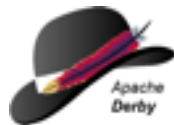- # **Library Management System**

- **Group 9**
  - **Bao Pham**
  - **Toan Quach**
  - **Anil KC**

- 13. Jul 2015

Agenda

- **Overview**
- **Tools & Technologies**
- **Class Diagram**
- **Database Diagram**
- **Sequence Diagram**
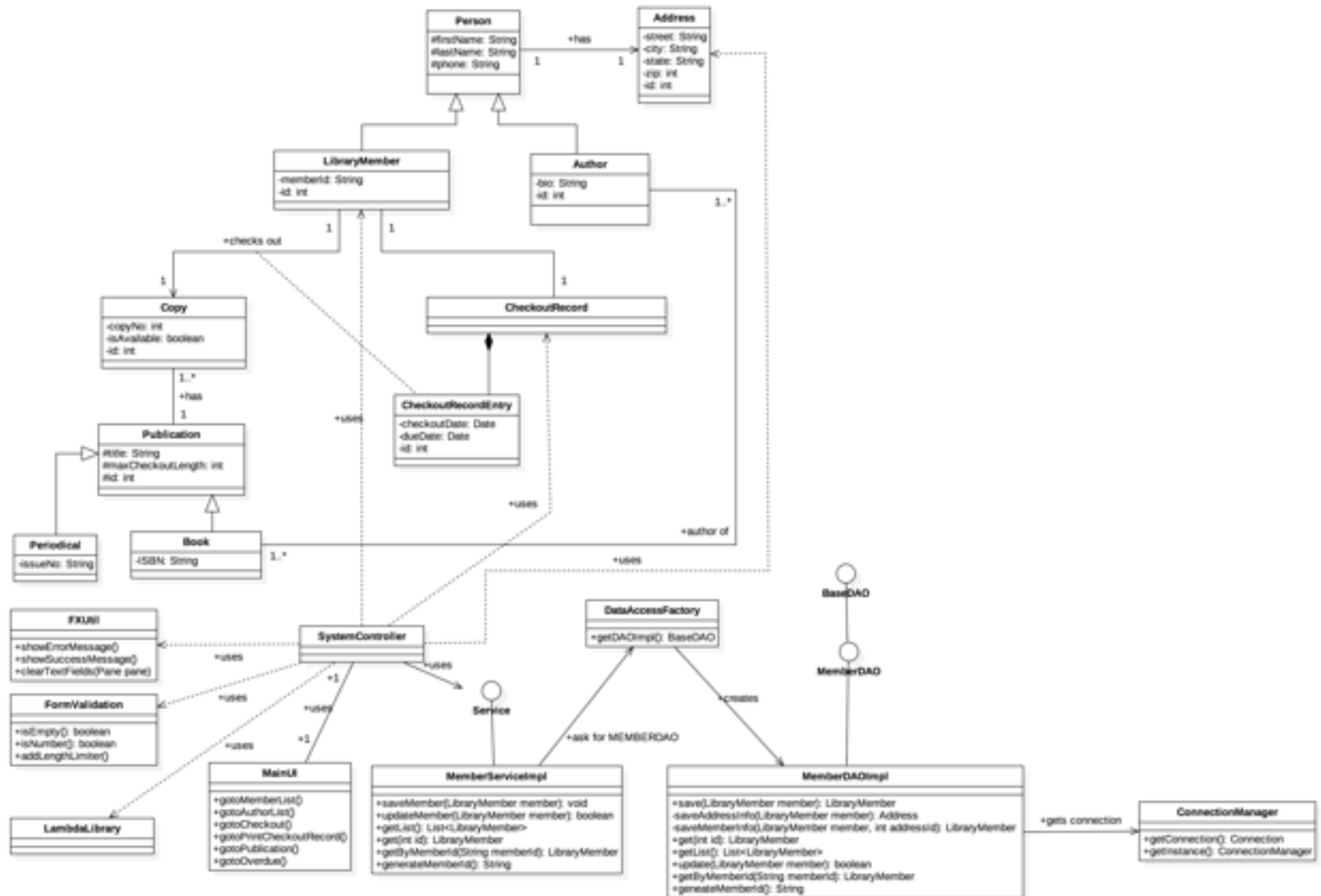- **Lambda Library**
- **Limitations**
- **Demo**

