



សាកលវិទ្យាល័យភ្នំពេញ
ROYAL UNIVERSITY OF PHNOM PENH

Library Management System (Phase 2)

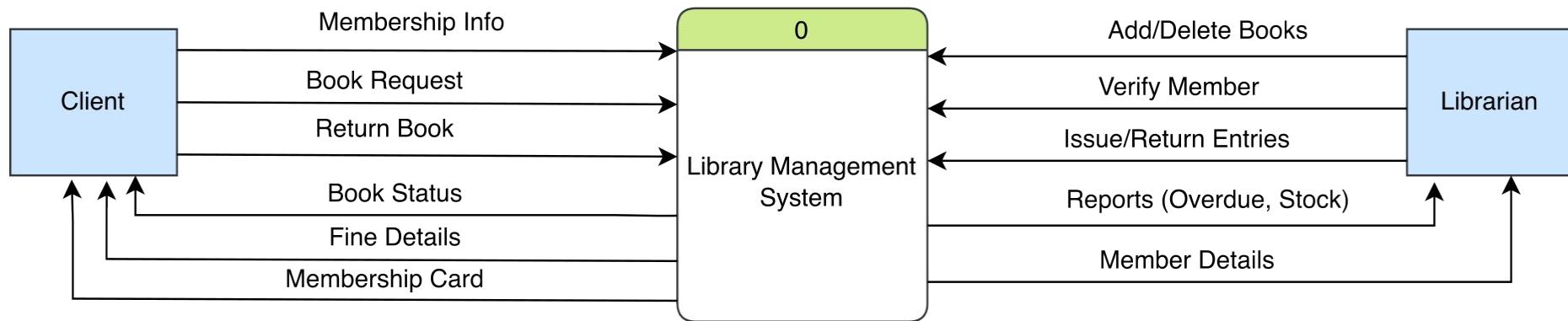
Software Engineering
Professor: Lim Lyheng
Class: M1
Group: 8

Group Member

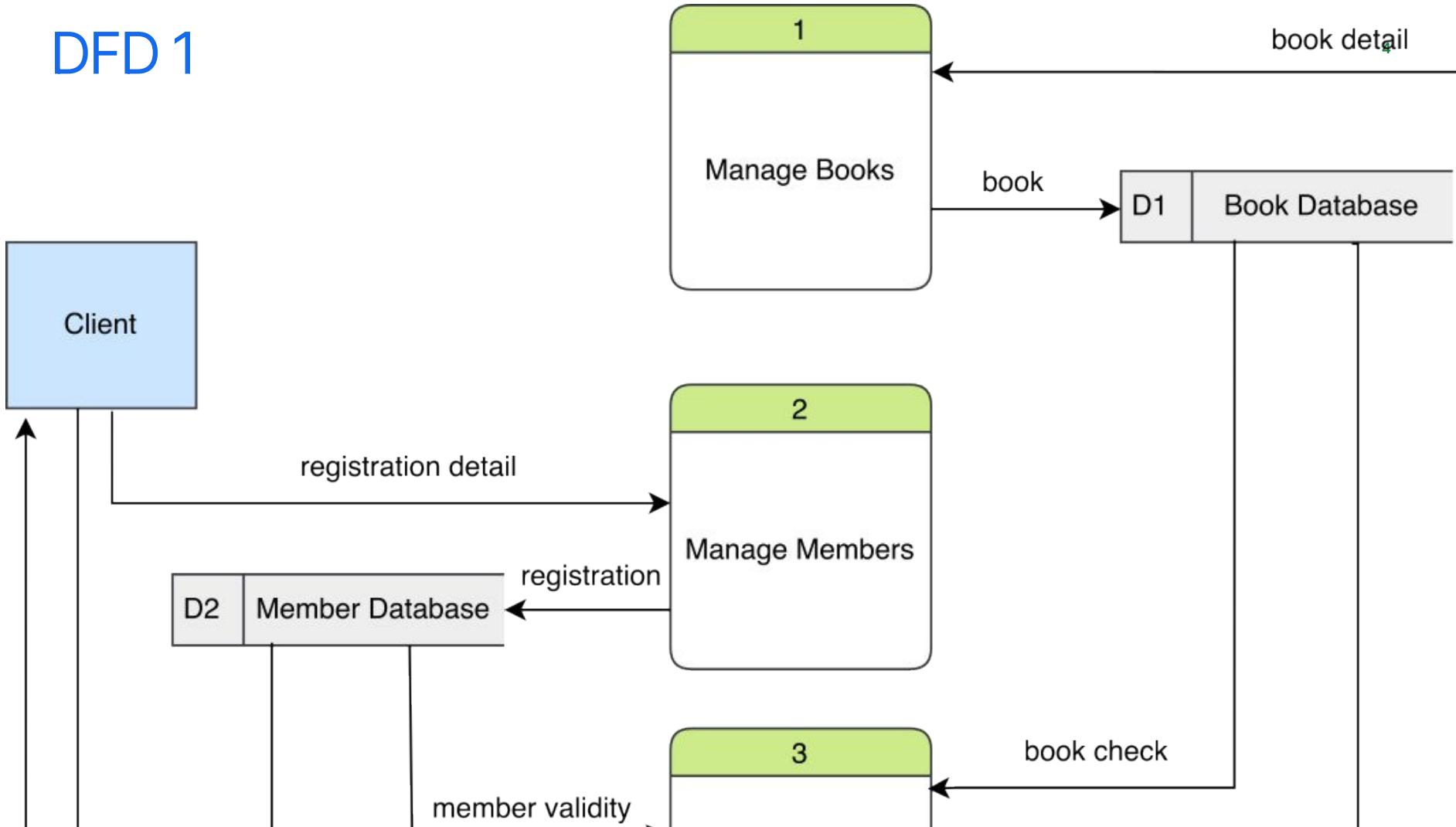


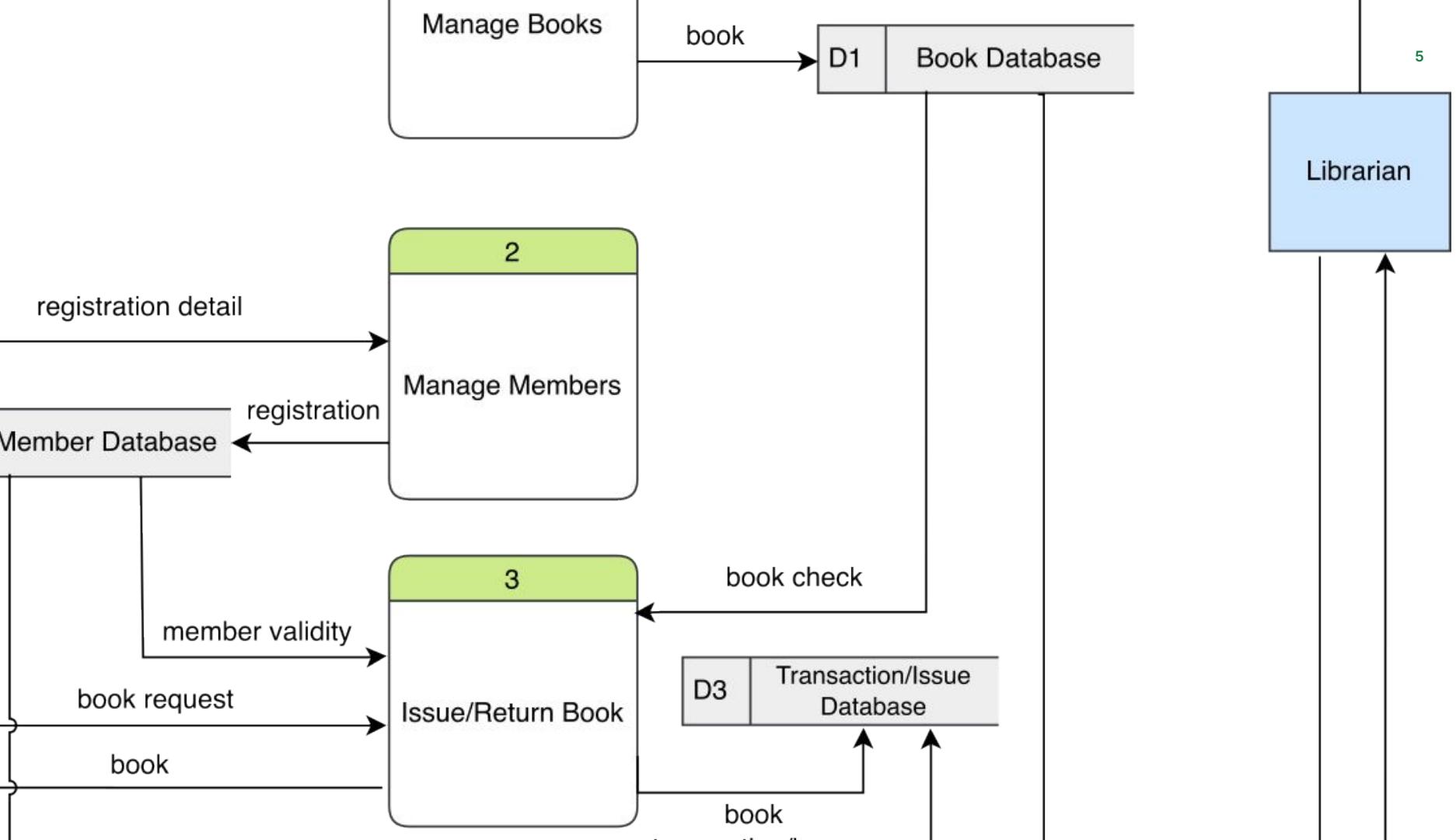
Name	Name in khmer	Role
Sou Chanrojame	សុខ ចាន្តរ៉ែម	Leader
Orn Pheakdey	អន ភកី	Follower
Long Neron	ឡុង និរន្ត	Follower
Sokkong Somnang	សុខគង់ សំណង	Follower

