ENSF 480 - Software Analysis Documentation
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1. Introduction

1.1 Purpose

This report provides documentation for the analysis done for the development of a Publication Management System.

1.2 Product Scope

We are developing a publication management system meant to record documents from authors, allow consumer use, and be open for modification by employees. The objective of the software is to accomplish all requirements set out by the term project document on D2L; for example, an Author submitting their document for printing. Any functionalities not mentioned in the term project document are outside of the scope of the project. Any additional features are optional and may not be completed by the due date.
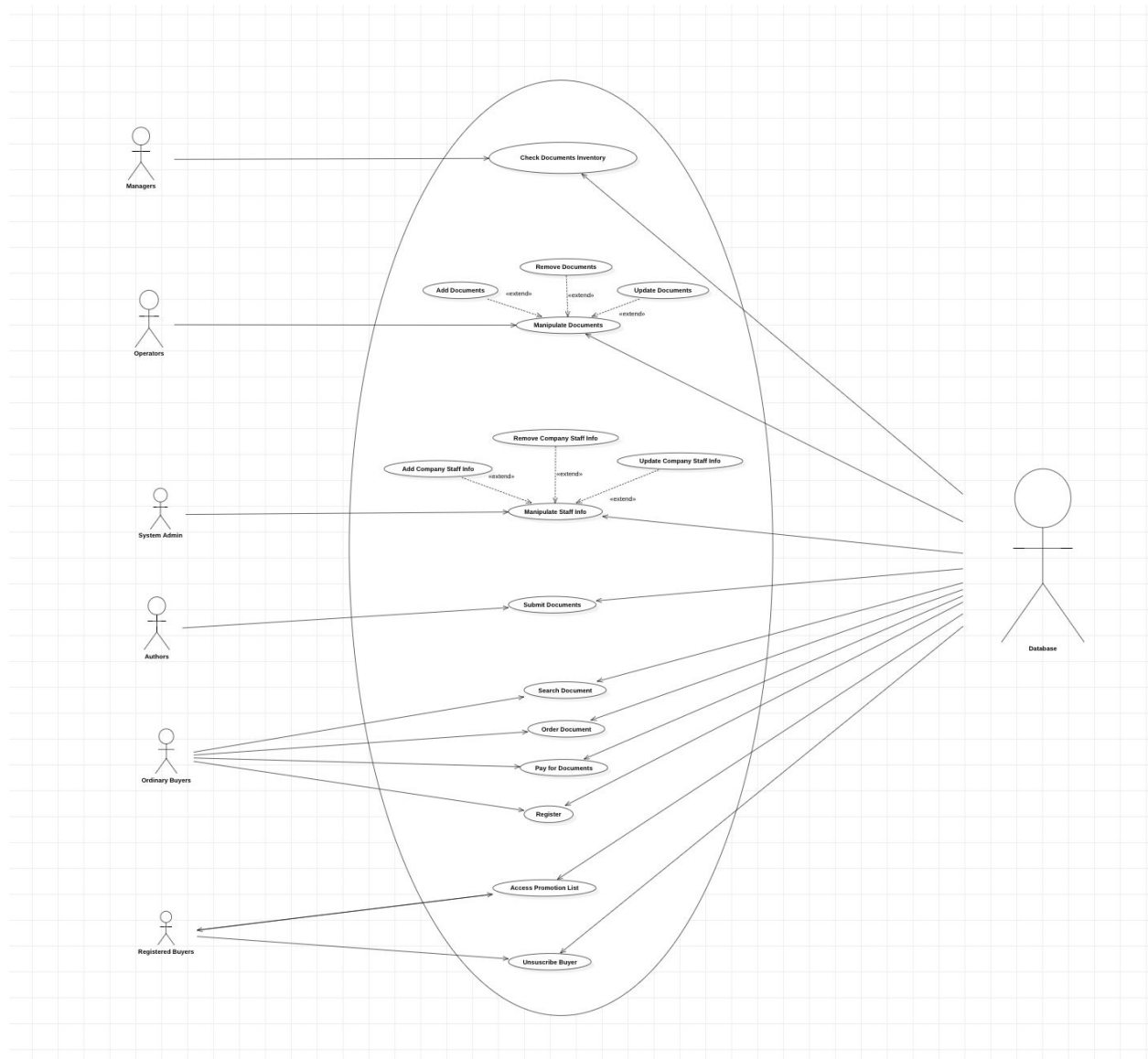
1.3 References

M. Moussavi, ENSF 480-Principles of Software Design, Fall 2018

2. Overall Description

2.1 Product Perspective

Our product will be a publication system as mentioned on the term project document on D2L. It is intended that this product is part of larger system for a publication company. This larger system would be required to manage multiple tasks for different users such as Manager, Operator, System Admin, Author, and Buyer.