Overview

- **Checkout book/periodical for library member.**
- **MVC Model:**
  - Ease to maintenance
  - Reduce code redundancy
  - High extension
- **Object creation factory pattern aids to support multiple data access layers.**
- **Lambda library reduces lines of codes for easy maintenance.**
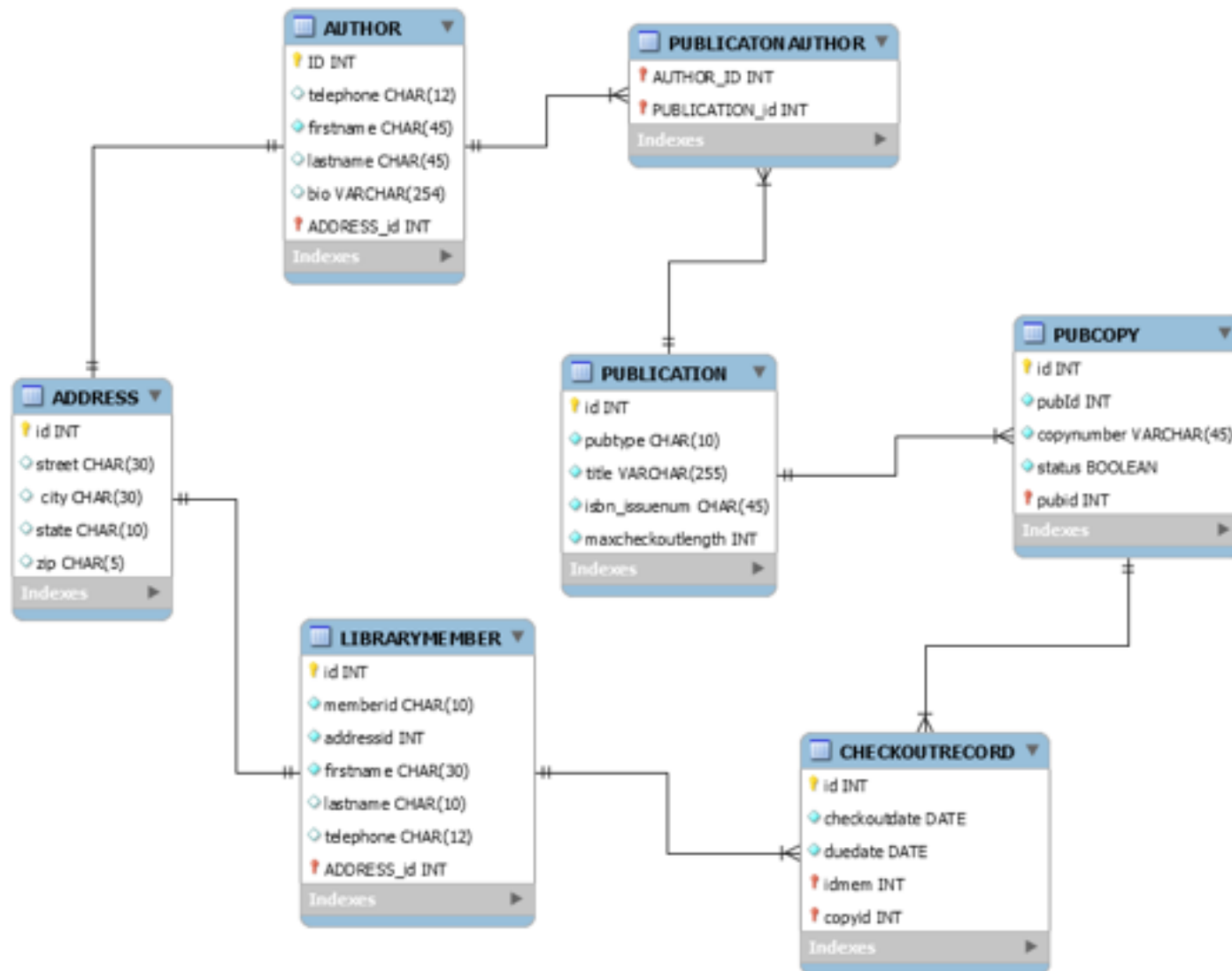- **User friendly UI with icons/button.**