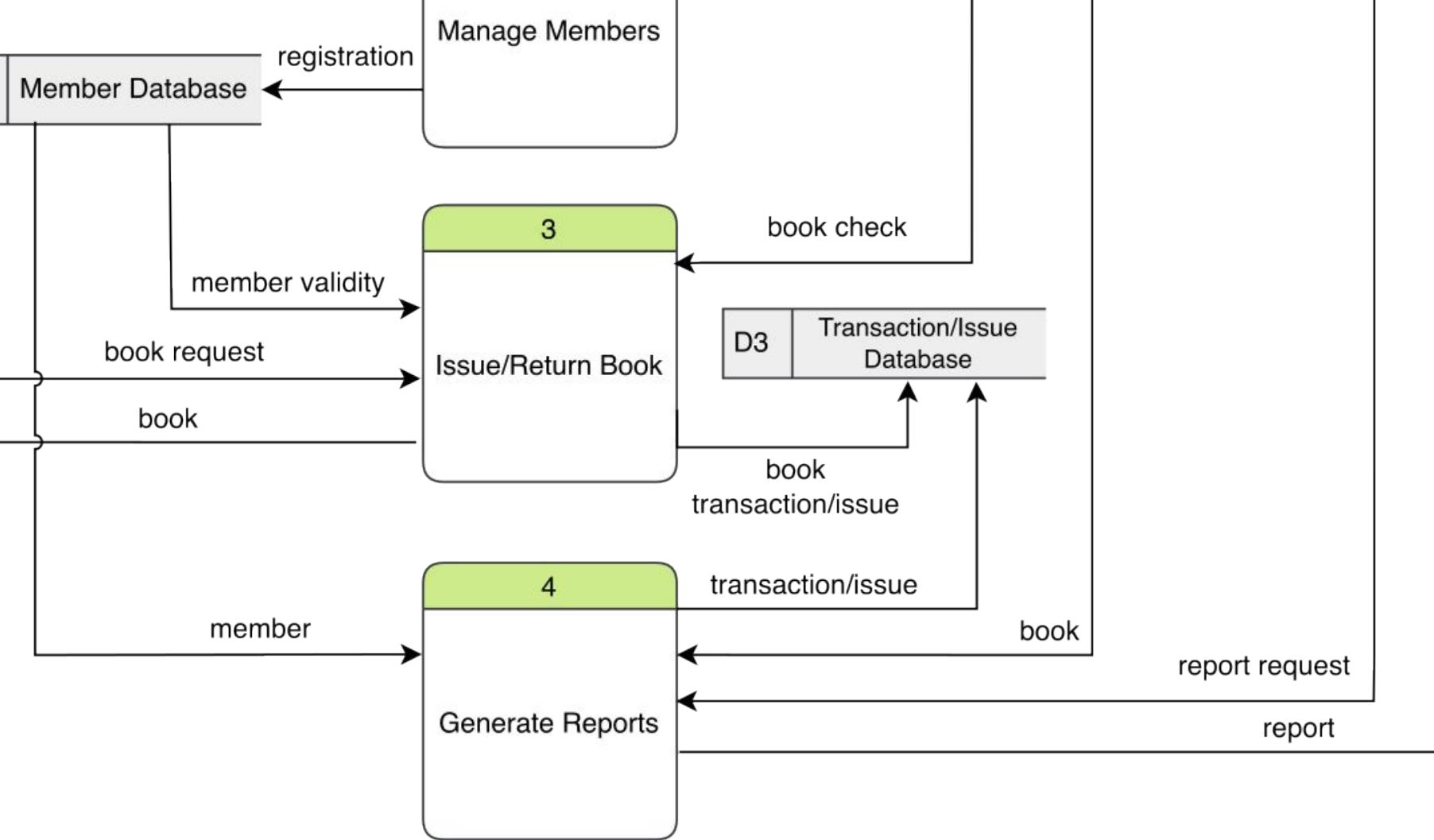
DFD 0 (Context Diagram)