2.2 Product Features

- Manages are able to check the documents inventory.
- Operators are able to add, remove or update documents.
- System Admin is able to add, remove, or update company staff information.
- Authors are able to submit their documents for printing.
- Ordinary-buyers are able to search and place orders for documents.
- Ordinary-buyers are able to make payments.
- Registered-buyers (which is an Ordinary-buyer with added behaviors) are able to access a promotion list. The promotion list is able to notify these Registered-buyers
- Registered-buyers are able unsubscribe from the promotion list

2.3 Operating Environment

Our software will be operated on Windows 10 and Mac OS but will be available for any operating system able to run a Java program.

3. Use Case Modeling

3.1 Use Case 1: Check Document Inventory

3.1.1 Brief description of the use case:

Managers can open and view the list of documents in the system

3.1.2 Sequence diagram:

Check Documents Use Case

«actor»
Managers

Publication Managment System

1 : Open Document Inventory

2 : Get list of documents
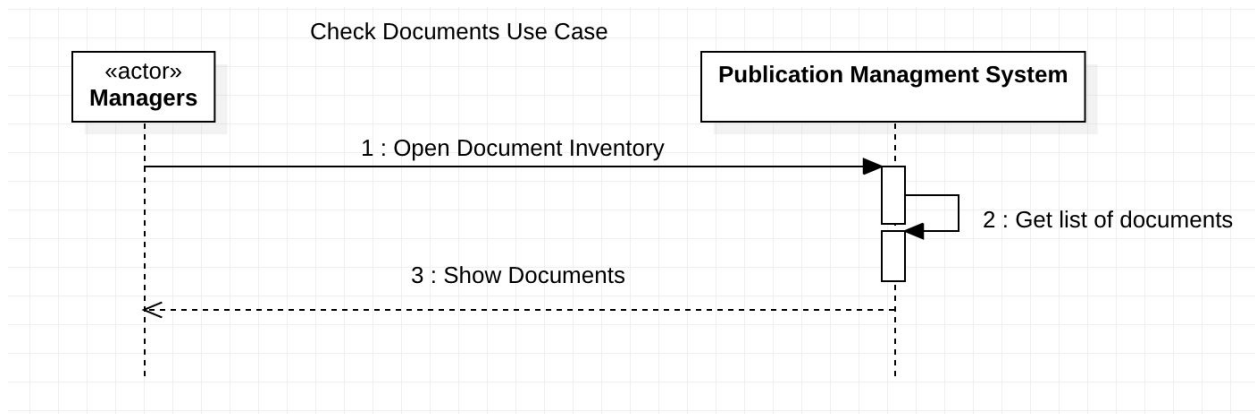
3 : Show Documents

3.2 Use Case 2: Add/Remove Documents

3.2.1 Brief description of the use case:

Operators can add new documents to the system or remove pre-existing ones

3.2.2 Sequence diagram:

Add/Remove Documents Use Case

Operators

Publication Management System

1 : Enter Document Info

2 : Enter Command

3 : Validate Information

4 : Perform Command

3.3 Use Case 3: Update Documents

3.3.1 Brief description of the use case:

Operators can update the information of existing documents in the system
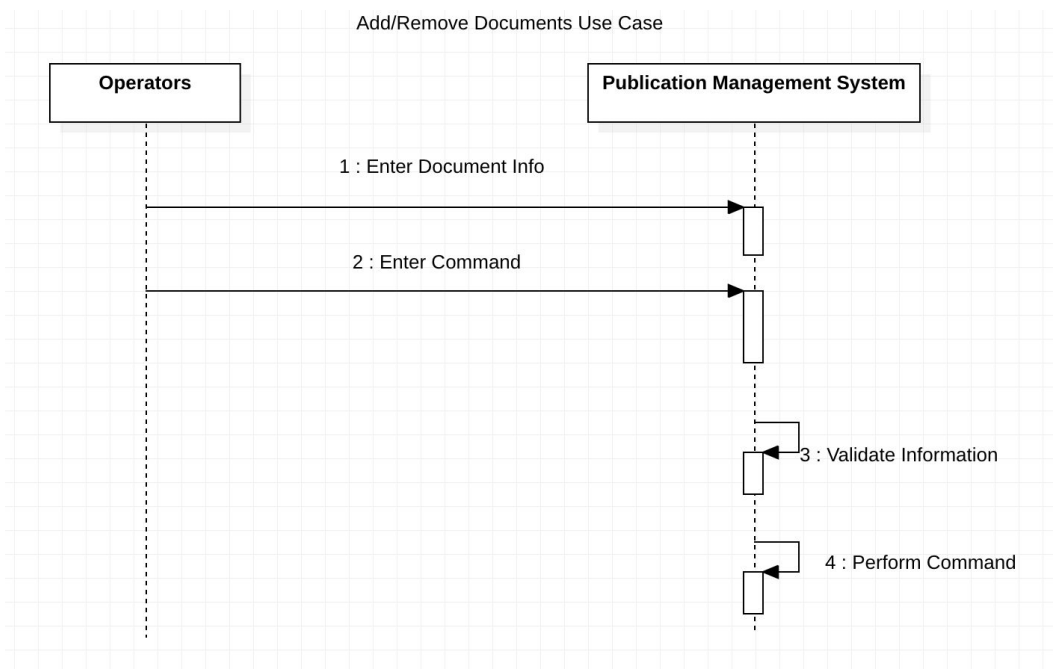
3.4.2 Sequence diagram**:**