• **Tools & Technologies**

- **JavaFX**
  - FXML
  - FX CSS
- **JavaDB**
- **Lambda expression**
- **Git / GitHub**
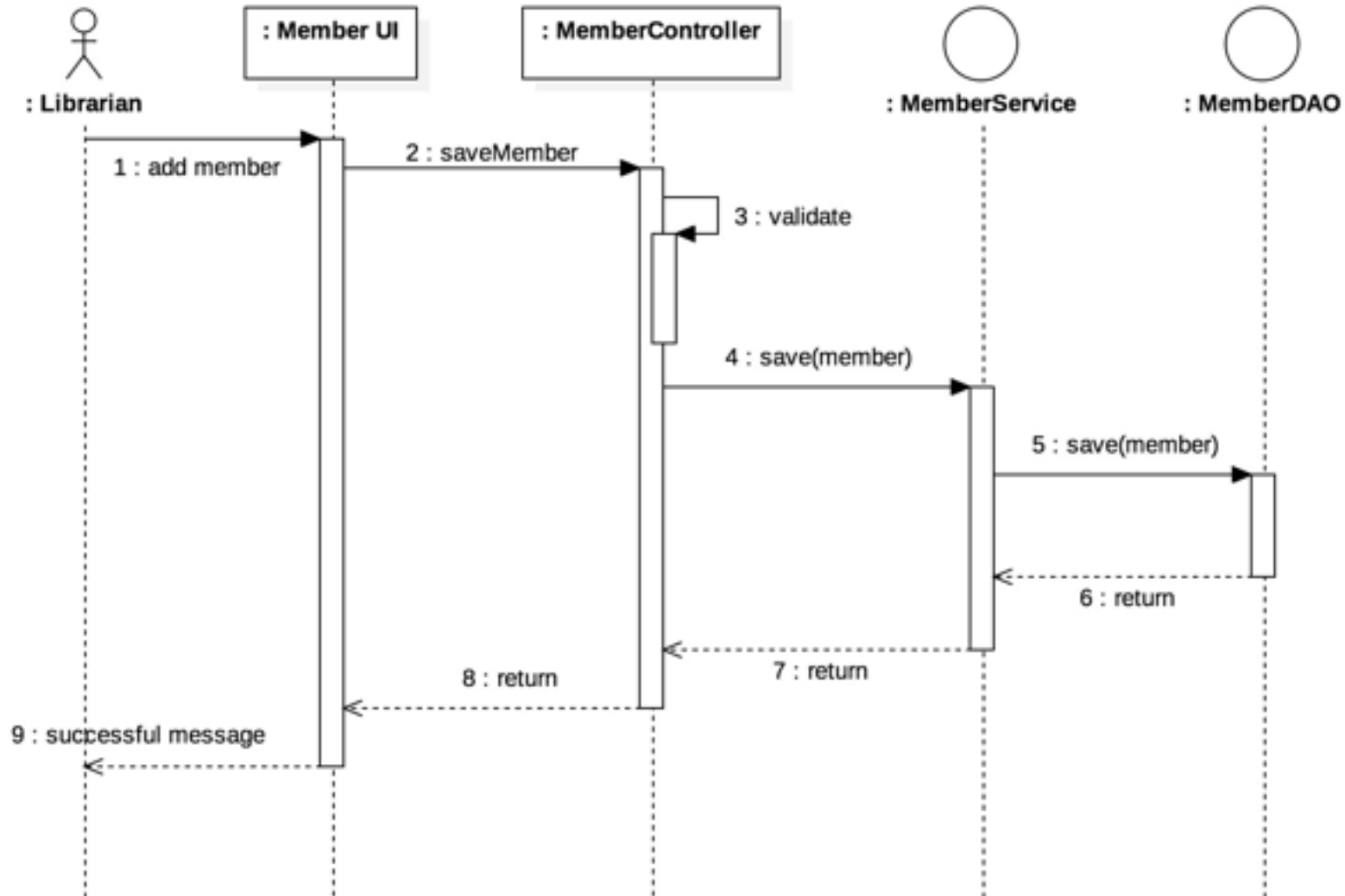- **Balsamiq**