DFD 1

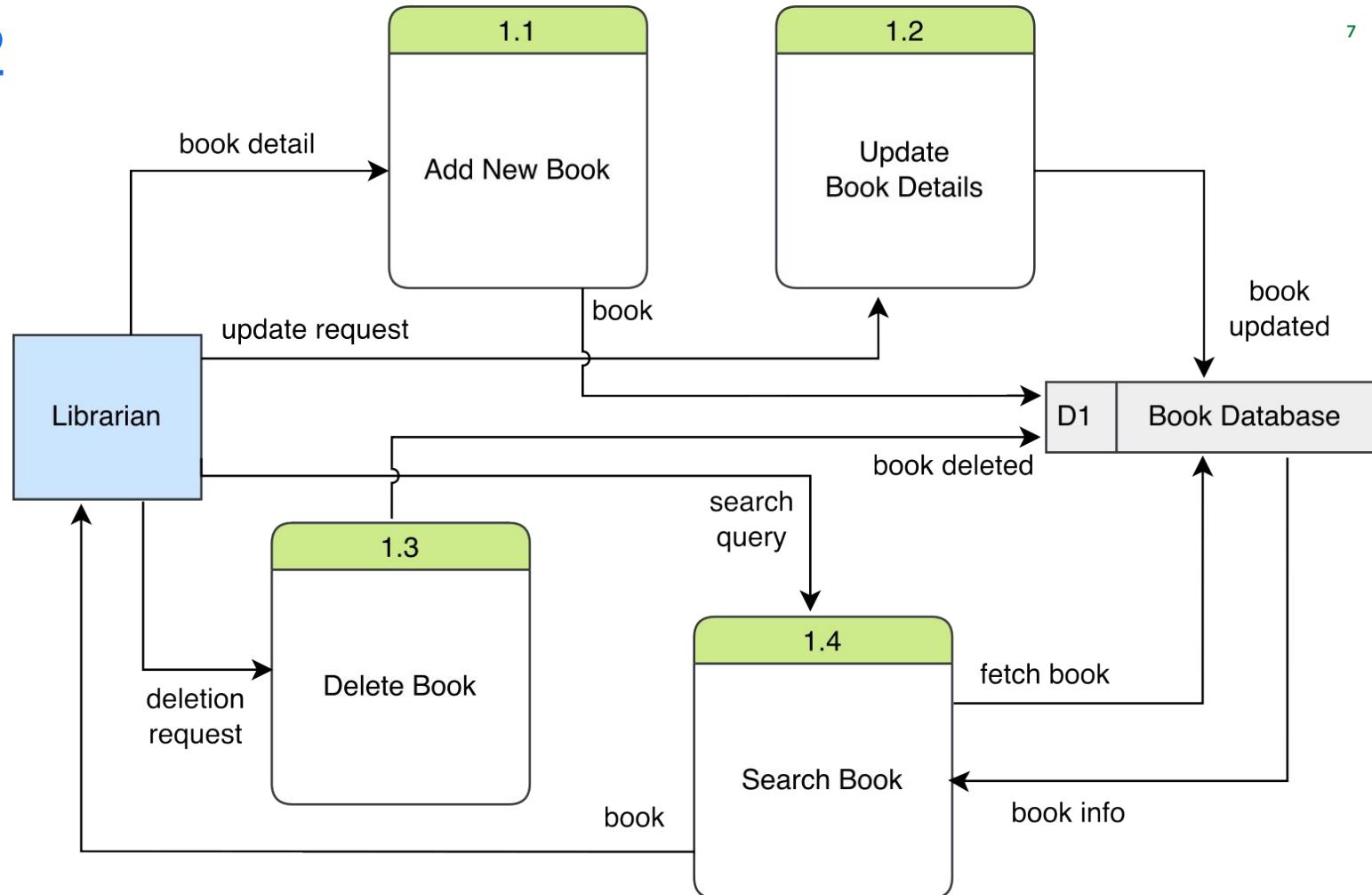


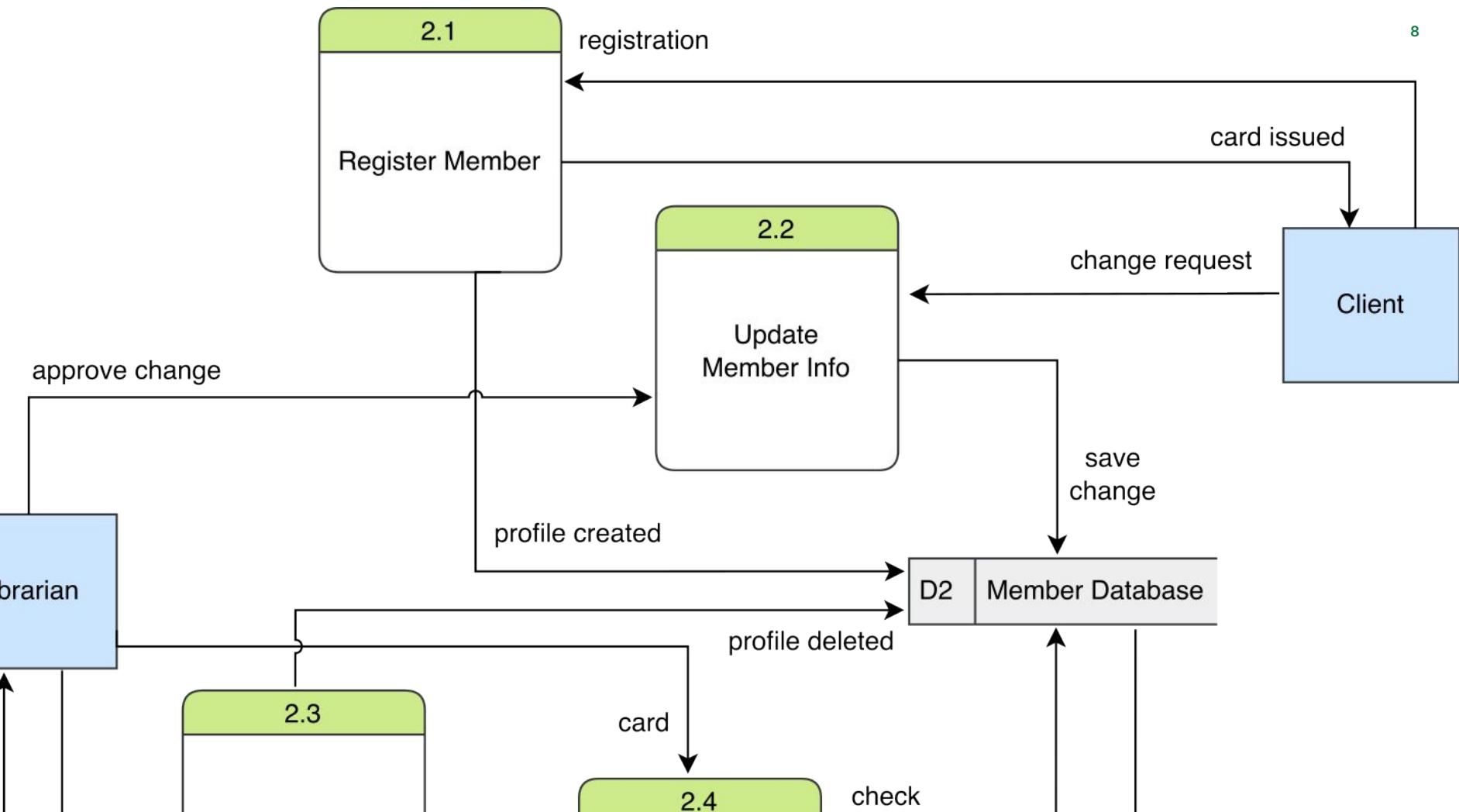


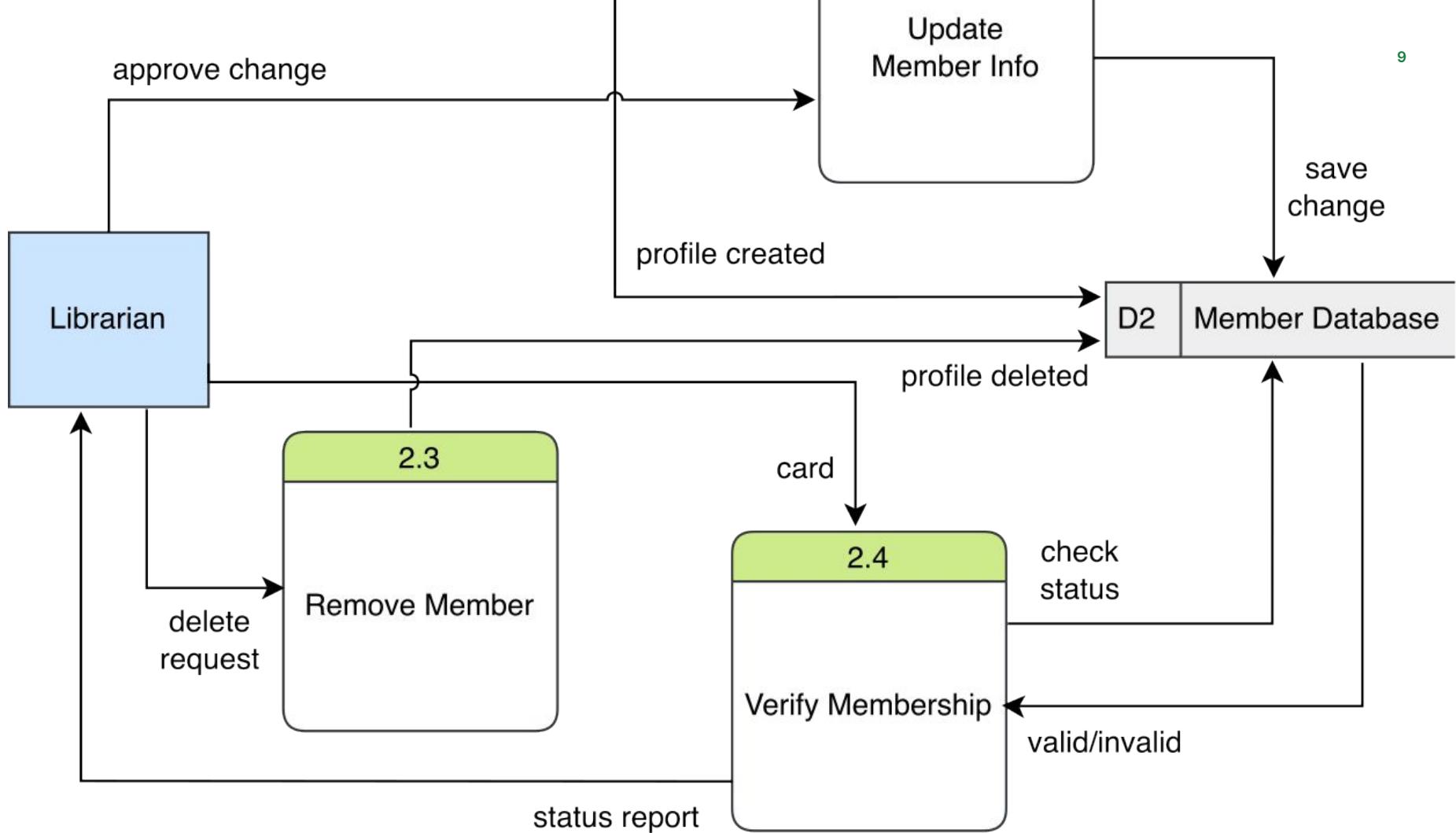


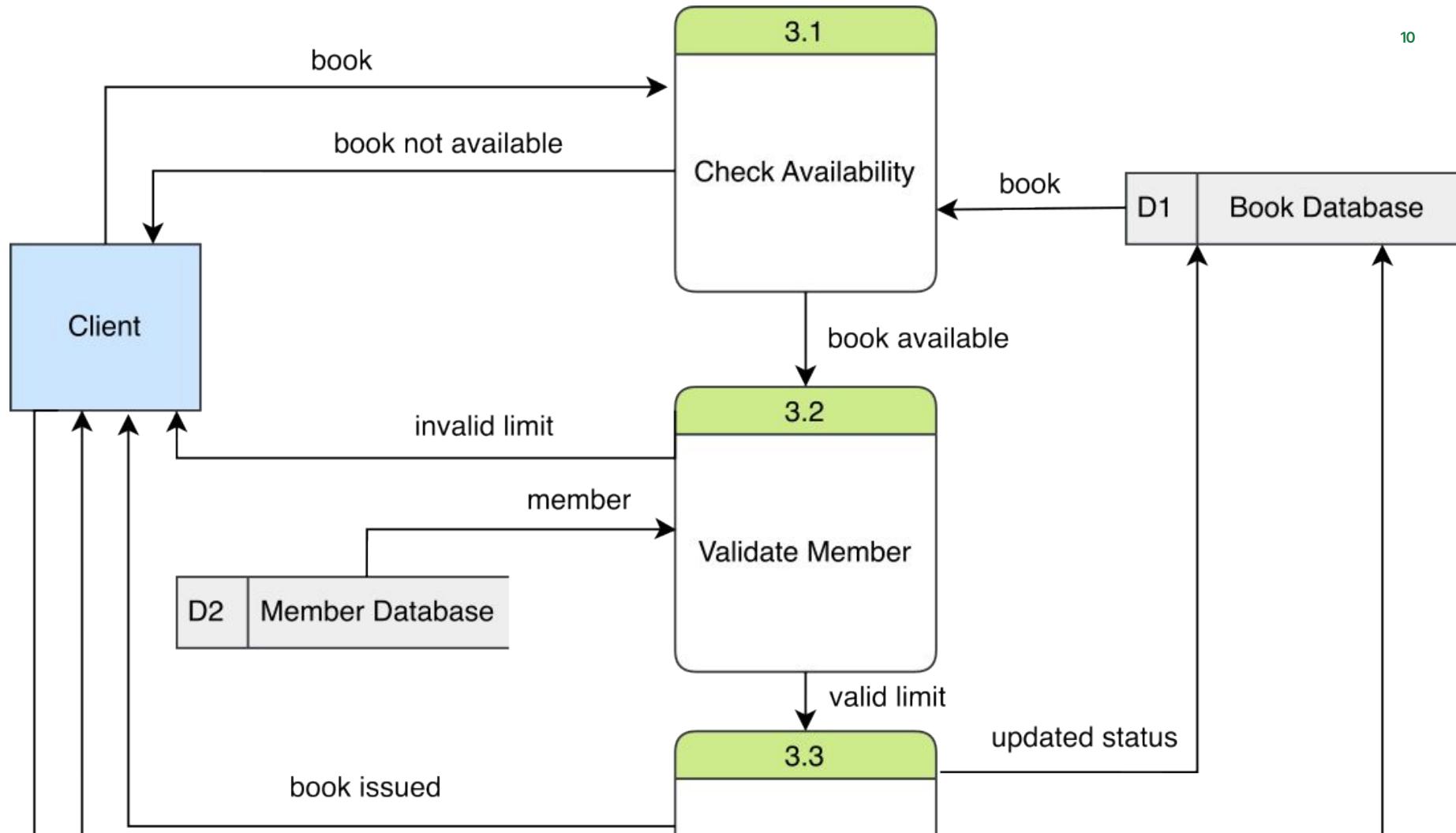
