UML DIAGRAMS

for

Book Shop Automation Software

Presented by

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Contents

1 UML Diagrams

1.1 Use Case Diagrams
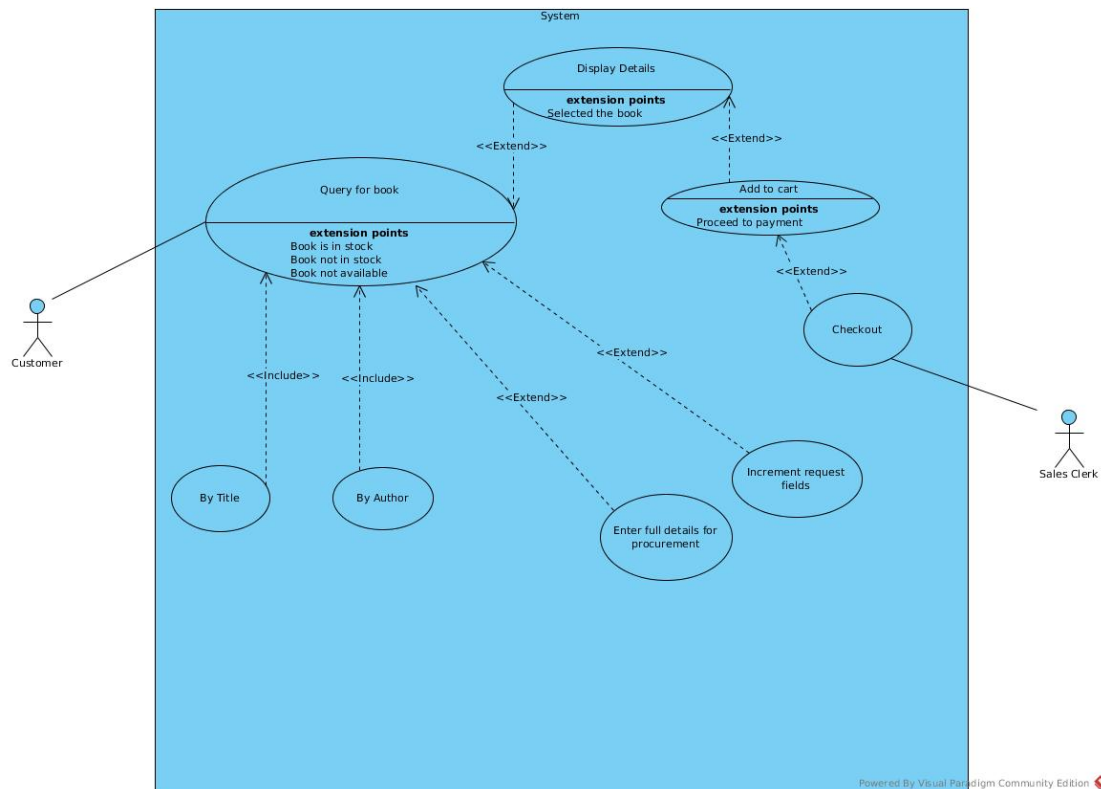
Figure 1.1: Customer related use cases.
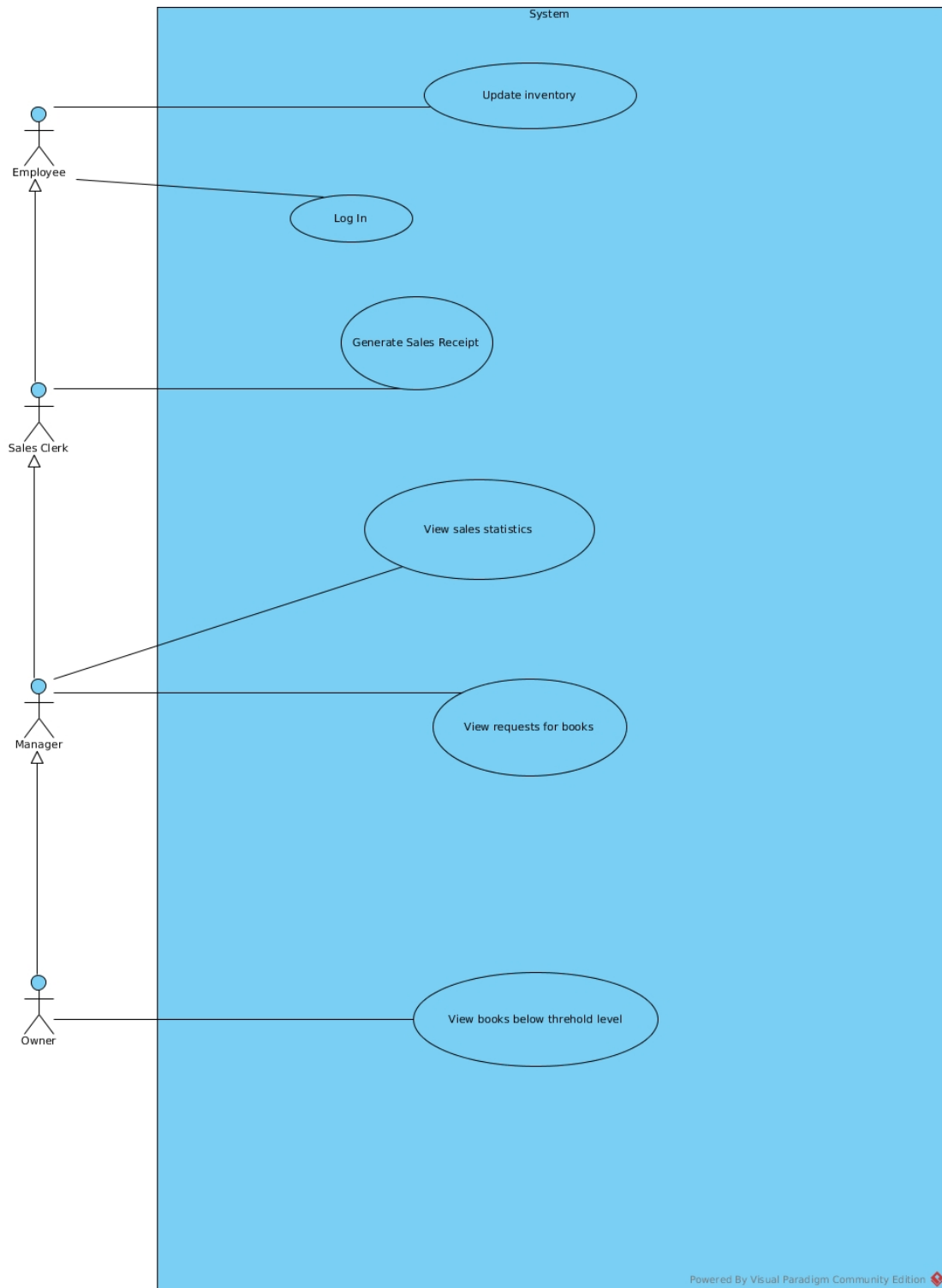
Figure 1.2: Employee related use cases.