Class Diagram

Database Diagram
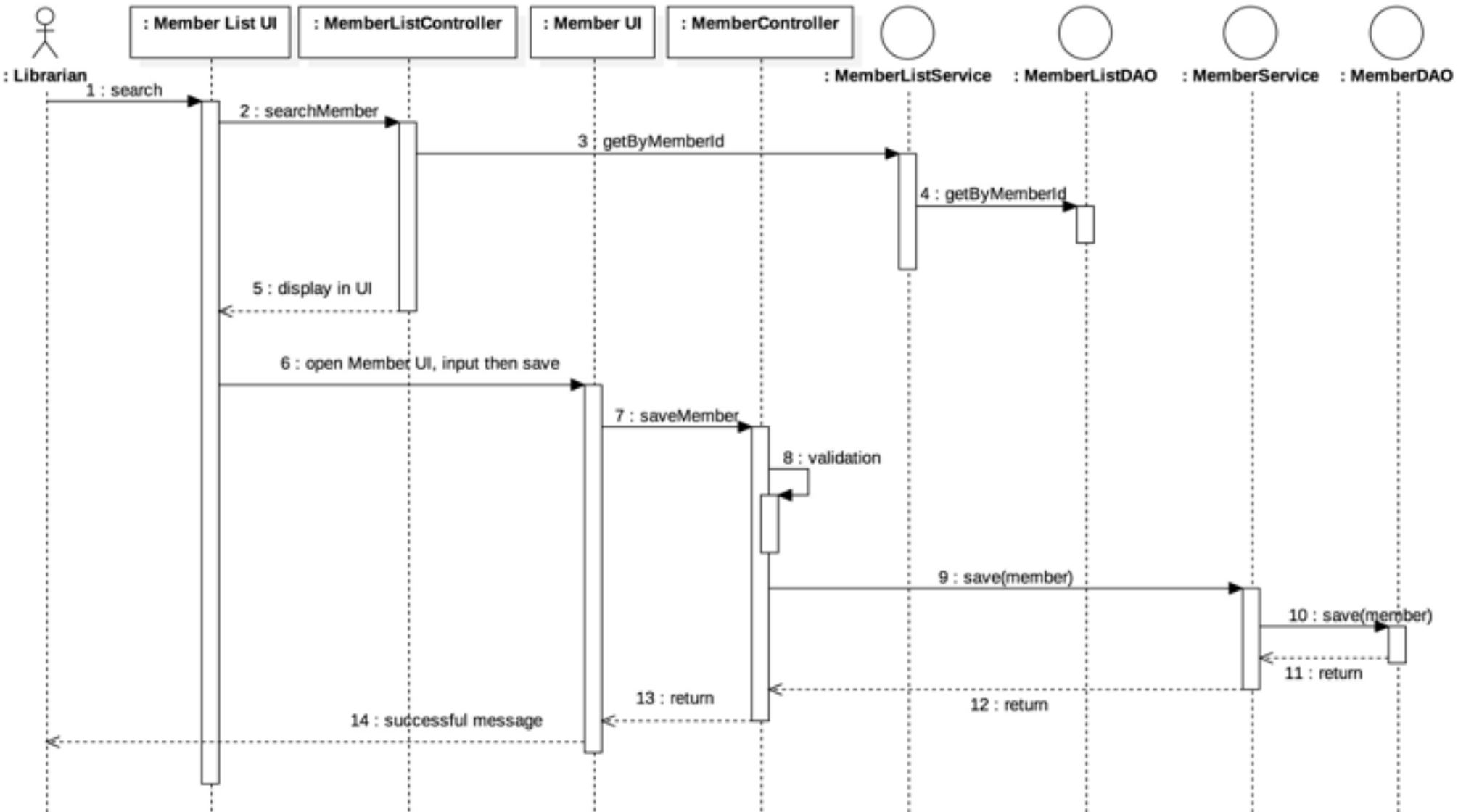
• **Sequence Diagram**

- **Add library member**
- **Search / edit library member**