DFD 2

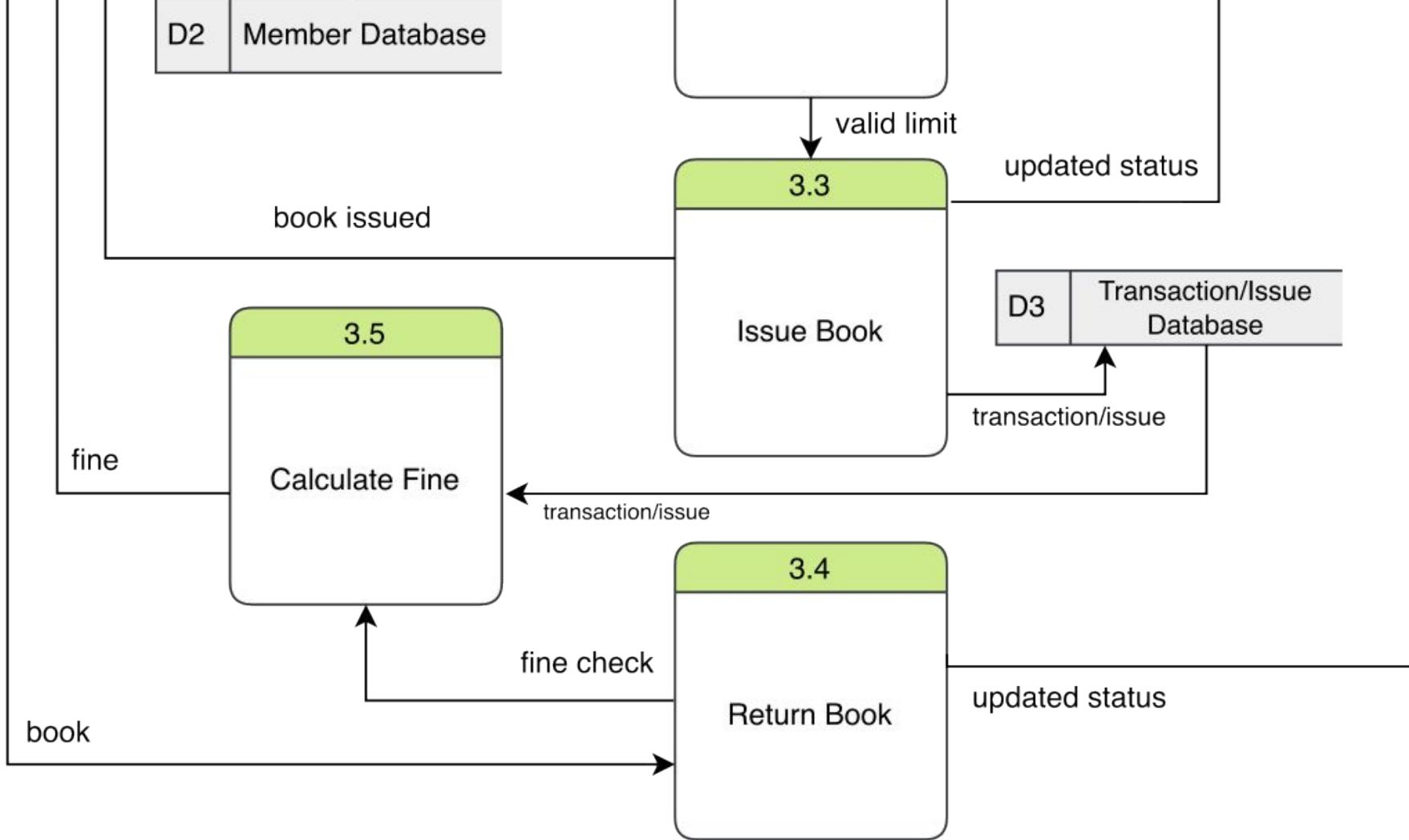
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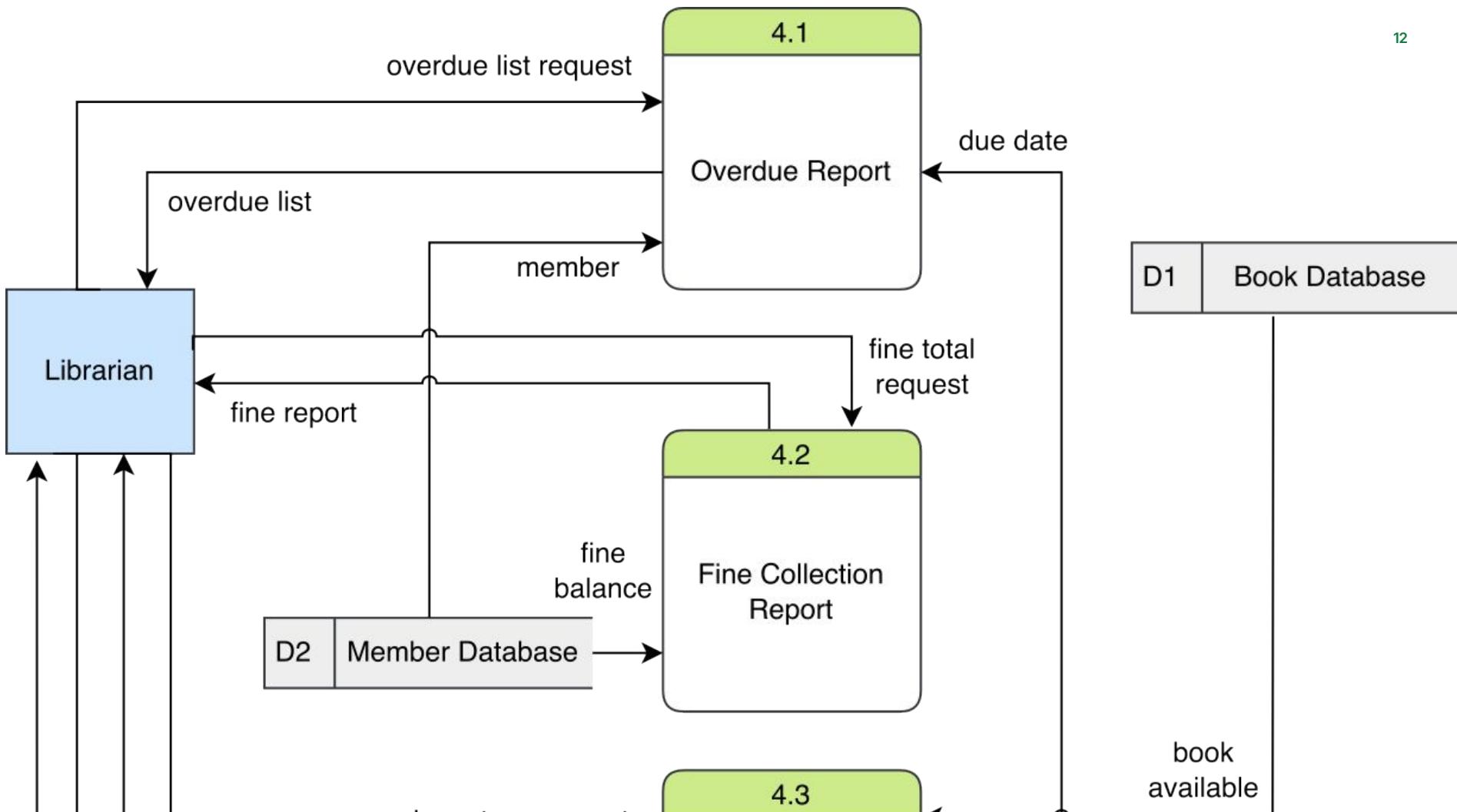