Update Document Info Use Case

| System Admin | | System |

1 : Read Info of Document

2 : Validate Info

3 : Update Information of Document

4 : Inform that Document has been Updated
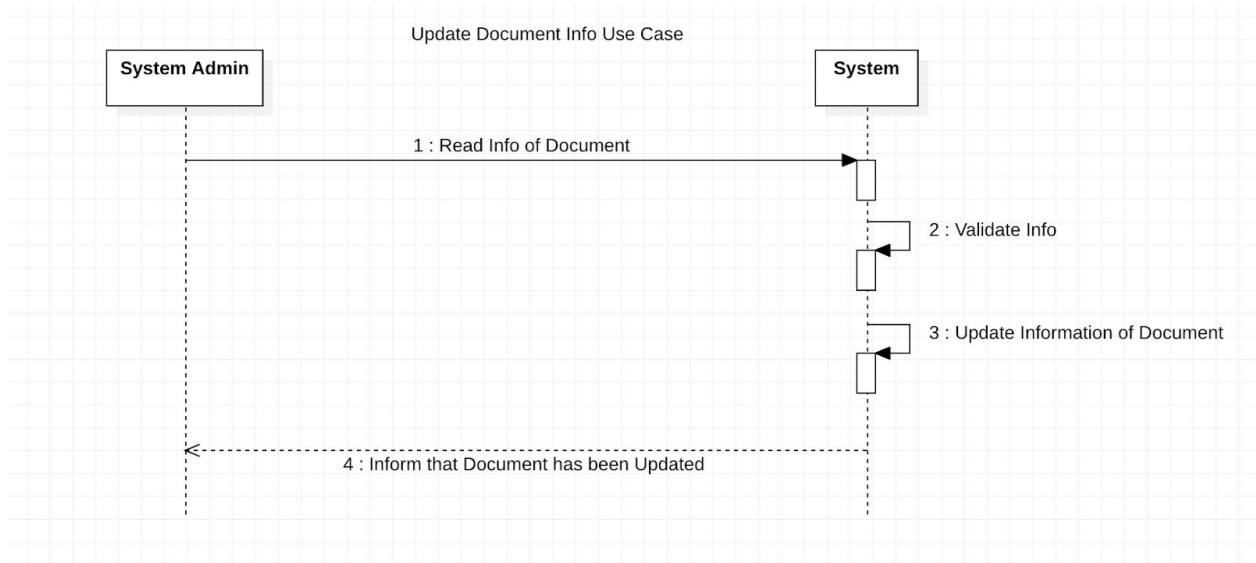
3.4 Use Case 4: Add/Remove Staff Info

3.4.1 Brief description of the use case:

System Admin can add new staff to the system or remove pre-existing staff

3.4.2 Sequence diagram:

Add/Remove Staff Info Use Case

| System Admin | | System |

1 : Enter Staff Info

2 : Enter command

3 : Validate Information

4 : Perform Command

3.5 Use Case 5: Update Staff Info

3.1.1 Brief description of the use case:

System Admin can update staff information

3.1.2 Sequence diagram:

Update Staff Info Use Case

```
System Admin                                          System

      1 : Read Info of Staff

                                              2 : Validate Staff Info

                                              3 : Confirm Staff is In System

                                              4 : Update Staff Info

      5 : Inform that Staff has been Updated
```
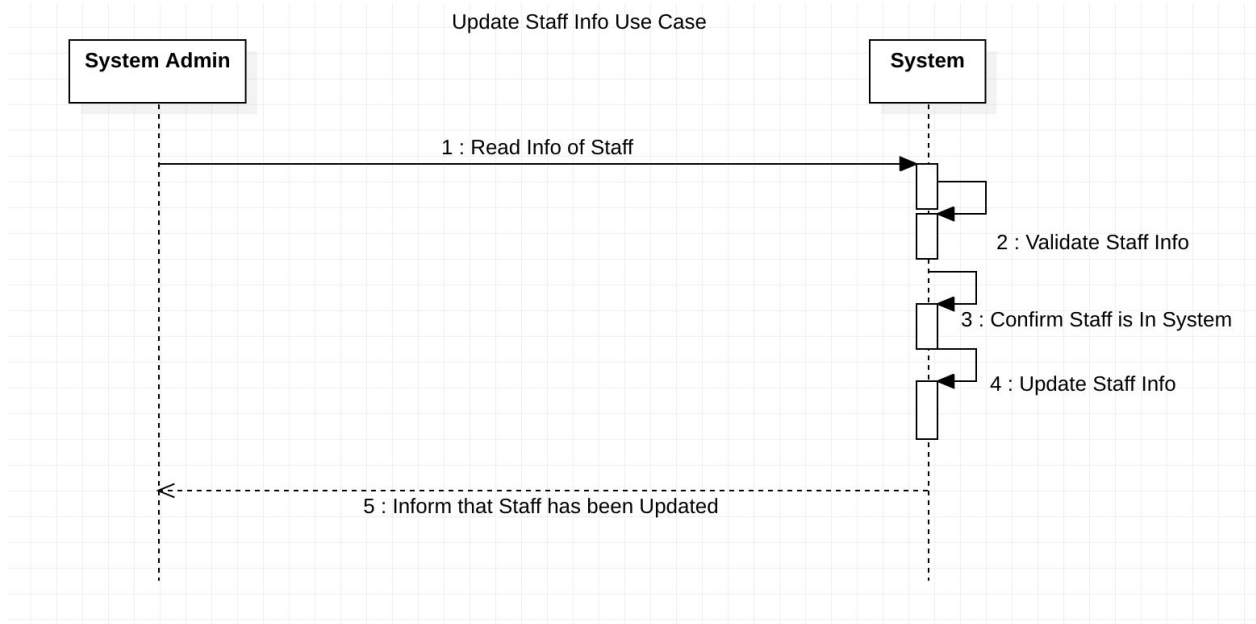
3.6 Use Case 6: Submit Documents

3.1.1 Brief description of the use case:

Authors can submit documents for printing

3.1.2 Sequence diagram:

Search Document Use Case

```
«Actor»
Ordinary-Buyers            Publication Management System

  1 : Open Document List

  2 : Choose document type

                                    3 : Validate Type

  4 : Type Document Name

                                    5 : Validate Name

  6 : Submit document complete
```
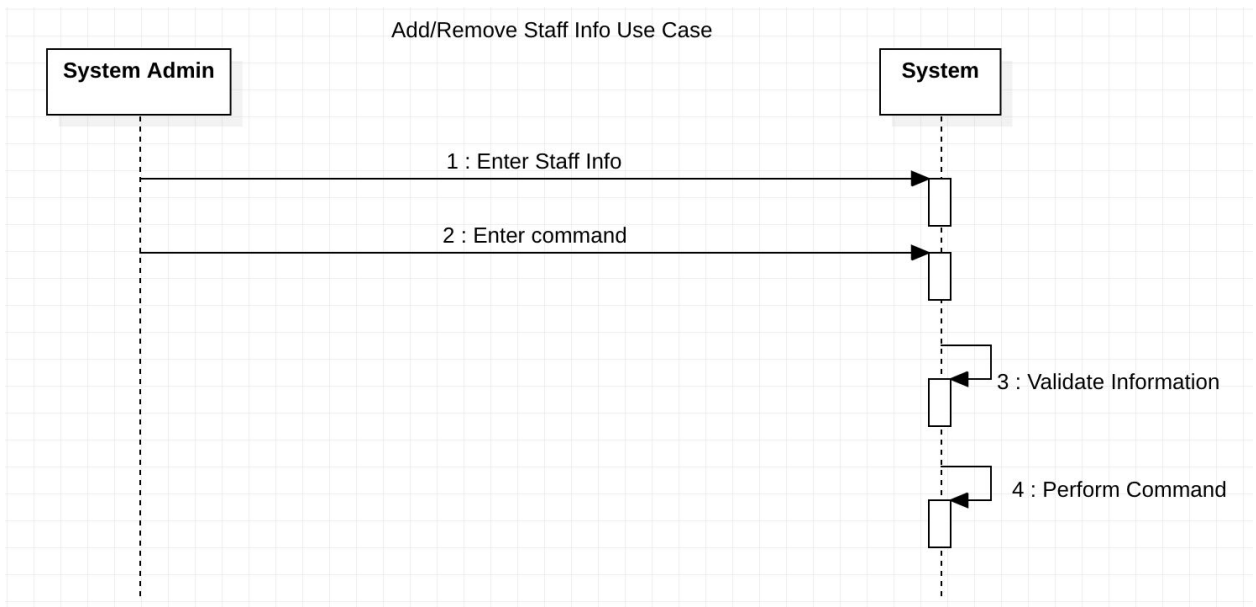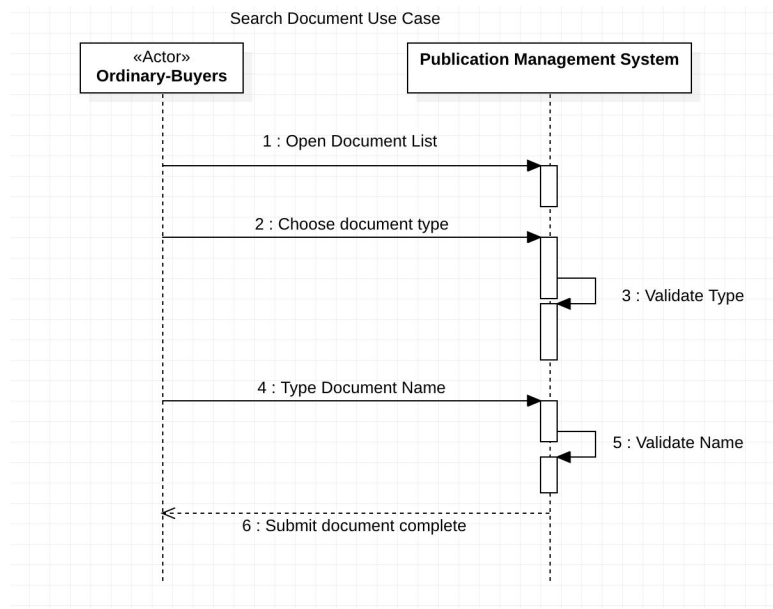
3.7 Use Case 7: Search Documents

3.1.1 Brief description of the use case:

Buyers can search for documents

3.1.2 Sequence diagram:

Search Document Use Case

```
┌─────────────────────┐                    ┌──────────────────────────────────┐
│     «Actor»         │                    │ Publication Management System     │
│  Ordinary-Buyers    │                    │                                   │
└─────────────────────┘                    └──────────────────────────────────┘
         │                                                   │
         │         1 : Open Document List                    │
         │──────────────────────────────────────────────────▶│
         │                                                   │
         │         2 : Choose document type                  │
         │──────────────────────────────────────────────────▶│
         │                                                   │──┐ 3 : Validate Type
         │                                                   │◀─┘
         │                                                   │
         │         4 : Type Document Name                    │
         │──────────────────────────────────────────────────▶│
         │                                                   │──┐ 5 : Validate Name
         │                                                   │◀─┘
         │                                                   │
         │                                                   │──┐ 6 : Find document
         │                                                   │◀─┘
         │                                                   │
```
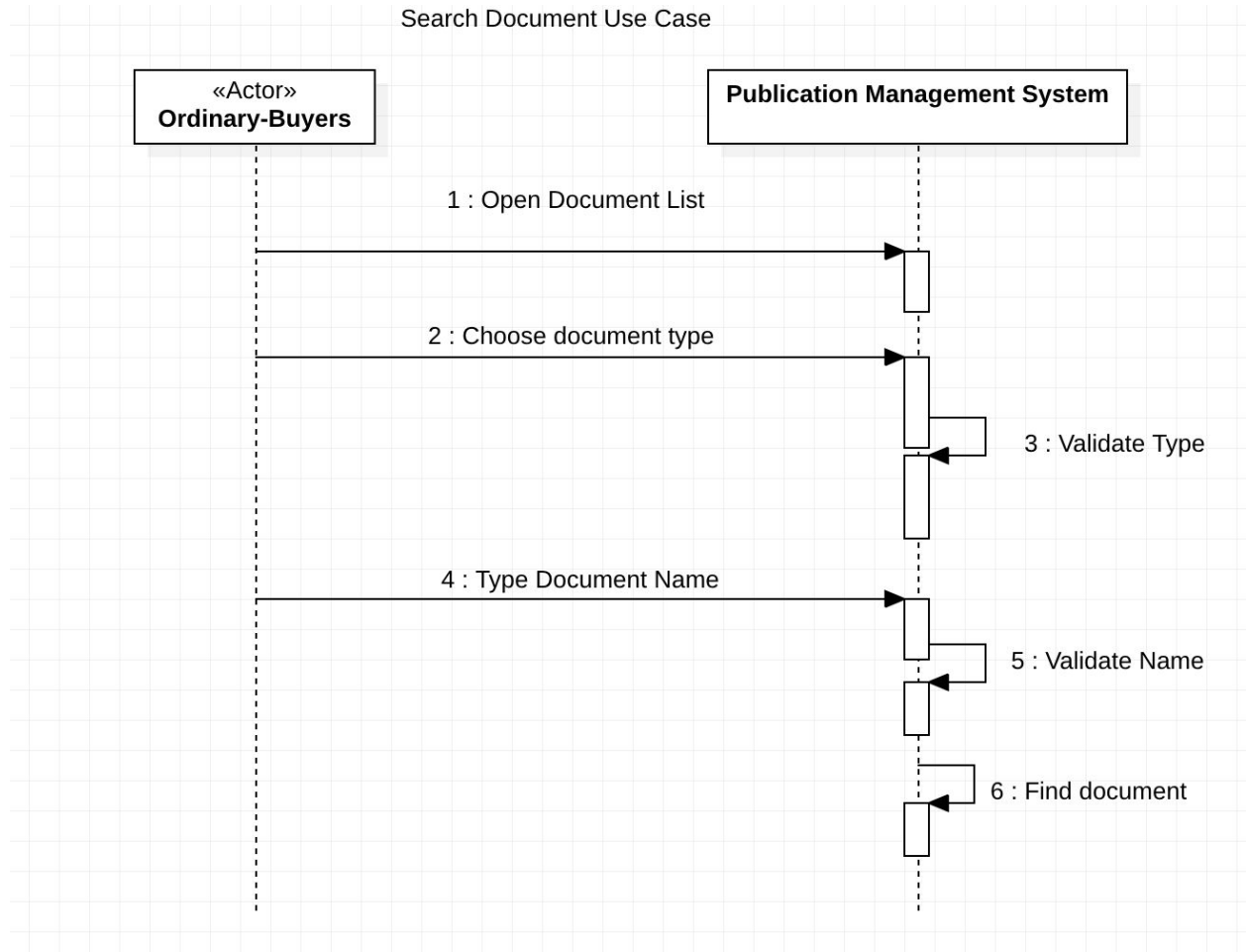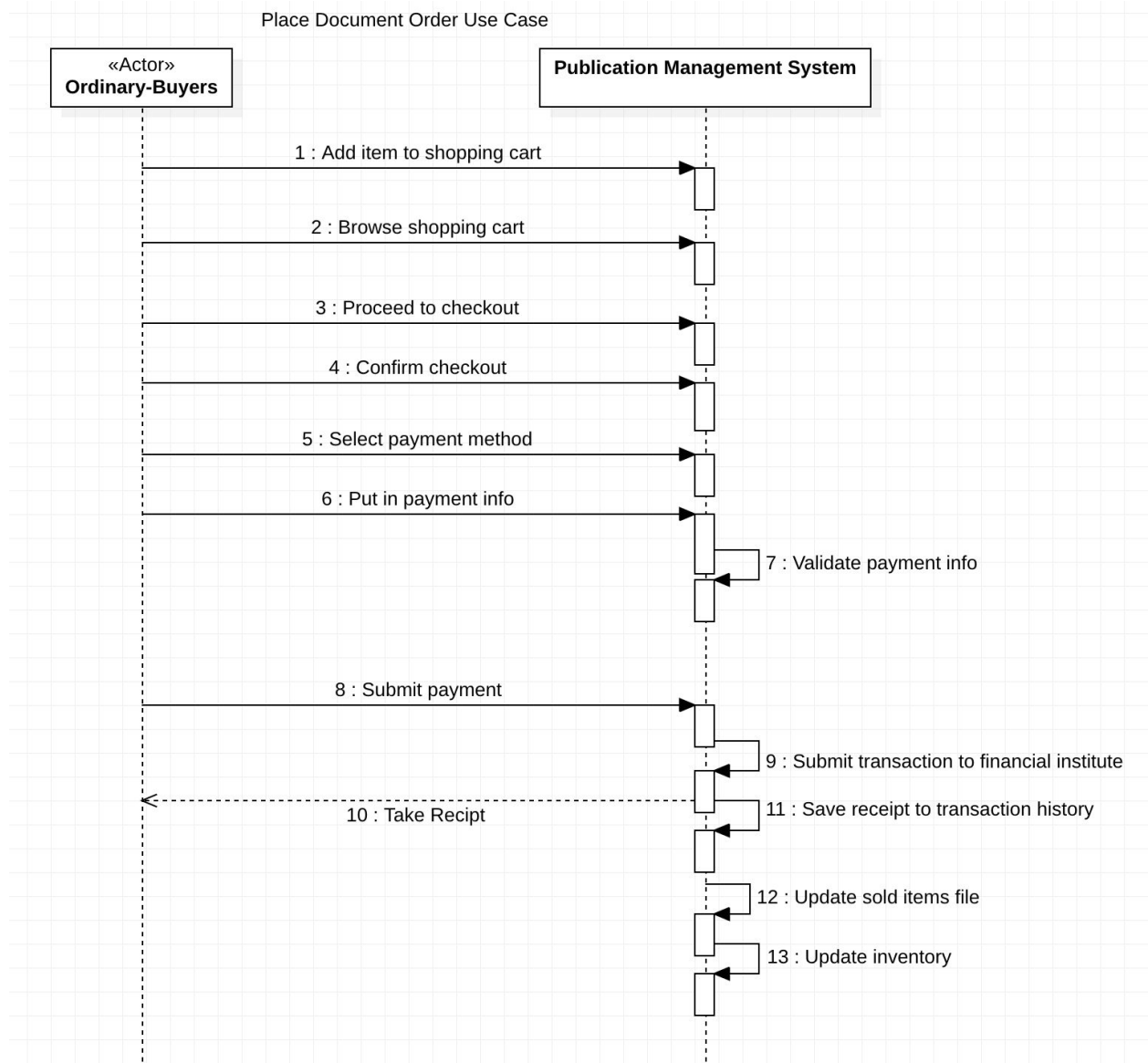
3.8 Use Case 8: Order Document

3.1.1 Brief description of the use case:

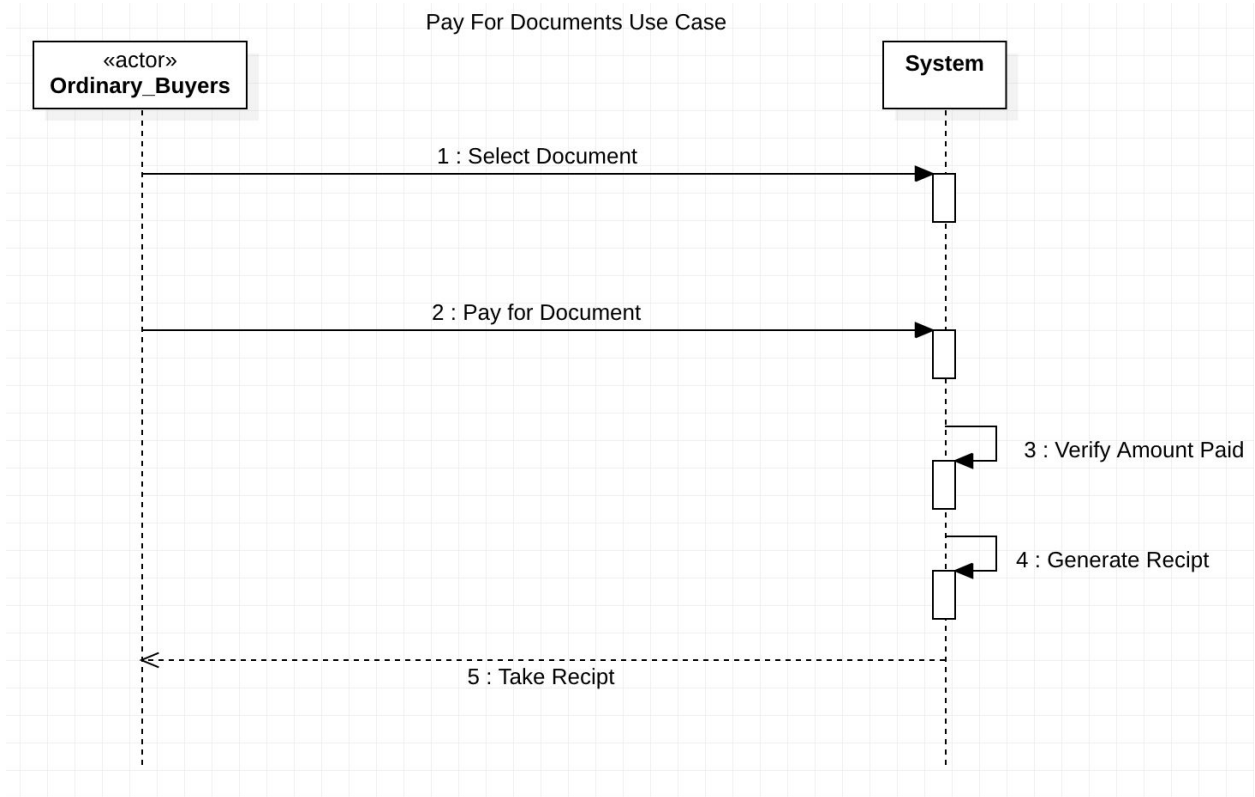Buyers can place an order for a document

3.1.2 Sequence diagram:

Place Document Order Use Case

«Actor»
Ordinary-Buyers

Publication Management System

1 : Add item to shopping cart

2 : Browse shopping cart

3 : Proceed to checkout

4 : Confirm checkout

5 : Select payment method

6 : Put in payment info

7 : Validate payment info

8 : Submit payment

9 : Submit transaction to financial institute

10 : Take Recipt

11 : Save receipt to transaction history

12 : Update sold items file

13 : Update inventory

3.9 Use Case 9: Pay for Document

  3.1.1 Brief description of the use case:

   Buyers can pay for documents

  3.1.2 Sequence diagram:

Pay For Documents Use Case

«actor» Ordinary_Buyers		System

1 : Select Document

2 : Pay for Document

3 : Verify Amount Paid

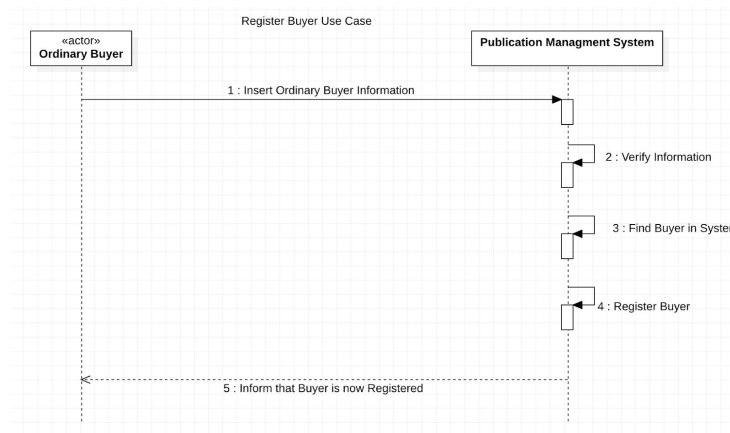4 : Generate Recipt

5 : Take Recipt

3.10 Use Case 10: Register Buyer

  3.1.1 Brief description of the use case:

   Ordinary Buyers can register into the system as Registered Buyers
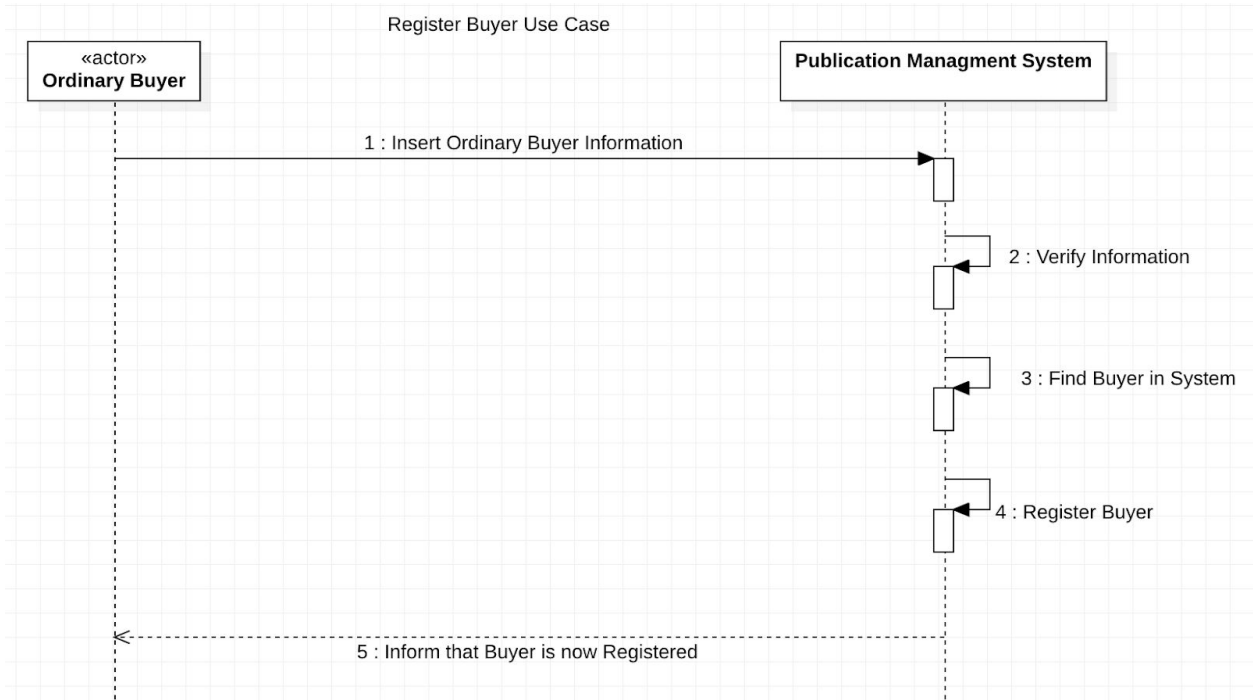
  3.1.2 Sequence diagram:

Register Buyer Use Case

«actor» Ordinary Buyer	Publication Managment System

1 : Insert Ordinary Buyer Information

2 : Verify Information

3 : Find Buyer in System

4 : Register Buyer

5 : Inform that Buyer is now Registered

3.11 Use Case 11: Access Promotion List

3.1.1 Brief description of the use case:

Registered Buyers can access the promotion list at any time

3.1.2 Sequence diagram:

Register Buyer Use Case

«actor»
Ordinary Buyer

Publication Managment System

1 : Insert Ordinary Buyer Information

2 : Verify Information

3 : Find Buyer in System

4 : Register Buyer

5 : Inform that Buyer is now Registered

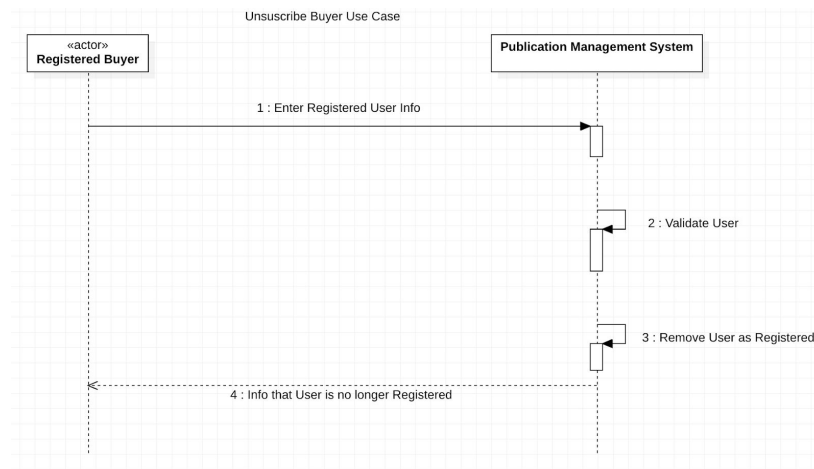### 3.12 Use Case 12: Unsubscribe Buyer

3.1.1 Brief description of the use case:

Registered Buyers can unsubscribe and become an Ordinary Buyer

3.1.2 Sequence diagram:

Unsuscribe Buyer Use Case

«actor»
Registered Buyer

Publication Management System

1 : Enter Registered User Info

2 : Validate User

3 : Remove User as Registered

4 : Info that User is no longer Registered

4. System's Conceptual Model