



FLOATING MOON DIGITAL LIBRARY



lilac penguin






BACKGROUND



Floating Moon is a fully remote, non-profit organization dedicated to promoting diversity, equity, and inclusion through accessible educational resources. With 100 employees and no physical office, the organization relies on a digital library management system to:

- Centralize DEI materials (books, articles, videos, podcasts)
- Manage memberships & access (users, borrowing, streaming)
- Support remote staff workflows (cataloging, lending, reporting)

This system ensures that resources are organized, searchable, and available globally, overcoming barriers like cost, language, and regional restrictions





BUSINESS RULES




- A member can open from 1 to 5 profile
- A subscription can have one or many profile signed up
- Each profile can only have 1 subscription
- A member can make many donations, each donation overseen by 1 staff
- A staff can oversee none or many donation
- A profile can stream 1 item at a time
- A profile can create reservation up to 10 items or none to borrow
- Each reservation is only for 1 profile to reserve 1 item to borrow
- There are 2 types of items: to borrow or to stream
- An item to stream can be streamed by many or no one



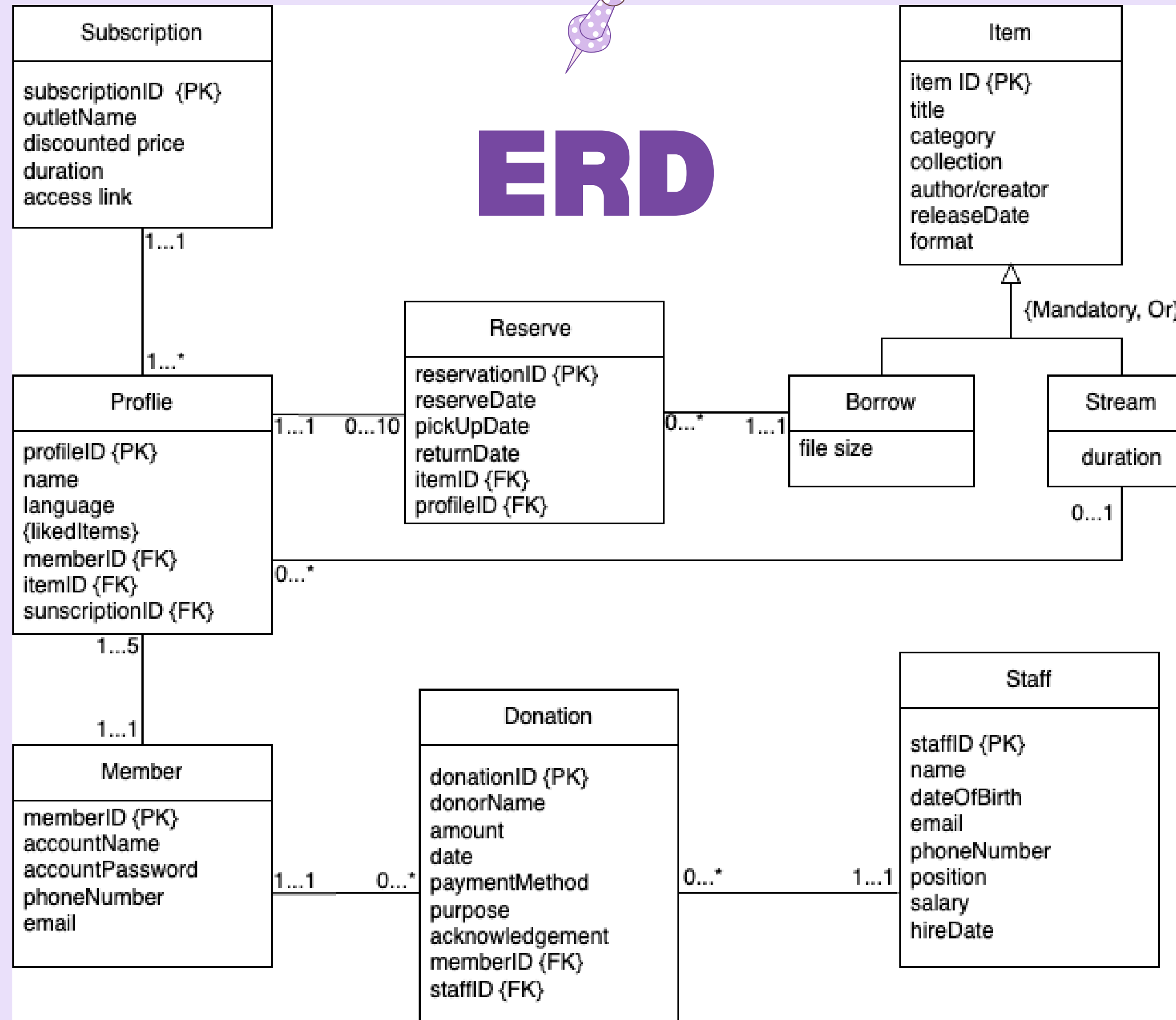


FUNCTIONAL DEPENDENCIES





- memberID -> accountName, accountPassword, phoneNumber, email
 - donationID -> donorName, amount, date, paymentMethod, purpose, acknowledgement
 - staffID -> name, dateOfBirth, email, phoneNumber, position, salary, hireDate
 - profileID -> name, language, likedItems
 - item ID -> title, category, collection, author/creator, releaseDate, format, file size/duration
 - reservation ID -> reserve date, pick up date, return date
 - subscriptionID -> outletName, discounted price, duration, access link
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ERD



IMPLEMENTATION

Find the profiles that make the latest return item:
SELECT Profile.* FROM Profile JOIN Reserve WHERE
Reserve.returnDate = (SELECT MAX(returnDate)
FROM Reserve) AND Reserve.ProfileID =
Profile.ProfileID;

Result Grid   Filter Rows: <input type="text" value="Search"/> Export						
	profileID	name	language	memberID	itemID	subscription...
	31	pink panda	eng	3	501	91

IMPLEMENTATION


Show the liked list of profile 031

```
SELECT likedItem FROM Profile_likedItems  
WHERE profileID='031';
```

🔍	likedItem
	Between the World and Me
	Savage Inequalities
	Teaching Community
	The high desert
	This violent empire
	Why didnt we riot?

IMPLEMENTATION

Show all David Bowie music item id and tile:
SELECT itemID, title FROM Item WHERE
author='David Bowie';



itemID	title
503	Space Oddity
504	Heroes
505	Starman

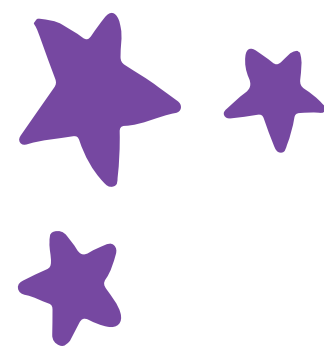


LESSONS LEARNED & IMPROVEMENTS



- Successfully implemented conceptual, logical, and physical database design
- Develop a pseudo-scenario and solve it
- Applied SQL skills to create tables, constraints, and relationships
- Improvement:
 - better use of in-class resources
 - time management
 - collaboration





**THANK
YOU**