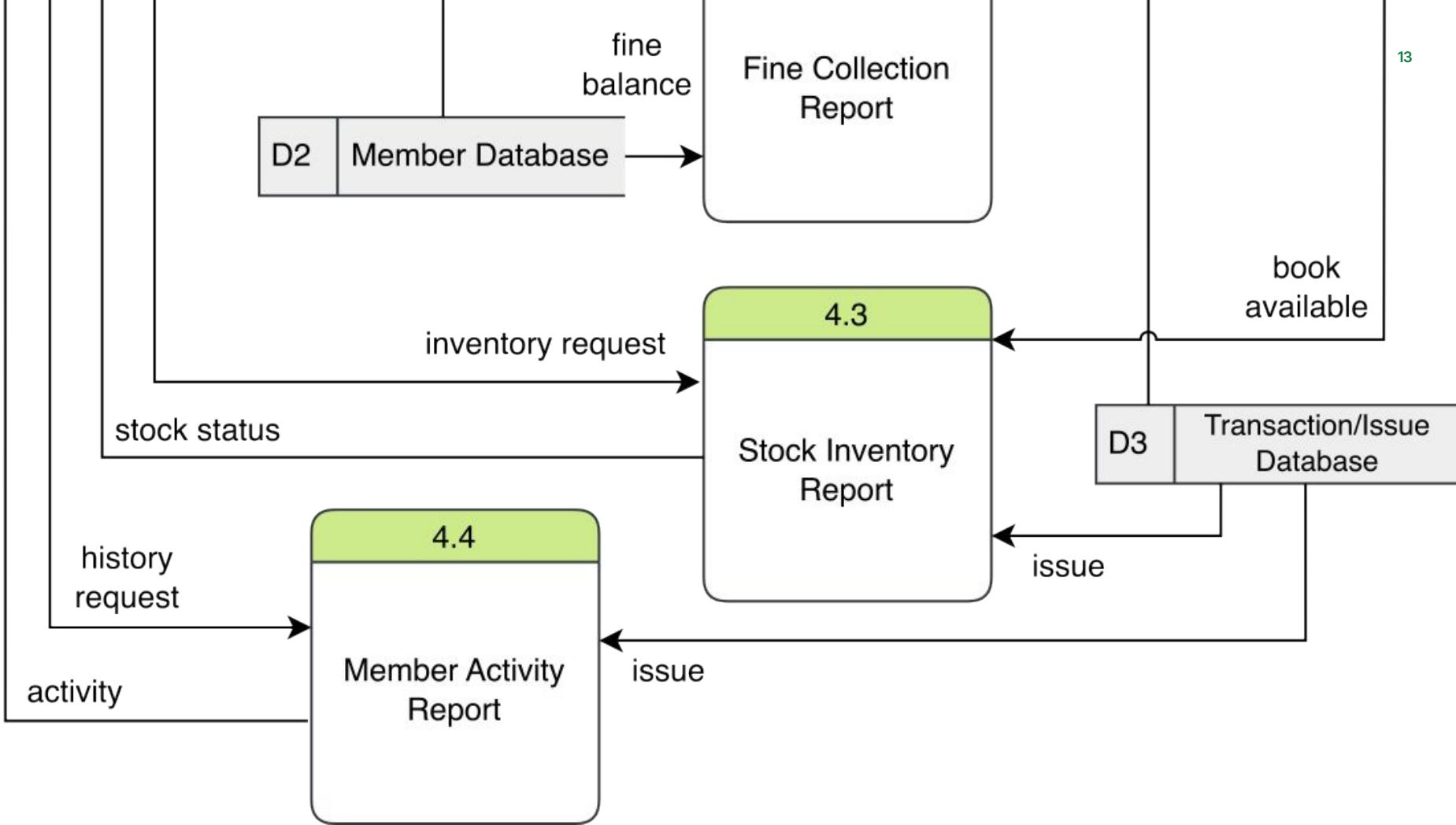






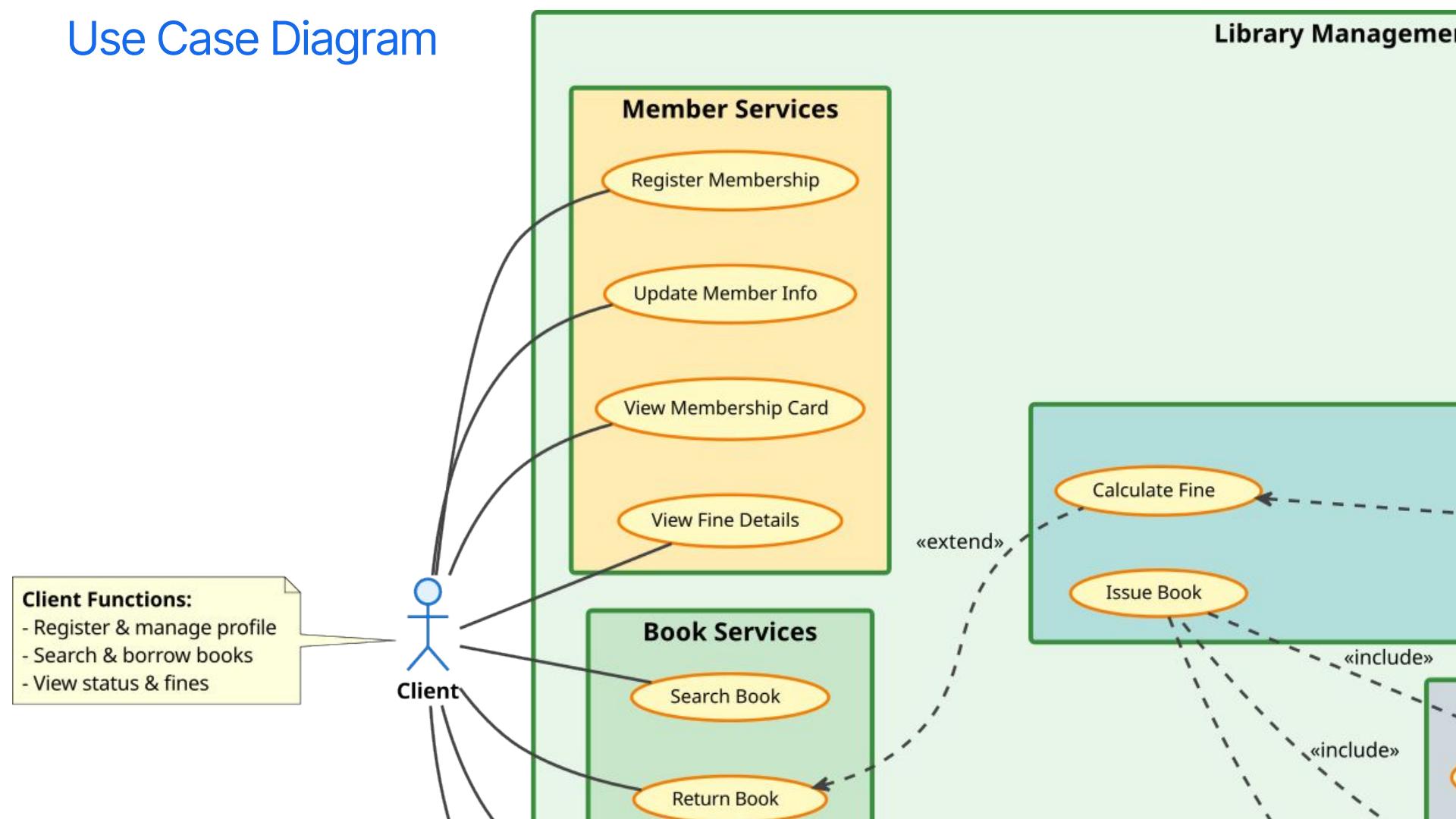




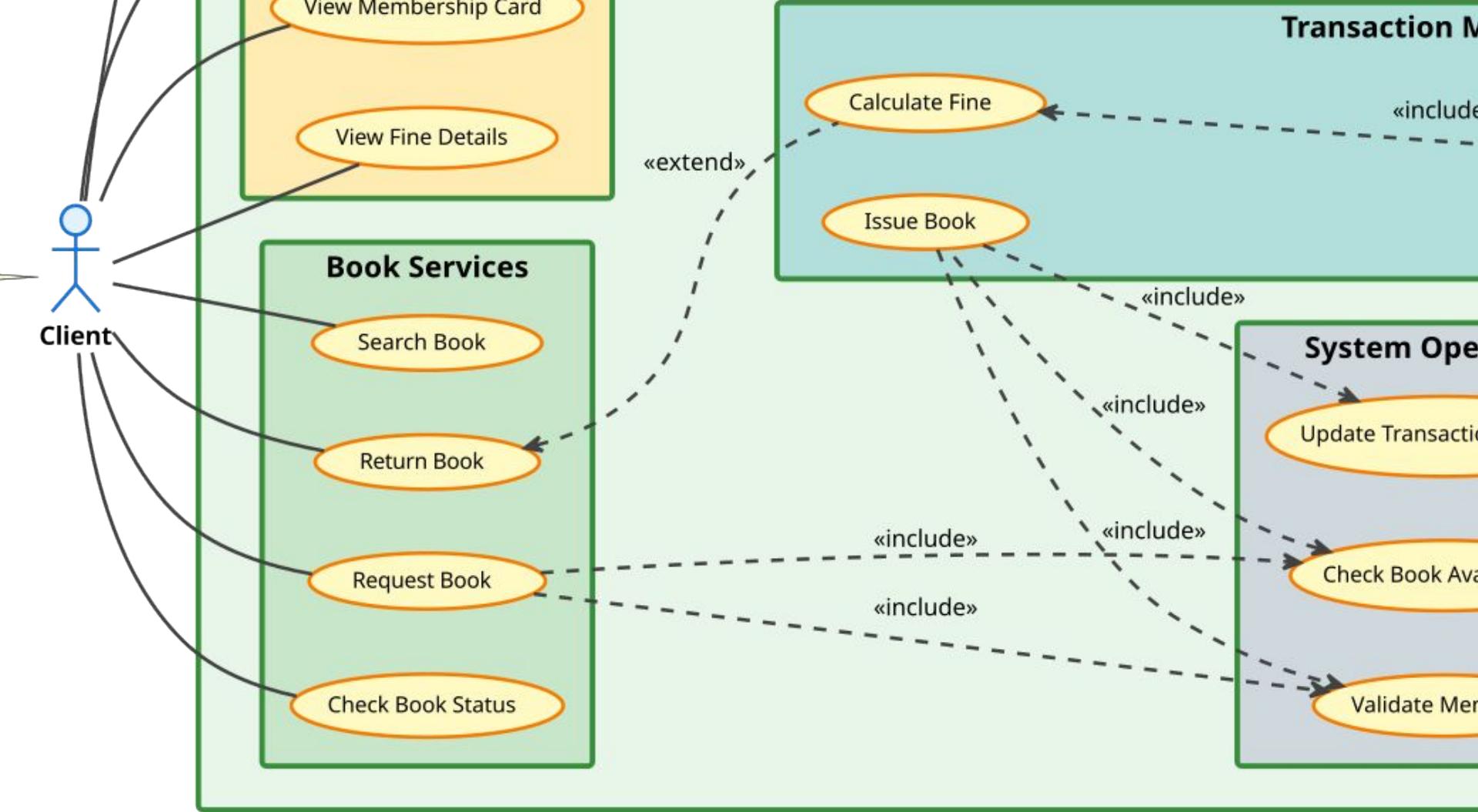


Use Case Diagram

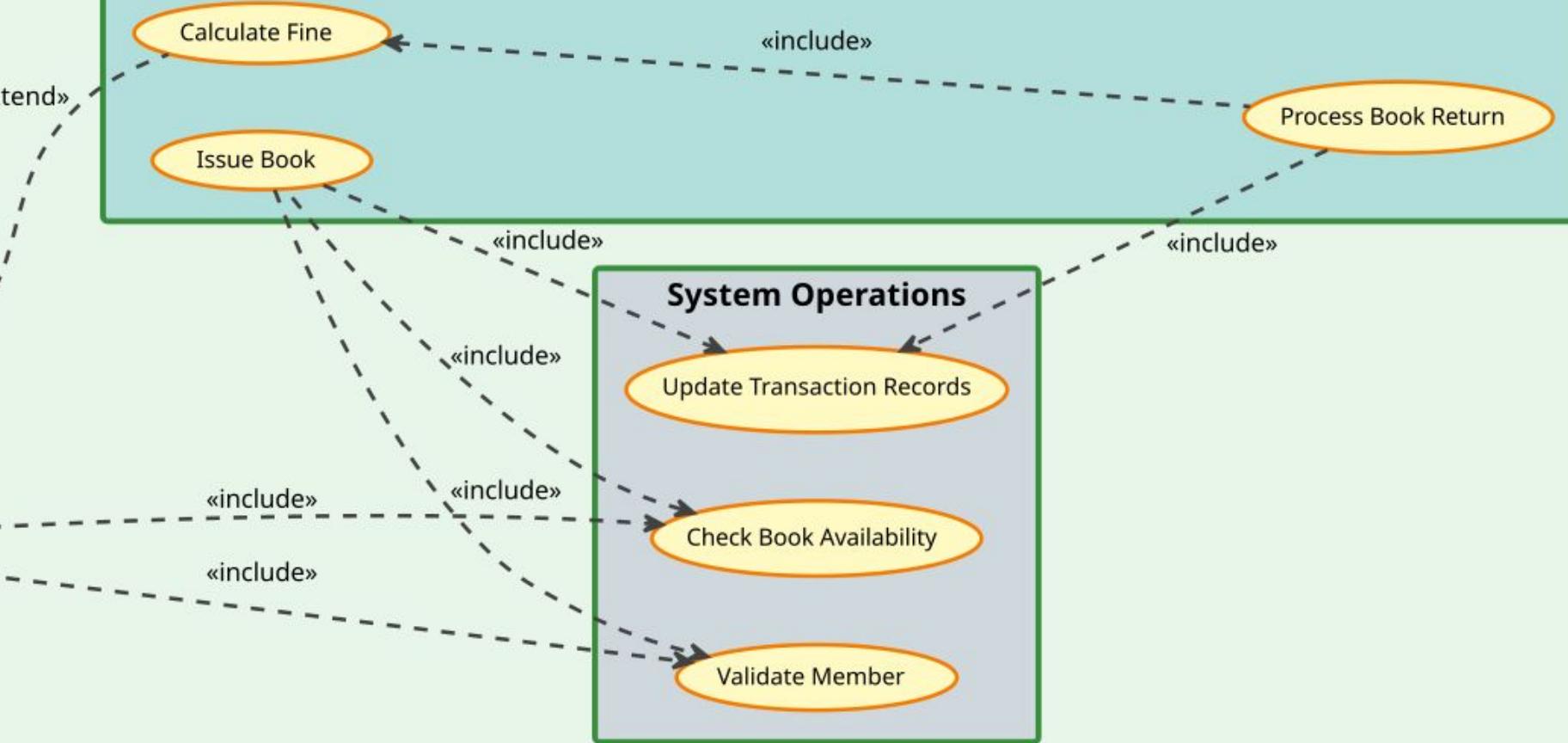
Library Management

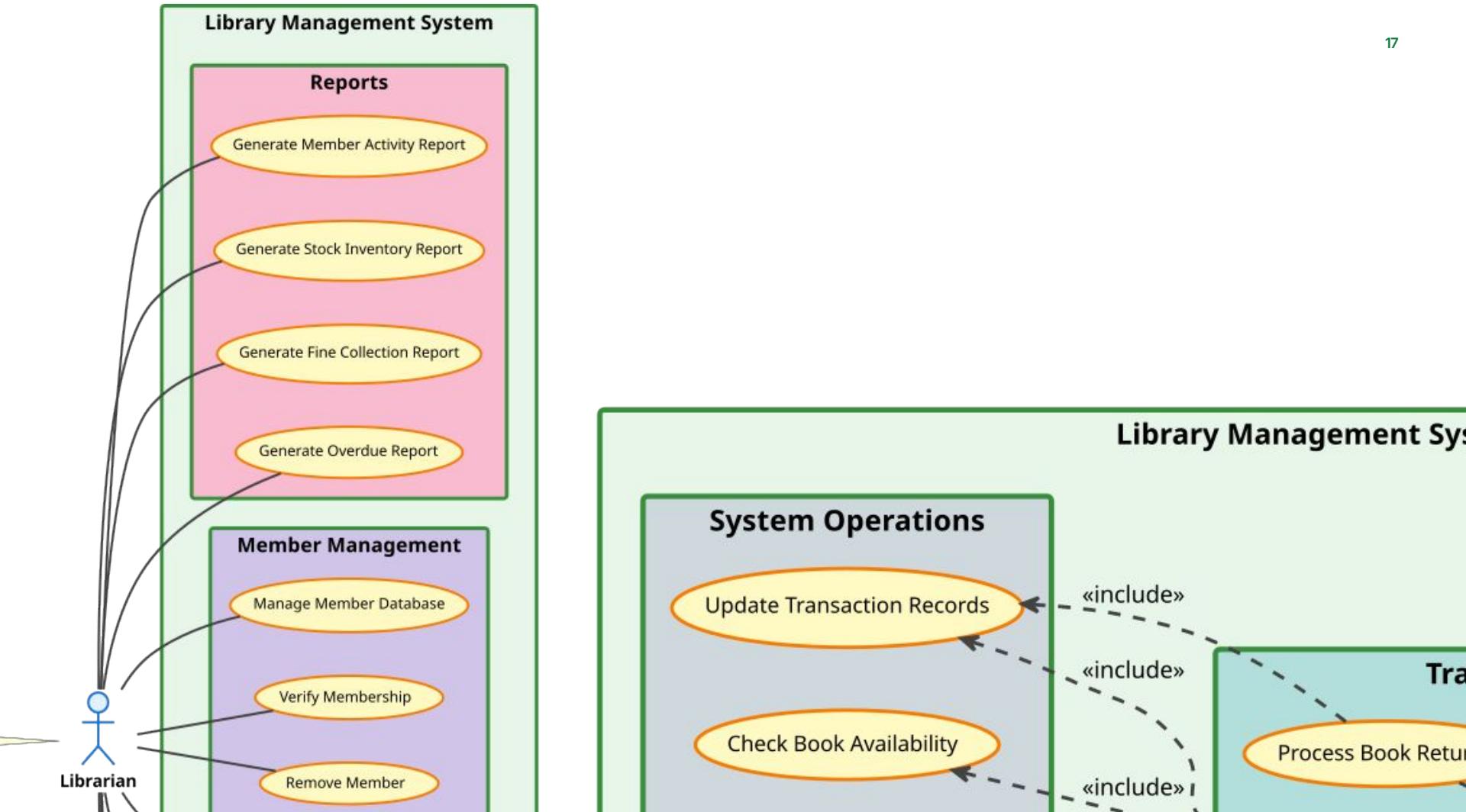