System

Update inventory

Log In

Generate Sales Receipt

View sales statistics

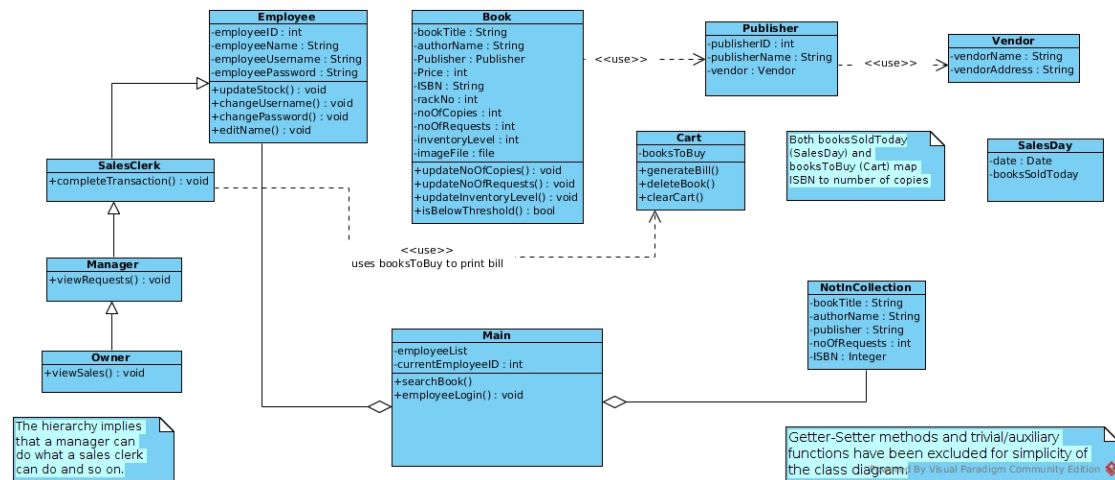View requests for books

View books below threhold level

Employee

Sales Clerk

Manager

Owner

1.2 Class Diagram

Figure 1.3: Class Diagram.

1.3 Sequence Diagrams

1.3.1 Book query and transactions

Customer

Database | o:Order | c: Cart | Sales Clerk

1: queryBook()

1.1: [present]displayDetails()

1.1.1: [want to buy]addToCart

1.2: [not available] fillDetails()

1.3: addToDatabase()

1.3: [not in stock]incrementRequests()

2: checkout()

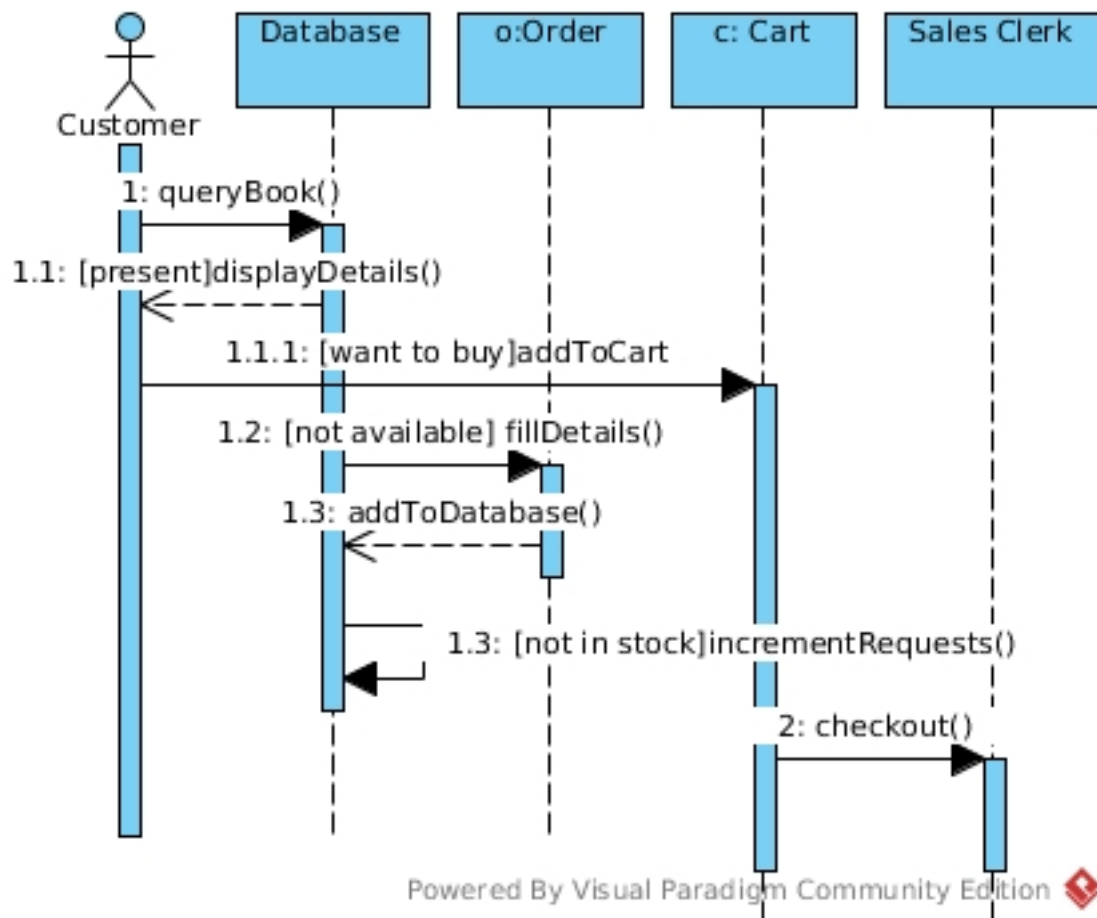Powered By Visual Paradigm Community Edition

Figure 1.4: Book related transactions.
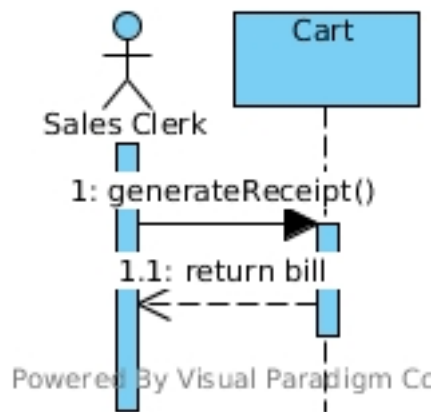
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1.3.2 Generate receipt

Figure 1.5: Sequence for generating receipt.

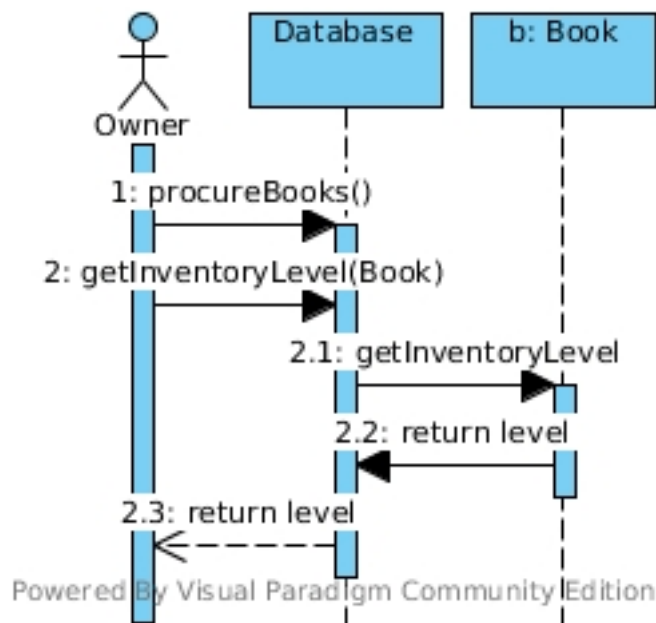### 1.3.3 Procurement of books

Figure 1.6: Sequence for procuring the book.
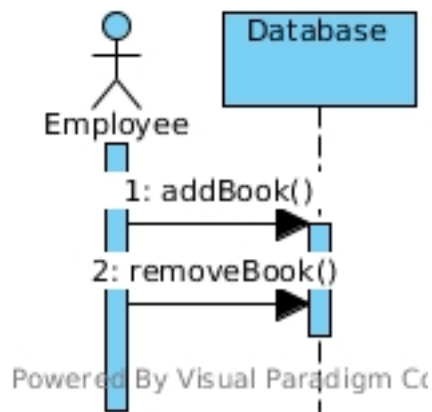
1.3.4 Update inventory

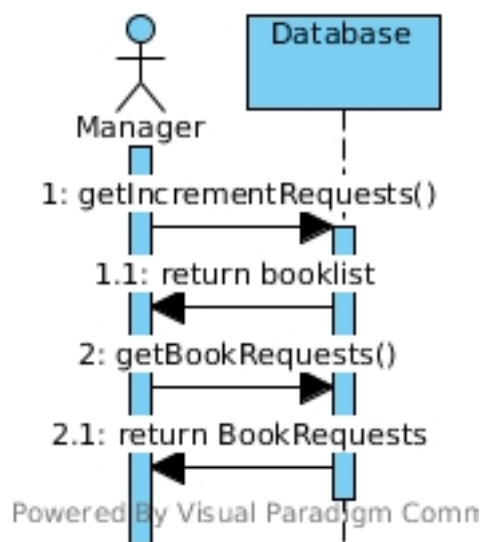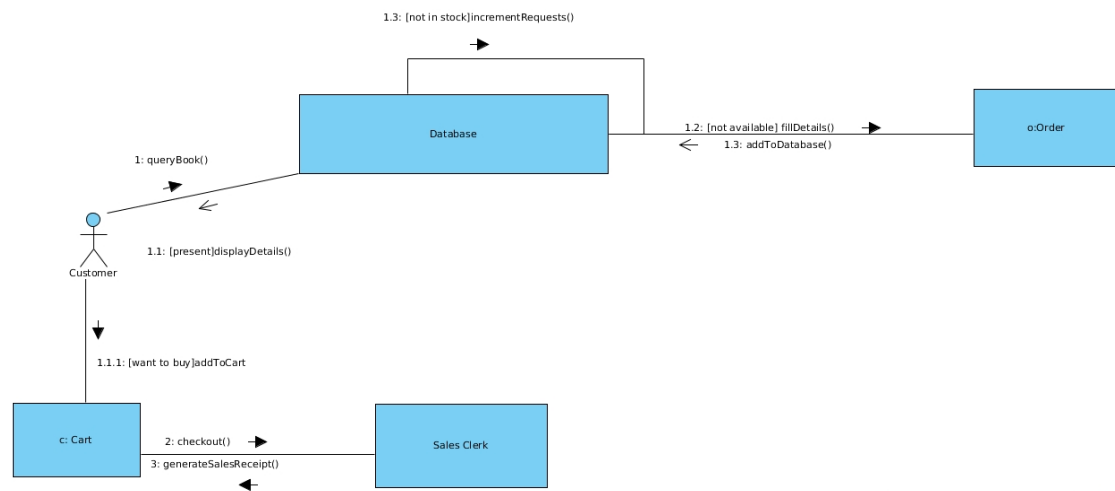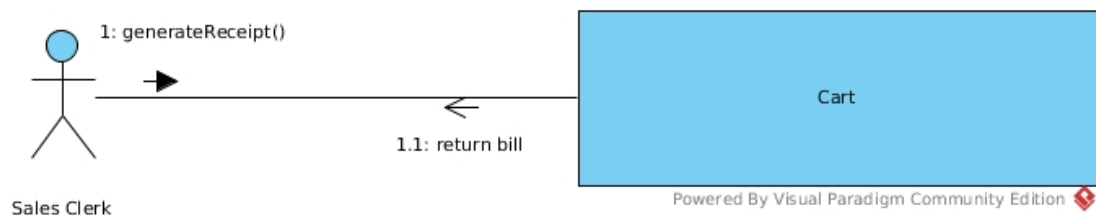Figure 1.7: Sequence for updating the inventory.

1.3.5 View requests

Figure 1.8: Sequence for viewing requests.

1.4 Communication Diagrams

1.4.1 Book query and transactions

1.3: [not in stock]incrementRequests()

Database

1.2: [not available] fillDetails()

1.3: addToDatabase()

o:Order

1: queryBook()

1.1: [present]displayDetails()

Customer

1.1.1: [want to buy]addToCart

c: Cart

2: checkout()

3: generateSalesReceipt()

Sales Clerk

1.4.2 Generate receipt

1: generateReceipt()

Cart

1.1: return bill

Sales Clerk

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1.4.3 Procure books
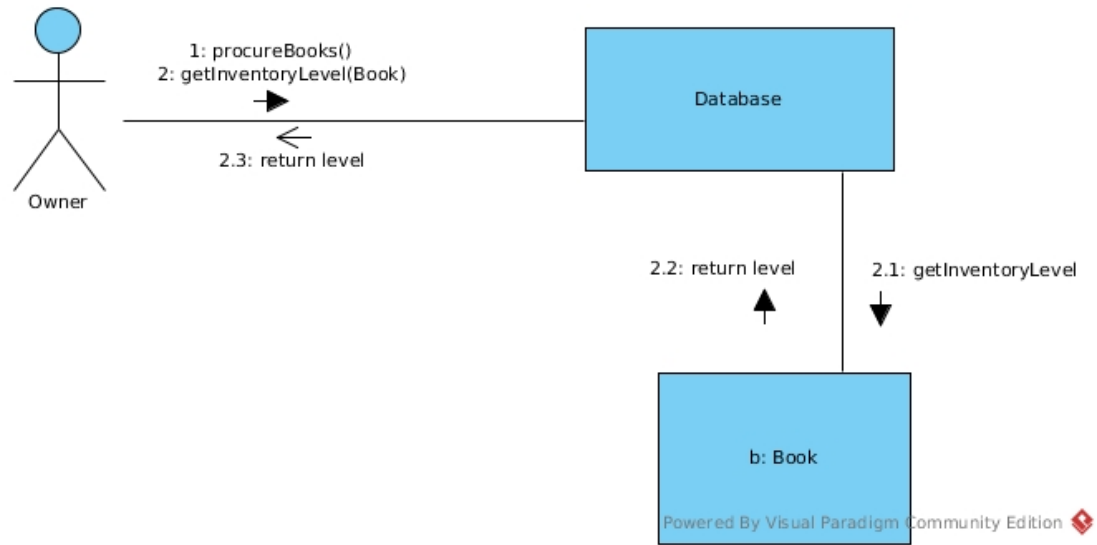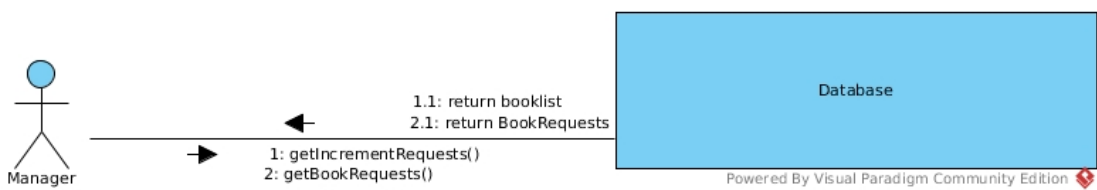

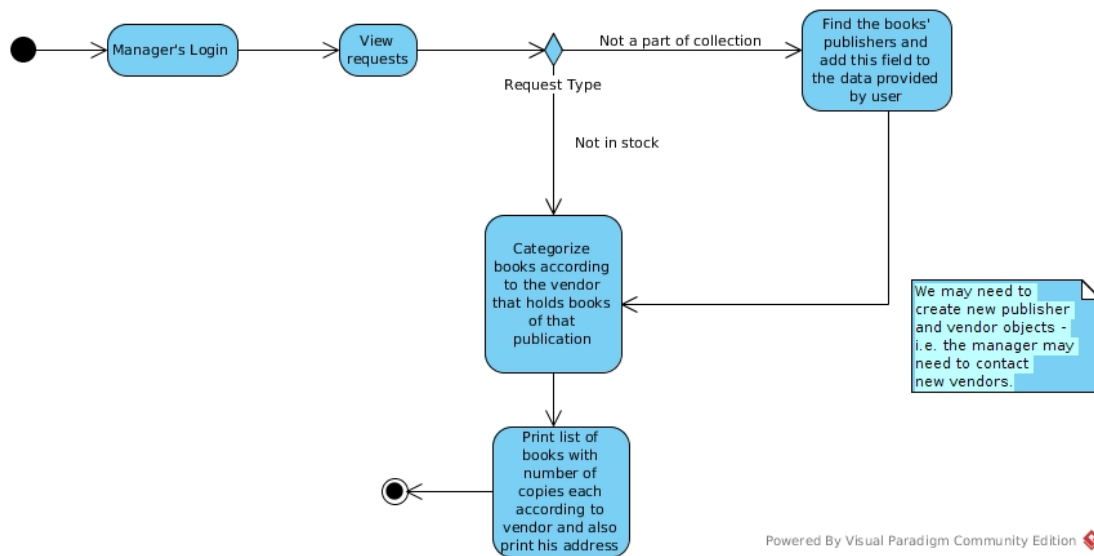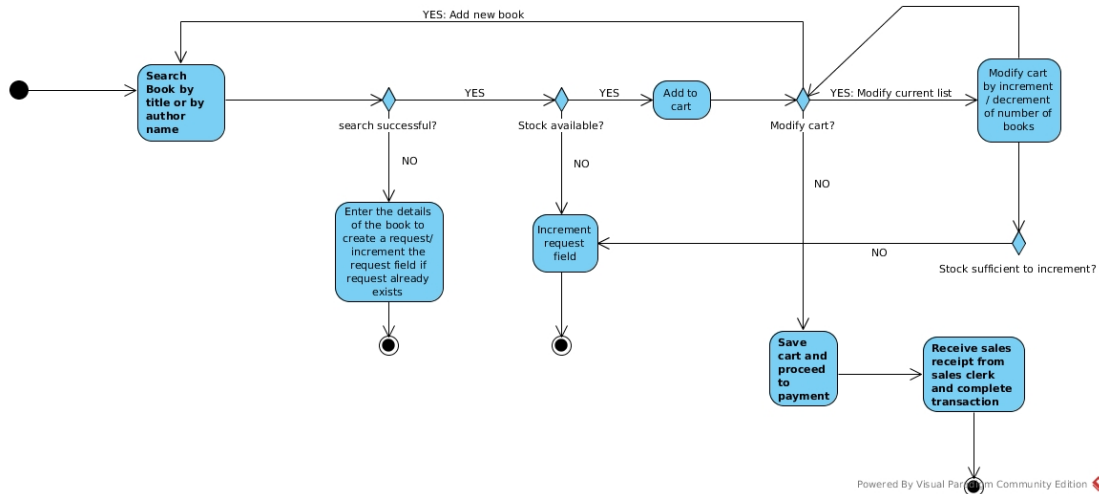### 1.4.4 Update inventory
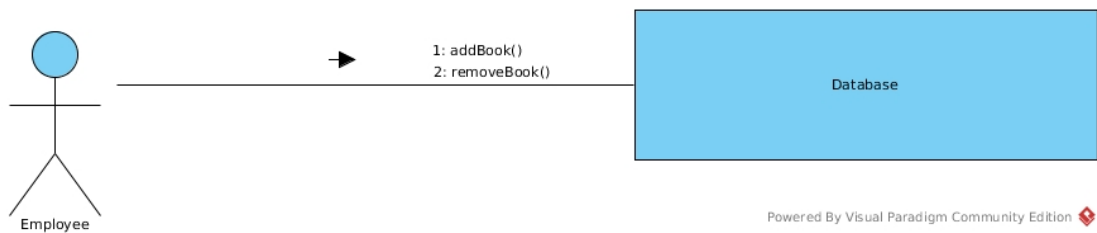
1.4.5 View requests

1.5 Activity Diagrams

1.5.1 Manager's activity

1.5.2 Book query

1.5.3 Stock arrival

Order arrives from various vendors → Employee Login → What type?

New books to be added to collection → Complete all details (assign rack no.) and add new entries to the database

Stock replenishment → Update database : increase noOfCopies fields

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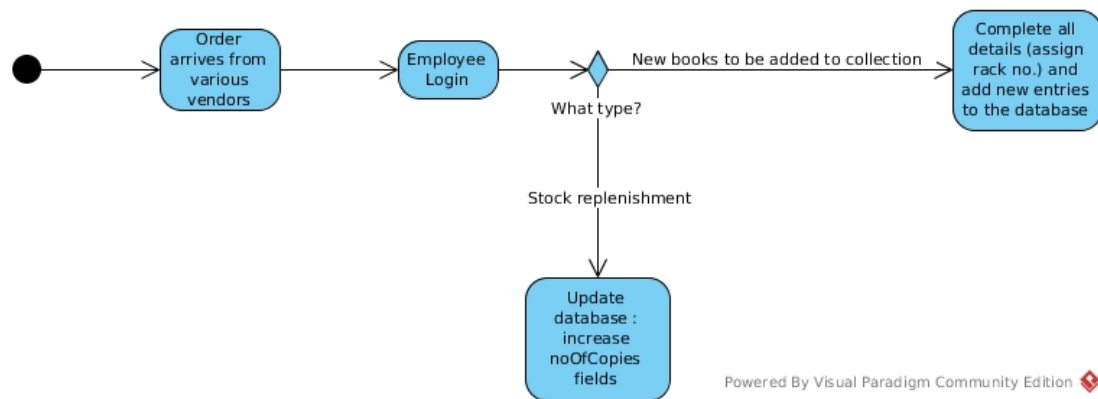
1.6 State diagrams

1.6.1 Book

New stock arrives

Book with
finite
number of
copies

Buying decrements noOfCopies

Book with
zero copies
: Dormant
state

Stock finishes

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1.6.2 Cart

Empty Cart

Customer searches and adds books

Modifiable Cart

Increments/decrements no of copies

Finalizes order/proceeds to payment

Final cart

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1.6.3 Order