- **Add publication (book / periodical)**
- **Add copy of publication (book / periodical)**
- **Checkout publication (book / periodical)**
- **Print checkout record**
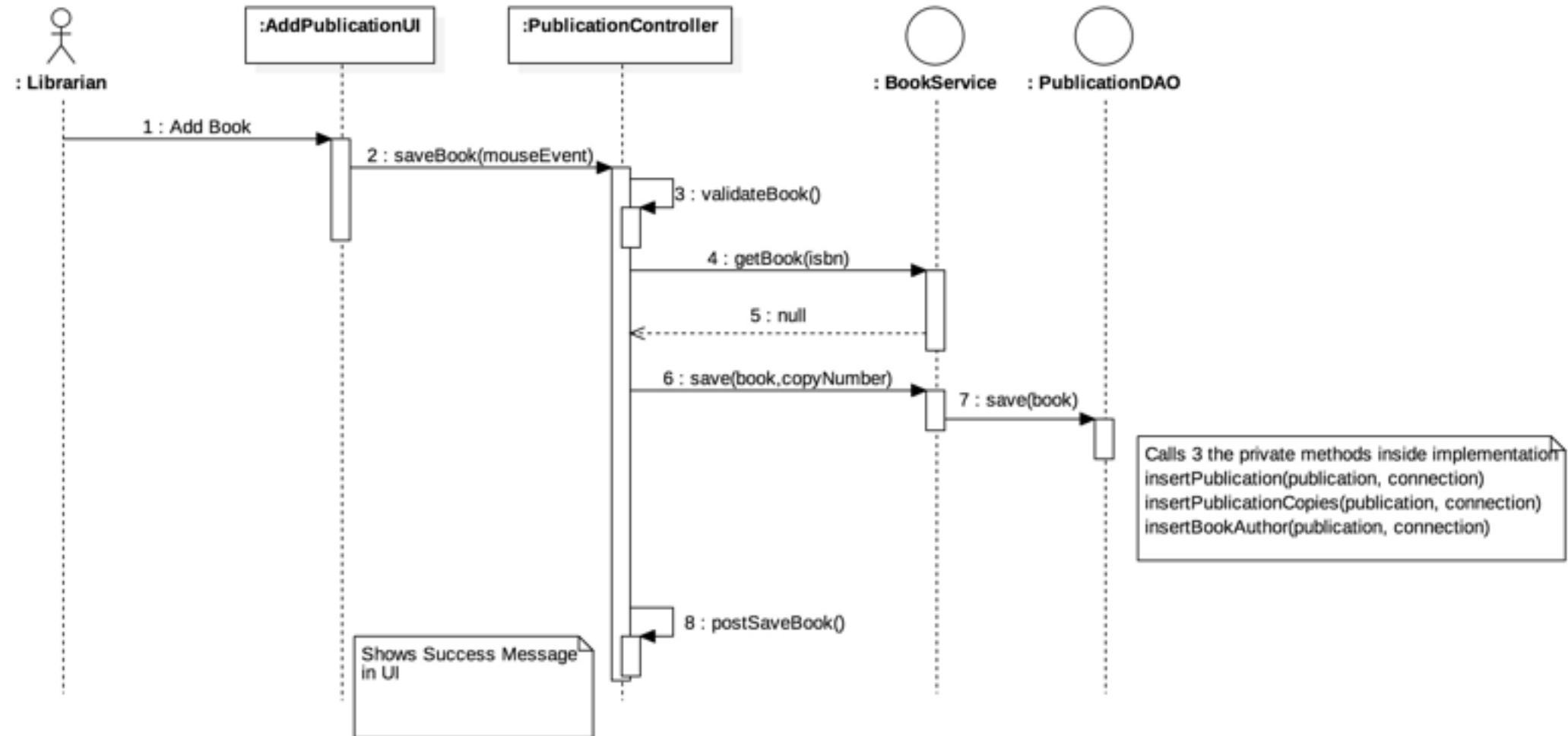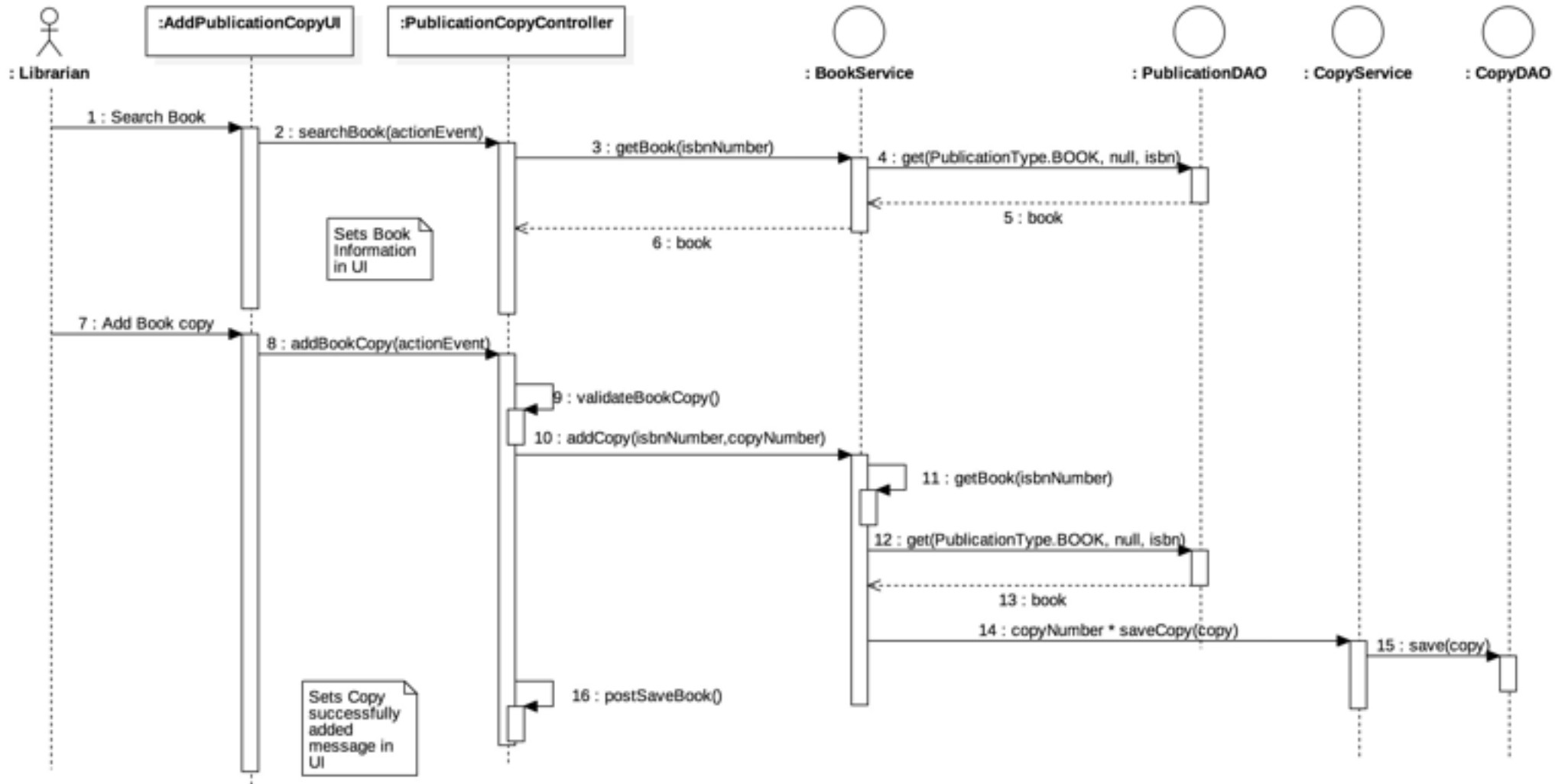- **Display publication overdue**

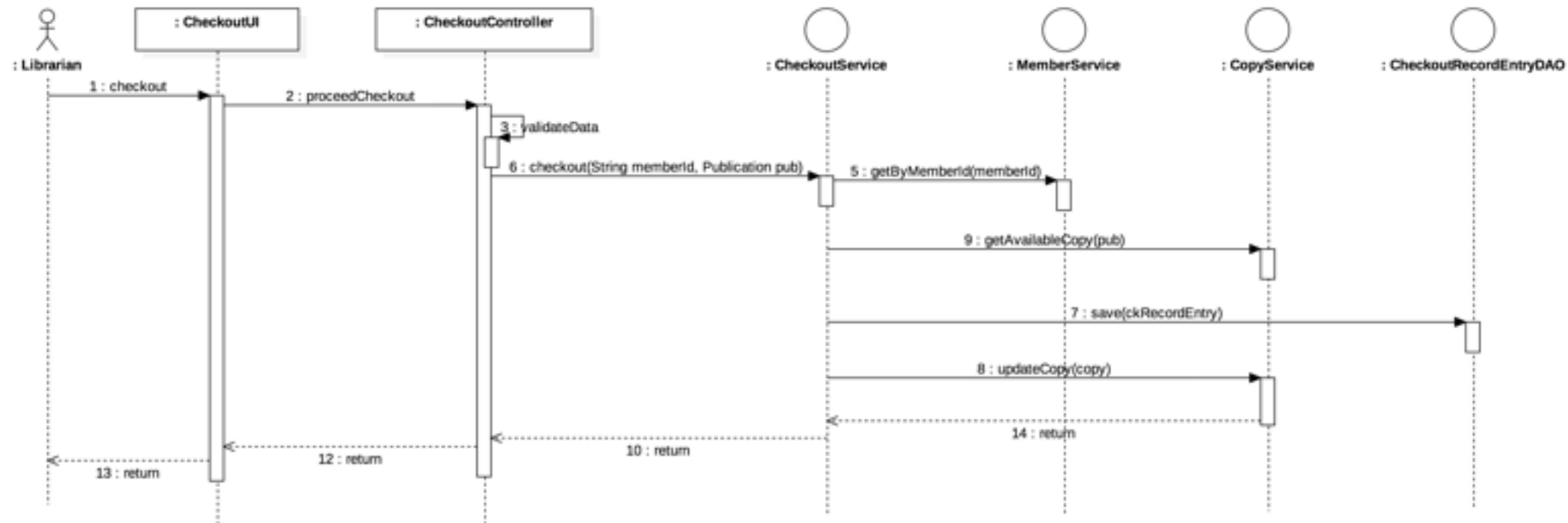# Add Library Member Diagram

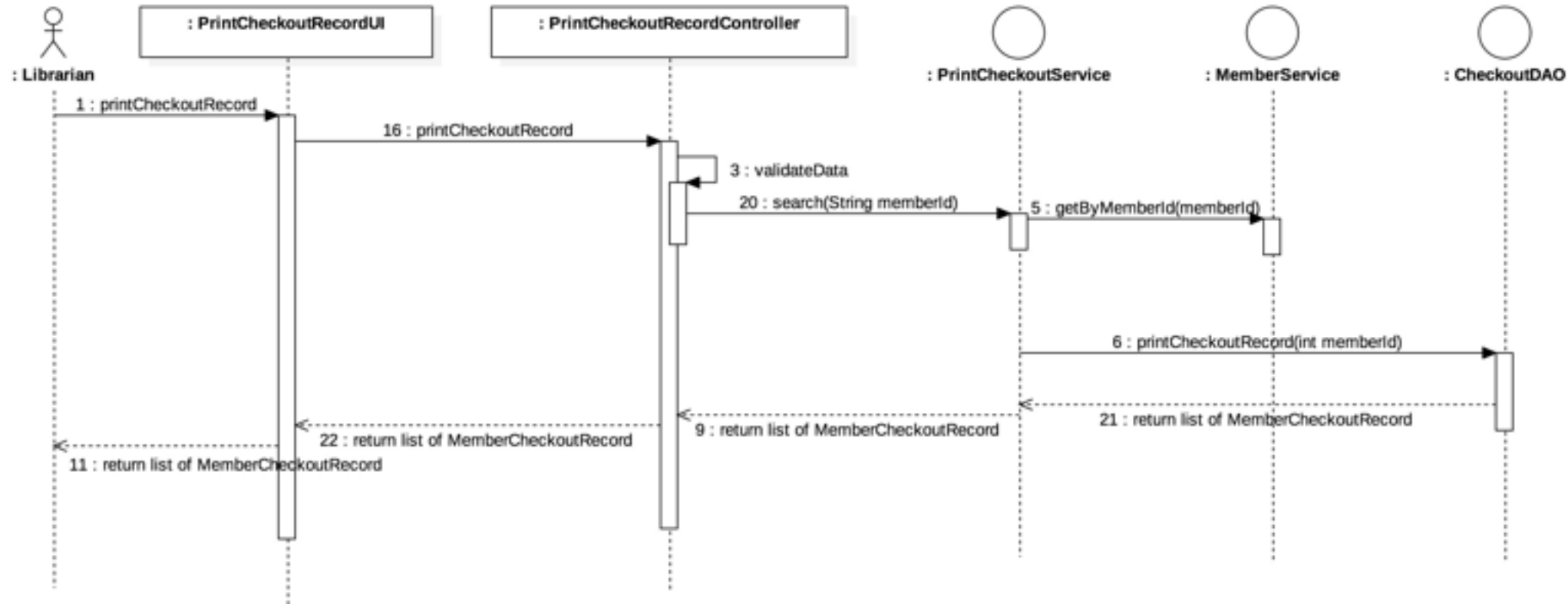# Search / Edit Library Member Diagram

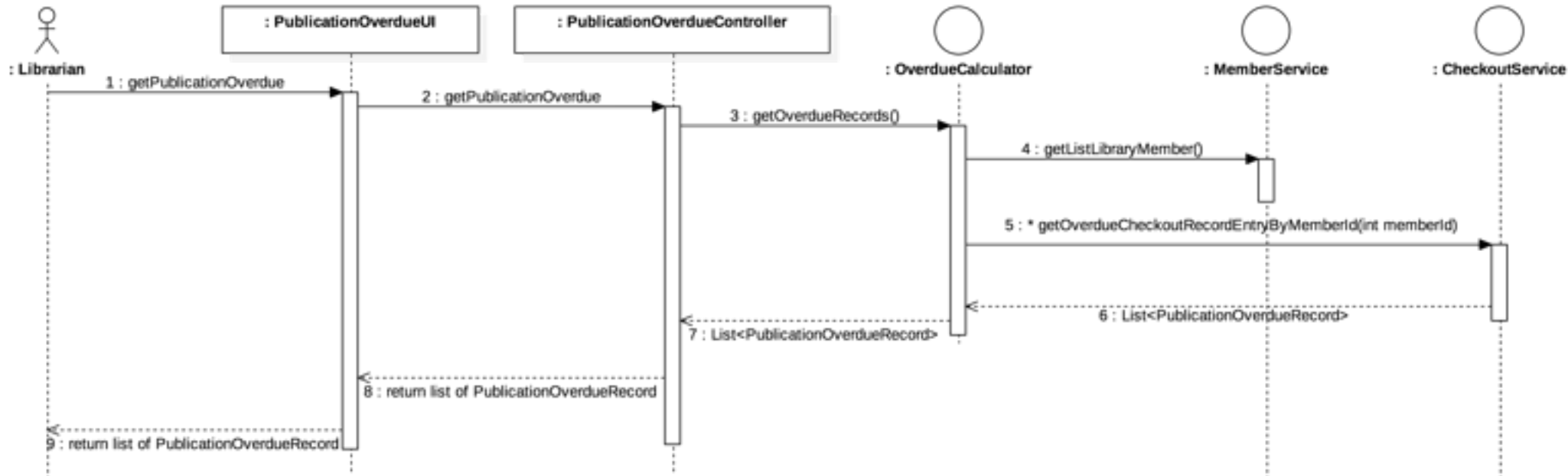# Add Publication Diagram

Add Copy of Publication Diagram

• Checkout Publication Diagram

• Print Checkout Record Diagram

Display Publication Overdue Diagram

- **Lambda Library**

- **PUBLICATION_OVERDUE_RECORD_LAMBDA:** return the list of publication overdue records from checkout record entries.

- **PRINT_CHECKOUT_RECORD:** print to the console the list of checkout record for a specific member.

- **REGEX_MATCHER:** checks if provided String matches with provided regular expression.

- **PANE_TEXTFIELD_CLEANER:** clears text of every textfield inside provided pane.

- **GENERATE_LIST_OF_COPIES:** creates and returns list of copies with provided copy number.

• **Limitations**

- **Only support two types of publication: Book and Periodical**
- **Only librarian can checkout the publication**
- **Do not support authentication**
- **Transaction handling is only implemented at some screens**

Live Demo