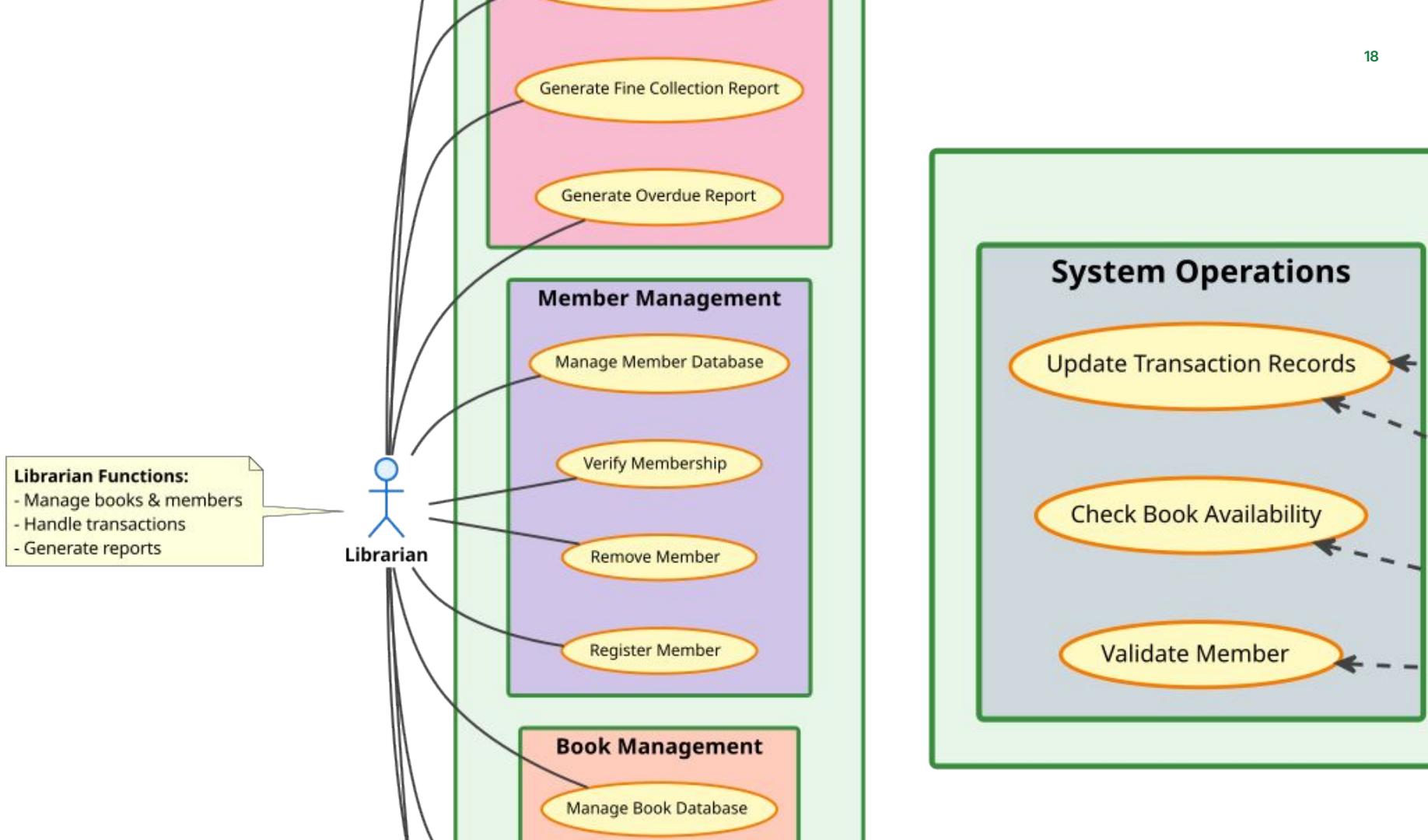
Transaction M



Transaction Management

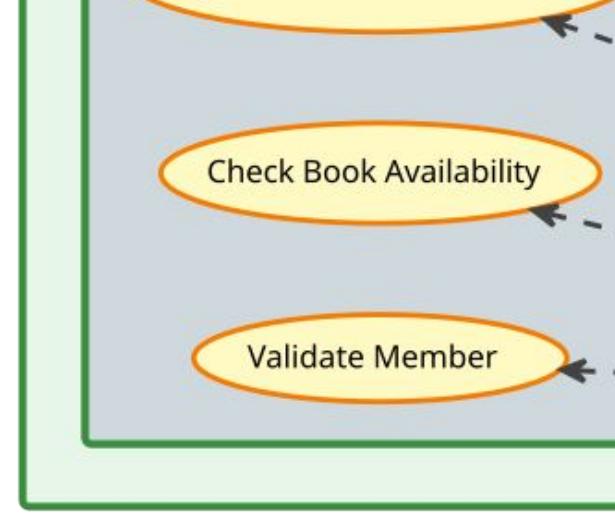
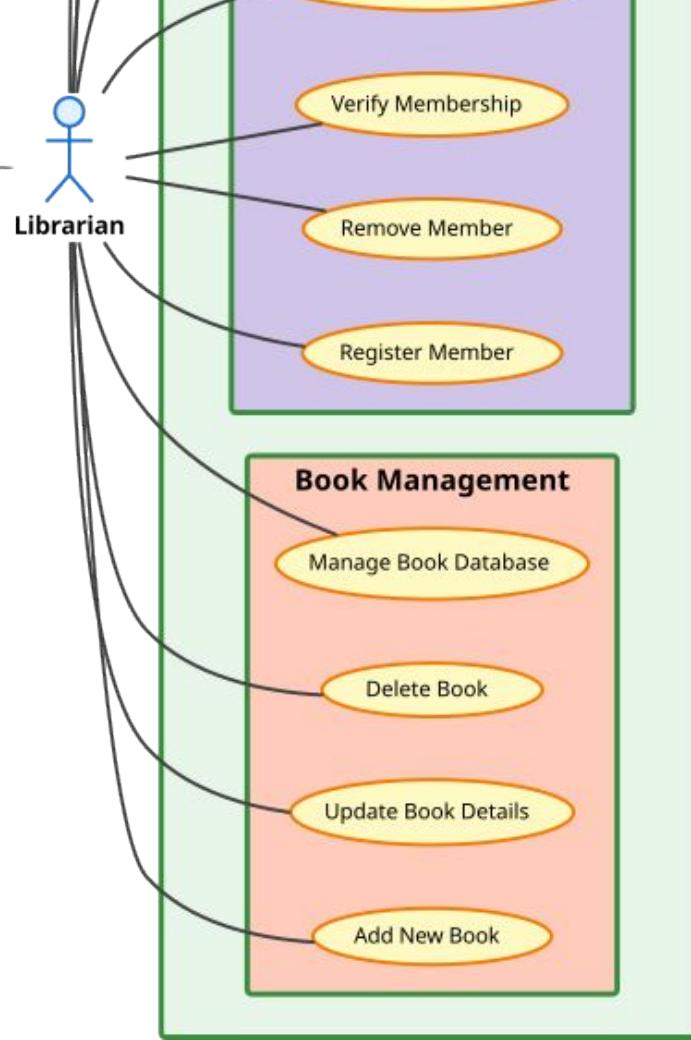




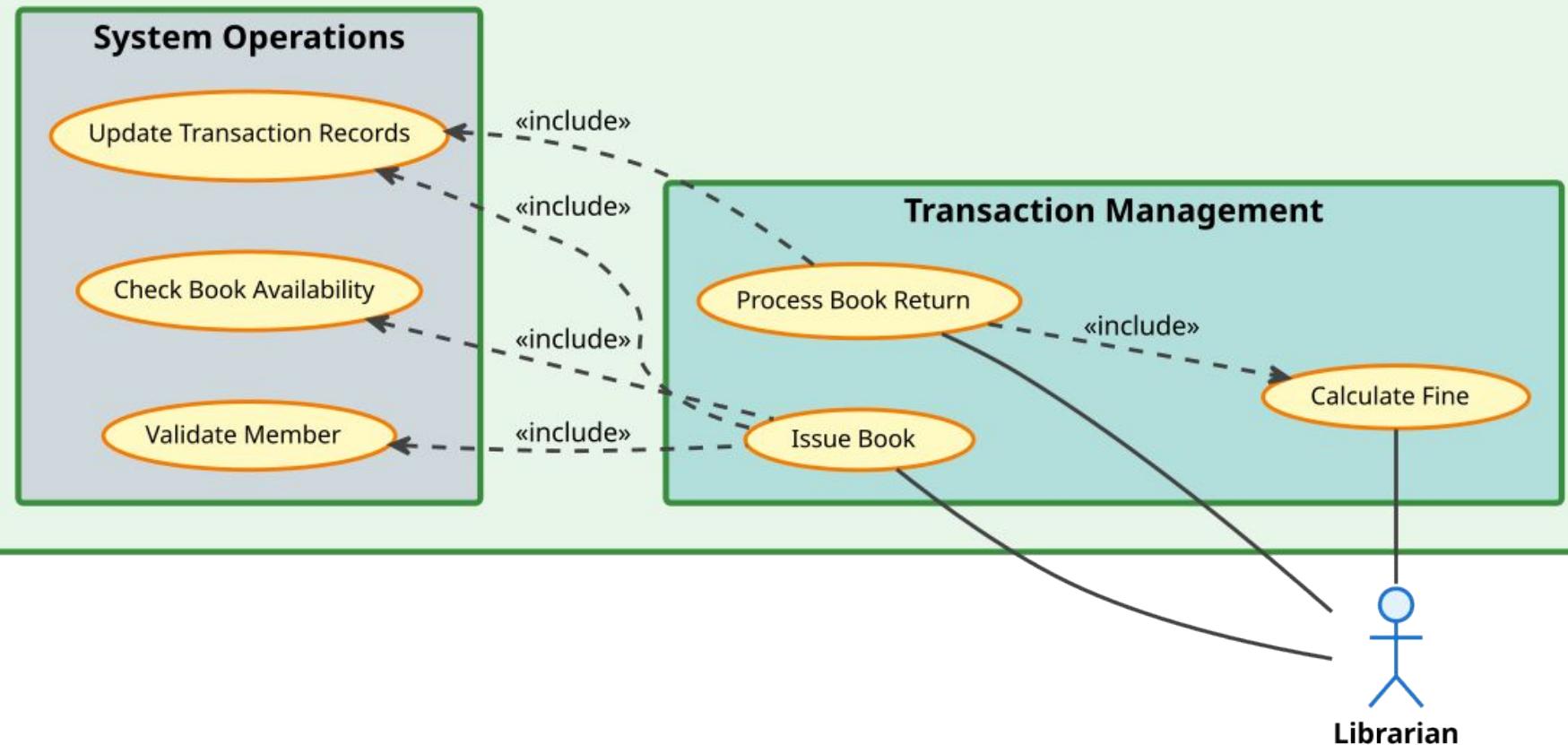


Librarian Functions:

- Manage books & members
- Handle transactions
- Generate reports

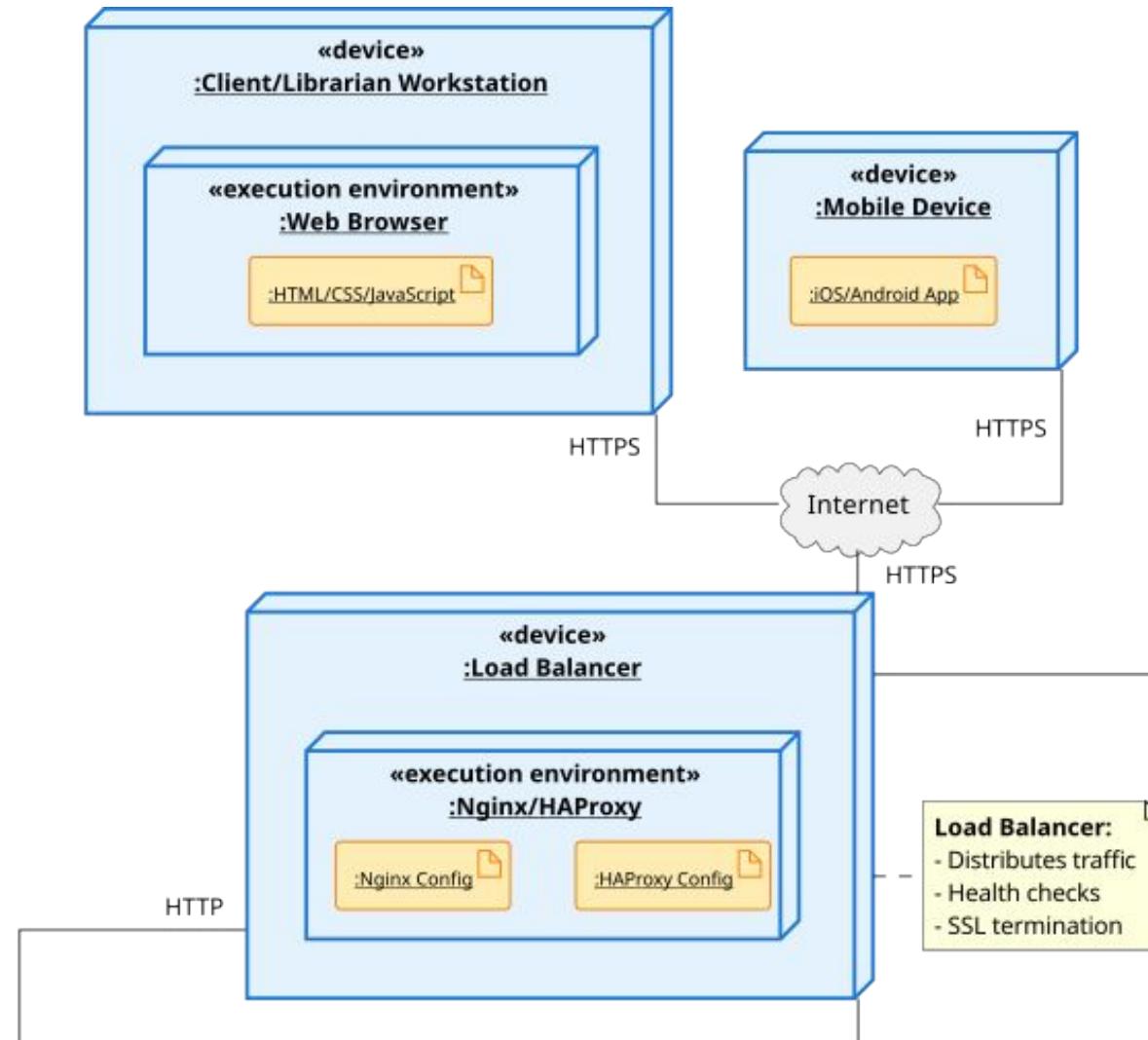


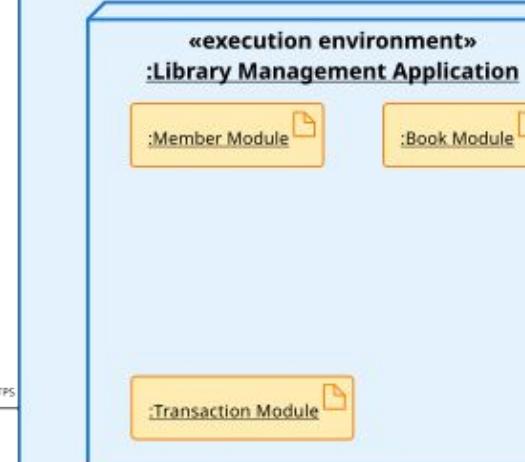
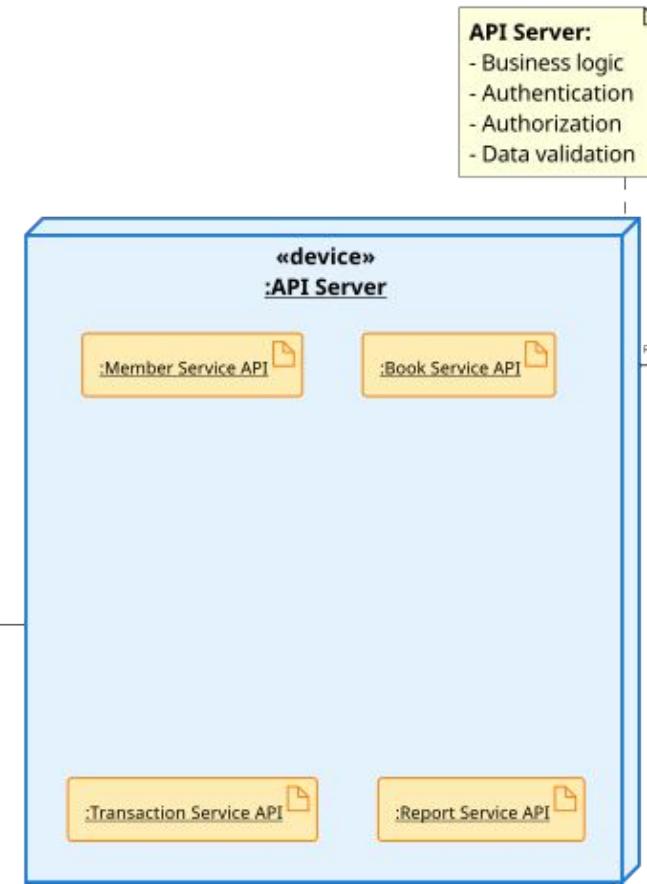
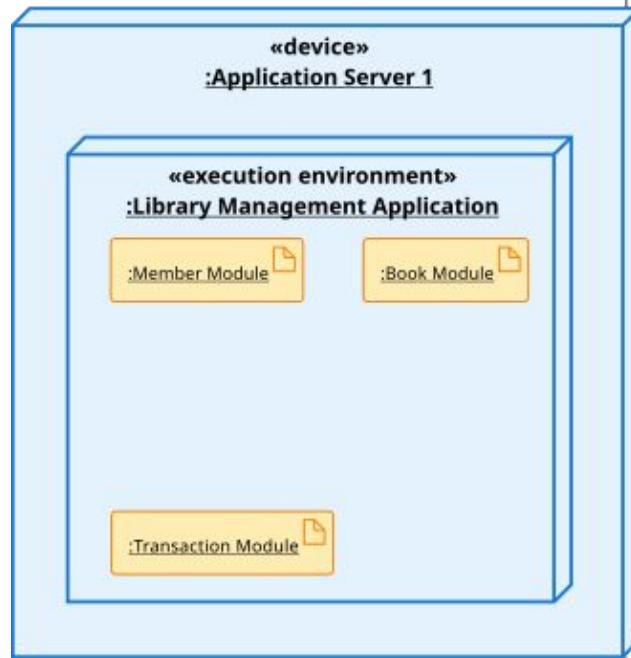
Library Management System

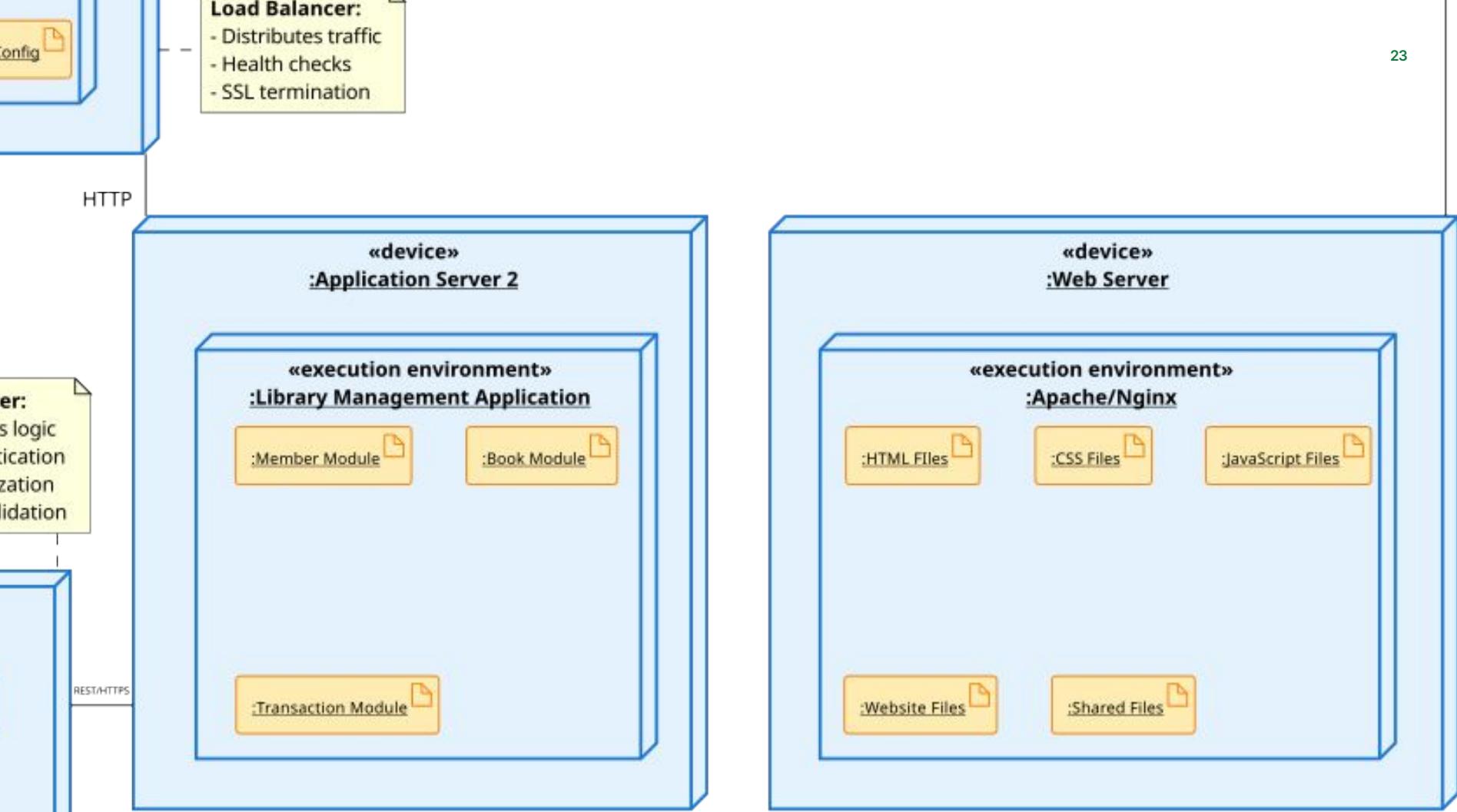


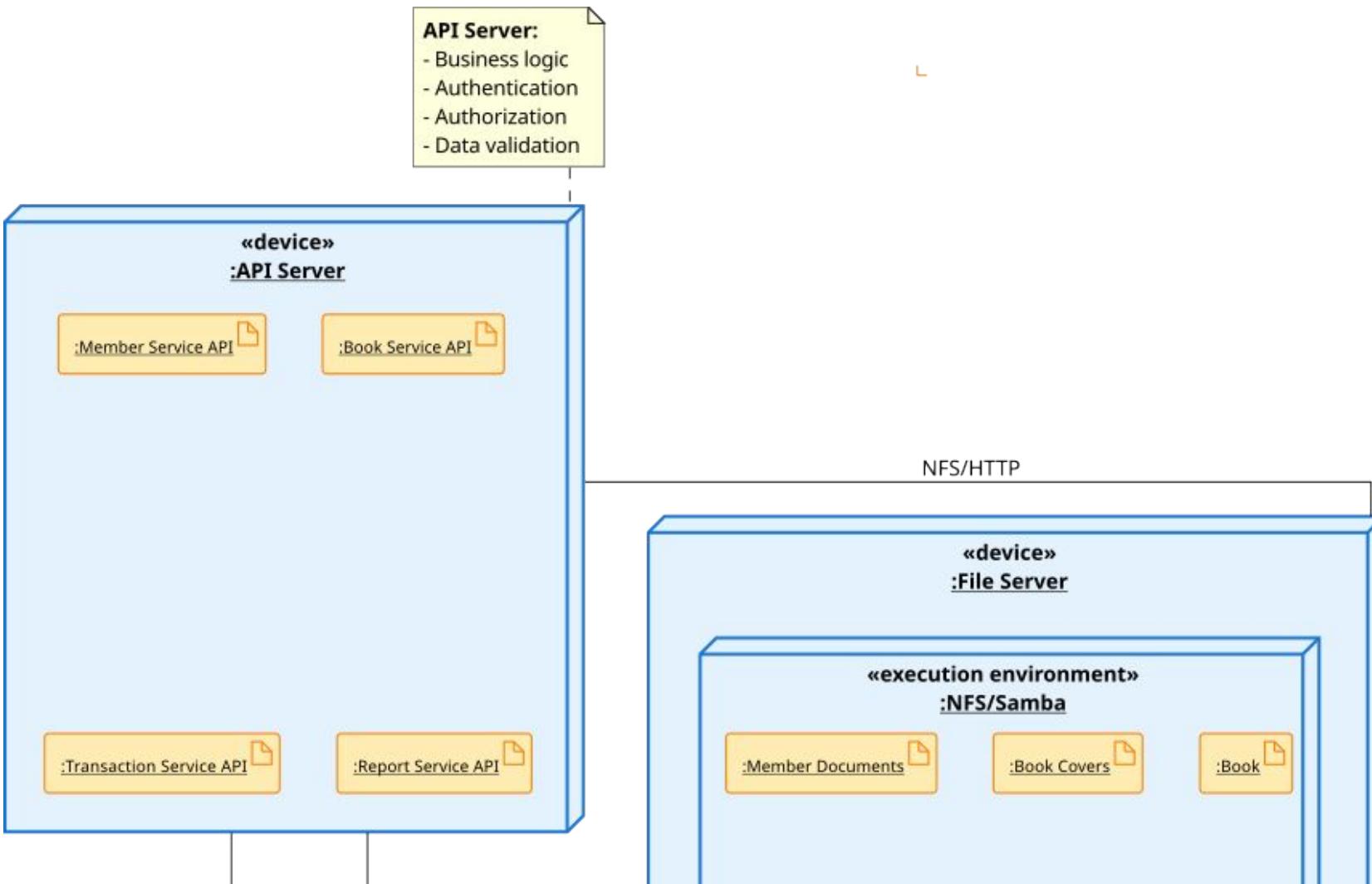
Deployment Diagram

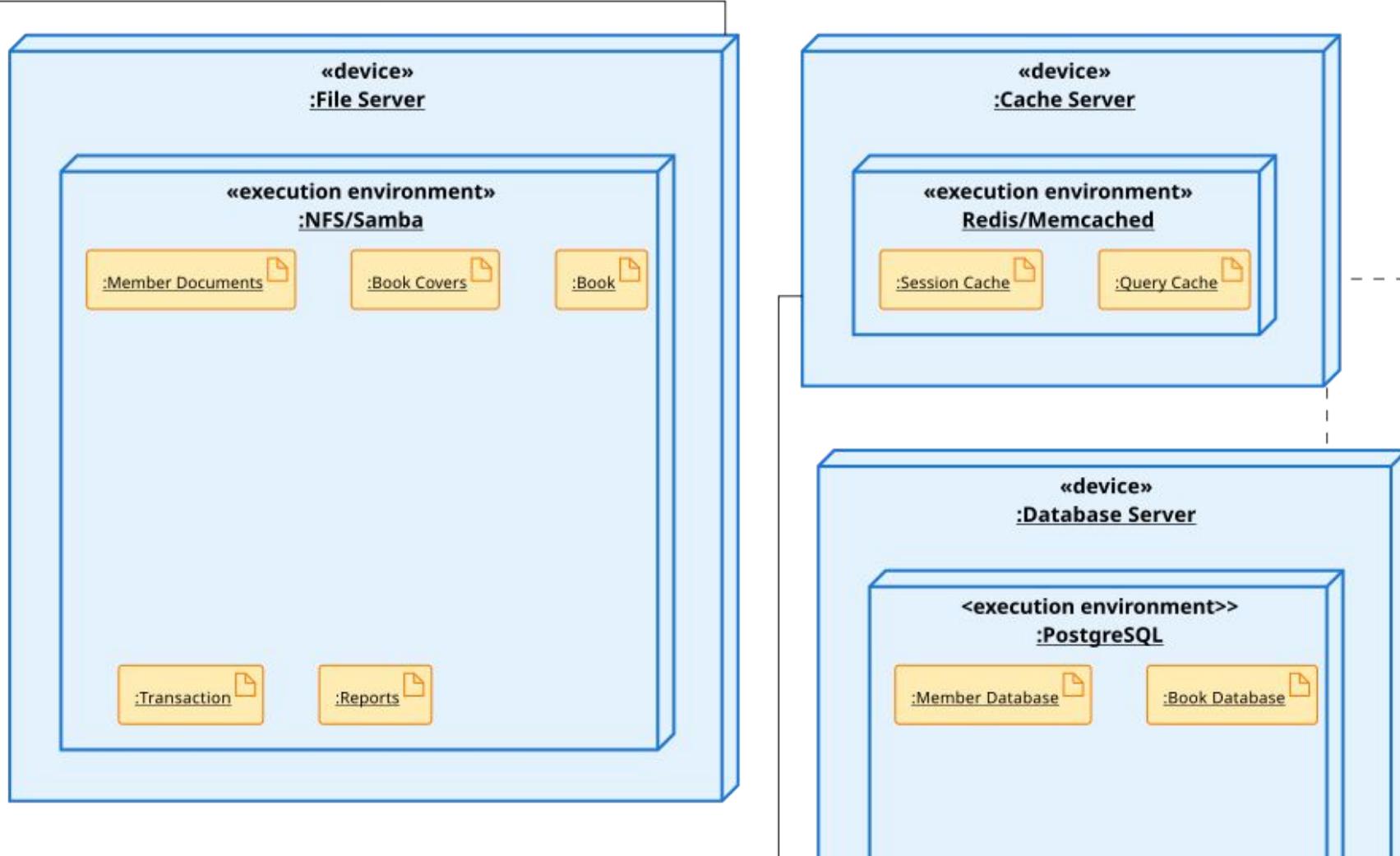
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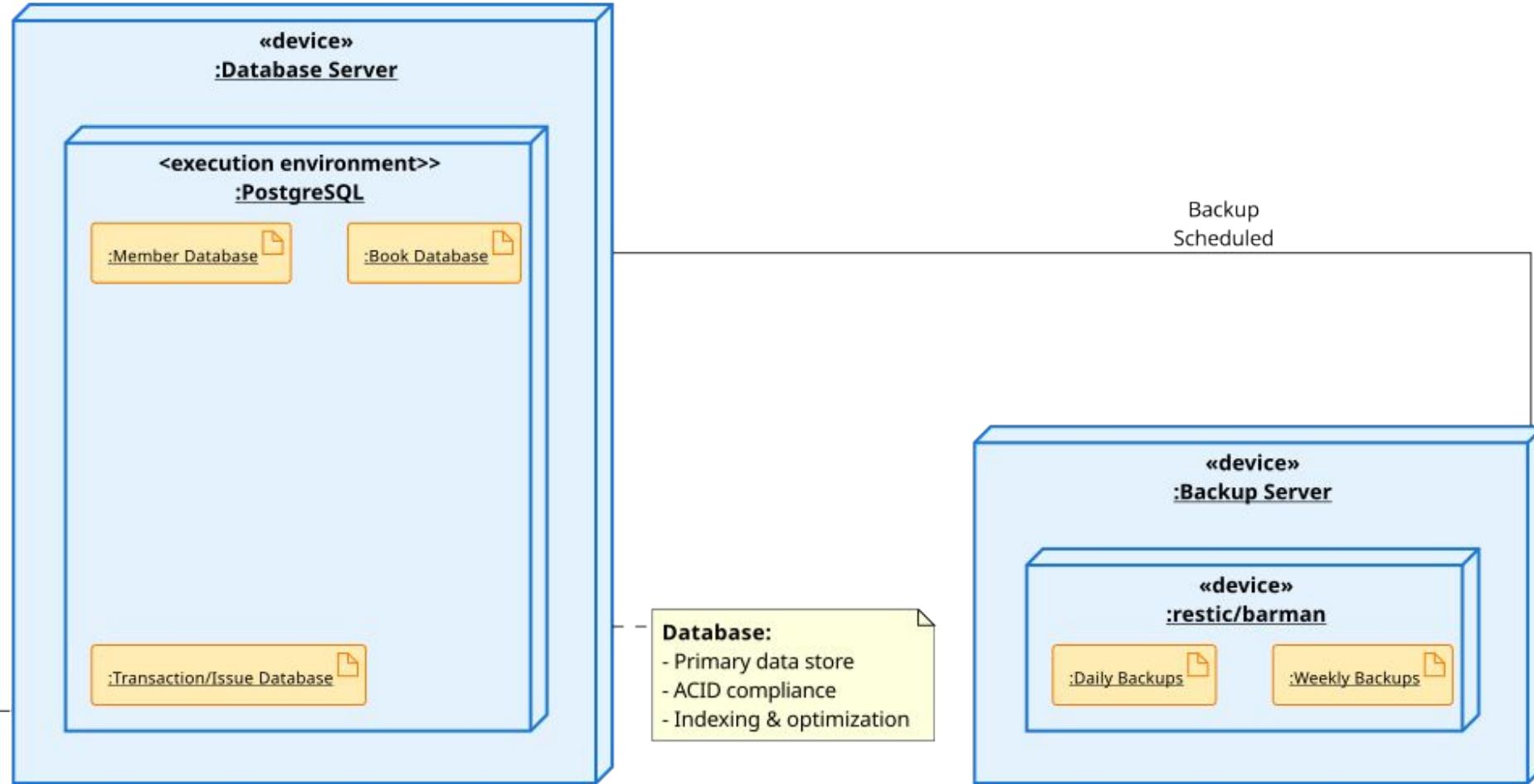








Cache
- Se
- Qu
- Pe



ERD (Entity Relationship Diagram)

Book_Authors	
string	ISBN
PK_FK	int
AuthorID	PK_FK

DigitalAccessLogs		
int	AccessID	PK
int	UserID	FK
int	AssetID	FK
string	AccessTimestamp	
string	IPAddress	

Loans		
int	LoanID	PK
string	ICRNL	FK

Loans

int	LoanID	PK
string	ISBN	FK
int	UserID	FK
int	StaffID	FK
string	IssueDate	
string	DueDate	
string	ReturnDate	
enum	Status	

DigitalAssets

int	AssetID	PK
string	ISBN	FK
enum	FileFormat	
decimal	FileSizeMB	
string	DownloadURL	
enum	AccessLevel	

processed by

references

digital version of

logs access to

Readers		
int	UserID	PK
string	FirstName	
string	LastName	
string	Email	UK
string	PhoneNumber	
string	Address	
string	JoinDate	

Staffs		
int	StaffID	PK
string	StaffName	
string	LoginID	UK
string	Password	
bool	CanManageDigital	

Books	
string	ISBN
string	Title
string	Editor
decimal	Price
enum	BookType
int	PubYear
int	Category

published by

belongs to

processed by

references

processes by

Staffs		
int	StaffID	PK
string	StaffName	
string	LoginID	UK
string	Password	
bool	CanManageDigital	

references

digital version of

written by

published by

belongs to

string	ISBN	PK
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