- Minimum of three records describing each category code.

| CategoryCode (Primary Key) | CategoryDescription |
|----------------------------|---|
| 1 | DVD: Digital Video Disc, Developed in 1995 and is an early and widely adopted form of storing video. |
| 2 | Blu-Ray: High-Density Optical Disc, Developed in 2005. Can hold much more data than a standard DVD |
| 3 | Game: A compact disc or cartridge that contains data for a game that can be played on an appropriate game console or computer. |
| 4 | Music: Sounds recorded digitally like in a compact disc or tape. Music could also be recorded on vinyl which would be an example of analog recording. |

Media:

Requirements:

- At least 30 records, representing a selection of DVD movies, Blu-Ray movies, and Games.
- I added another field **MedialID** which will act as the primary key since some movies can have the same titles.
- **MedialtemCategory** is a foreign key to the Categories table (**MedialtemCategory = CategoryCode**)

| MedialID (Primary Key) | MedialtemTitle | MedialtemCategory (Foreign Key) |
|------------------------|---------------------------------------|---------------------------------|
| 11 | Attack of the Killer Rubber Ducks | 1 |
| 12 | The Dancing Banana Apocalypse | 1 |
| 13 | Zombie Cats from Outer Space | 1 |
| 14 | Zombie Cats from Outer Space 2 | 1 |
| 15 | Aardvarknado: The Anteater's Revenge" | 1 |
| 16 | The Cheeseburger Chronicles | 1 |
| 17 | The Pajama Party of Doom | 1 |
| 18 | The Secret Life of Sock Puppets | 1 |
| 21 | The Space Adventures in HD | 2 |
| 22 | Mystery Mansion in HD | 2 |
| 23 | Robo-Rampage in HD | 2 |
| 24 | Jungle Safari in HD | 2 |
| 25 | Galactic Pirates in HD | 2 |
| 26 | Dancing Pandas in HD | 2 |
| 27 | Chocolate Factory in HD | 2 |
| 31 | Cosmic Quest: Galaxy Guardians | 3 |
| 32 | "Serpent's Curse: Lost Kingdom | 3 |
| 33 | Ninja Havoc: Shadow Strike | 3 |
| 34 | Pixel Pioneers: Retro Odyssey | 3 |
| 35 | Starlight Chronicles: Space Odyssey | 3 |
| 37 | Dragonfall: Age of Legends | 3 |
| 38 | Steamworks Adventure: Clockwork Chaos | 3 |
| 39 | Crystal Crest: Enchanted Realm | 3 |

| | | |
|----|---------------------|---|
| 41 | Euphoric Dreamscape | 4 |
| 42 | Neon Skies | 4 |
| 43 | Rhythm Rebellion | 4 |
| 44 | Luminous Serenade | 4 |
| 45 | Electric Meadows | 4 |
| 46 | Soulfire Symphony | 4 |
| 47 | Echoes of Eternity | 4 |
| 48 | Melodic Mirage | 4 |
| 49 | Enchanted Echo | 4 |

Rentals:

Requirements:

- At least 20 records.
- 6 fields
- RentalNumber is a primary key.

| RentalNumber | CustomerID (Foreign Key) | MediaID (Foreign Key) | DateOfRental | DueDate | Returned |
|--------------|--------------------------|-----------------------|--------------|------------|----------|
| 1 | 110 | 49 | 12/12/2023 | 19/12/2023 | True |
| 2 | 101 | 47 | 13/12/2023 | 20/12/2023 | False |
| 3 | 102 | 11 | 23/12/2023 | 30/12/2023 | True |
| 4 | 101 | 12 | 1/1/2024 | 3/1/2024 | False |
| 5 | 110 | 13 | 1/1/2024 | 3/1/2024 | False |
| 6 | 103 | 21 | 1/1/2024 | 4/1/2024 | False |
| 7 | 102 | 23 | 1/1/2024 | 4/1/2024 | True |
| 8 | 104 | 31 | 1/1/2024 | 3/1/2024 | True |
| 9 | 105 | 11 | 2/1/2024 | 7/1/2024 | False |
| 10 | 107 | 38 | 2/1/2024 | 7/1/2024 | False |
| 11 | 107 | 33 | 2/1/2024 | 7/1/2024 | True |
| 12 | 107 | 31 | 2/1/2024 | 7/1/2024 | False |
| 13 | 104 | 22 | 3/1/2024 | 8/1/2024 | False |
| 14 | 108 | 24 | 3/1/2024 | 8/1/2024 | True |
| 15 | 110 | 45 | 3/1/2024 | 8/1/2024 | False |
| 16 | 101 | 43 | 3/1/2024 | 8/1/2024 | True |
| 17 | 102 | 12 | 3/1/2024 | 8/1/2024 | False |
| 18 | 103 | 11 | 4/1/2024 | 10/1/2024 | True |
| 19 | 105 | 34 | 4/1/2024 | 10/1/2024 | True |
| 20 | 106 | 45 | 4/1/2024 | 10/1/2024 | True |

Table Details

Customers Table

- Customer ID# - Primary Key/Foreign Key
- LastName - Customer's last name
- FirstName - Customer's first name
- Address - The customer's address

Category Table

- CategoryCode - Primary Key/Foreign Key
- CategoryDescription - A brief description of the media category

Media

- MediaID - Primary key, uniquely identifies each media item
- MediaItemTitle - Name of the media item
- MediaItemCategory - Foreign Key to connect to Categories table

Rentals

- RentalNumber - Primary Key
- CustomerID - Foreign key for the Customers table
- MediaID - Foreign key for Media tables (MediaID = MediaID)
- DateOfRental - Date the media was rented
- DueDate - The date the media is due back
- Returned - Boolean value. True = item has been returned. False = item has not been returned

Schema:

