System Design Document

SE302

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1 Introduction

1.1 Purpose

The purpose of the system design document is complete description of the system design and architecture of the application. Detailed information on the design processes is explained in this design document. This document will help us in understanding the system and how to build it.

1.2 Scope

This application will be created as a desktop application that runs on the Windows platform. The aim of the application is to provide a reference management system to the user. By using this application user will be able to add the type, year of publication, title, item title, author of the references that the user wants to collect. The reference management application should provide the ability to the user to add, delete and search the item that he/she wants.

1.3 Design Concerns

(1)The application will run on the windows; it will be installed on the user's computer. Since the application is settled up on computer it includes database. Any physical harm to the computer can cause all or some of the data to be deleted. (2) The application is able to work with the search engine of the internet browser. While user importing a reference, reference file may include malware or viruses which can cause serious problems. Additionally, (3) The user may experience accidental deletion of data. That Data cannot be restored.

2 Use Case Diagram

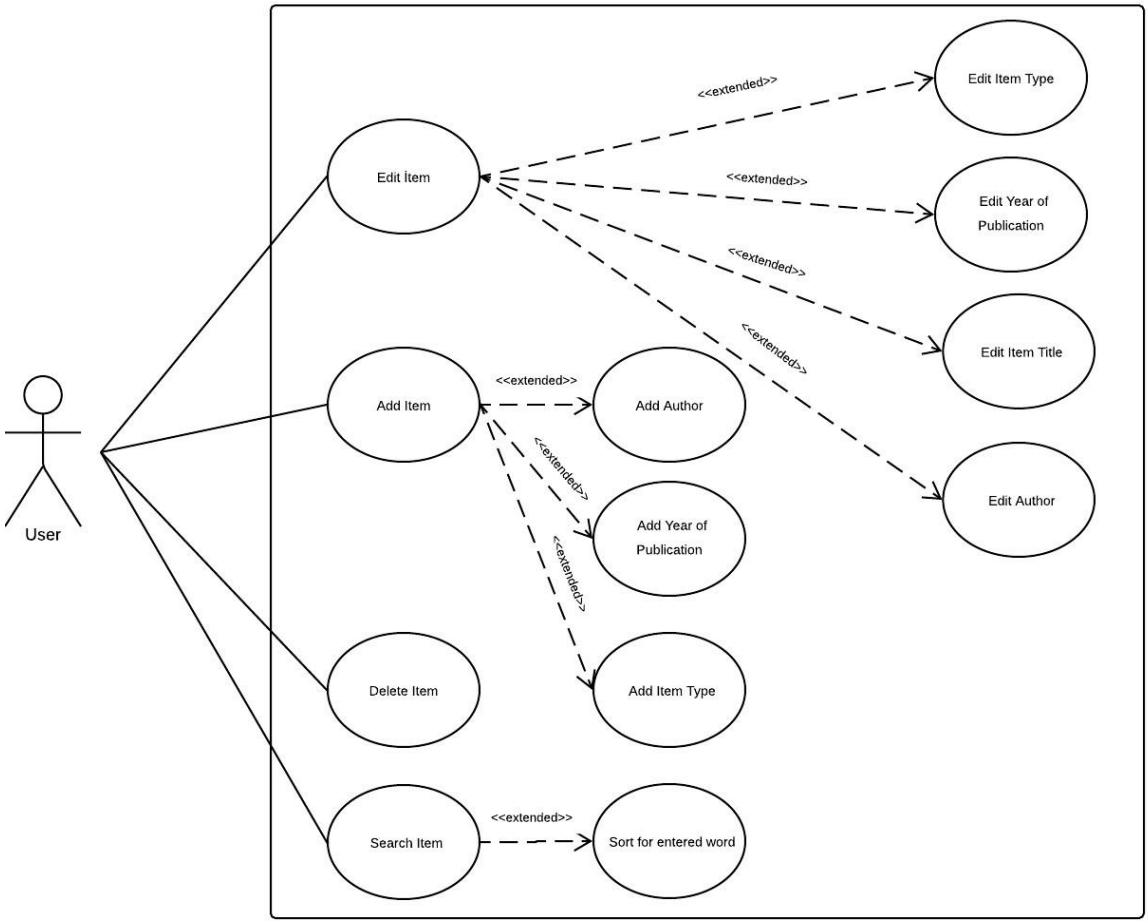
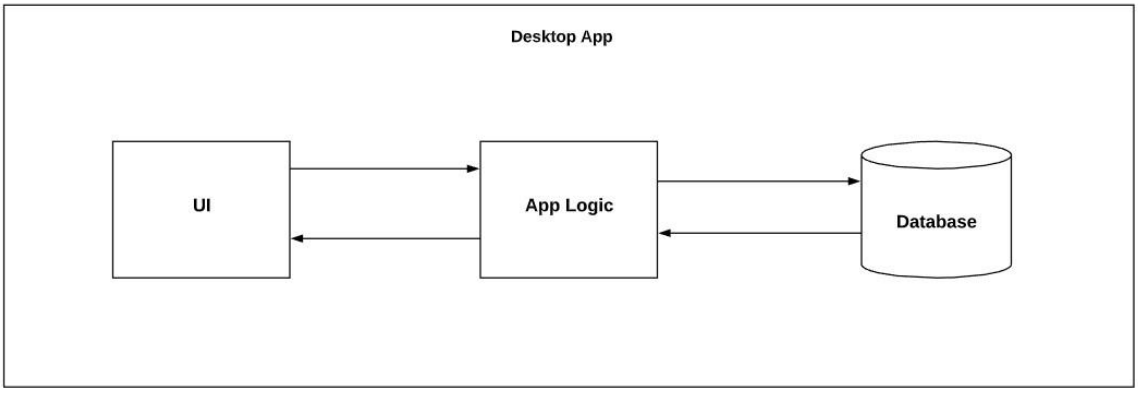


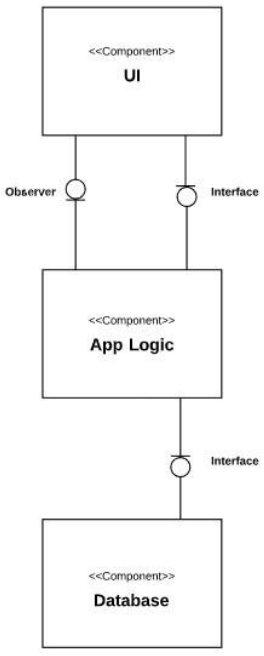
Figure: UML Use Case Diagram

The application does not require log in or registration. Therefore, the user can administer the system directly. The application does not contact with any extrinsic system or user. The system provides the user with some actions such as add, delete, search and edit for items.

3 Architecture



The system consists of User Interface, App Logic and Database. The User Interface communicates directly with Application Logic and over the latter with the Database. The system runs on the Windows OS Machine



The desktop application consists of three components. The user interface component updates its data by using data from the application component by using the observer pattern. The database component holds the data.

4 UML Class Diagram

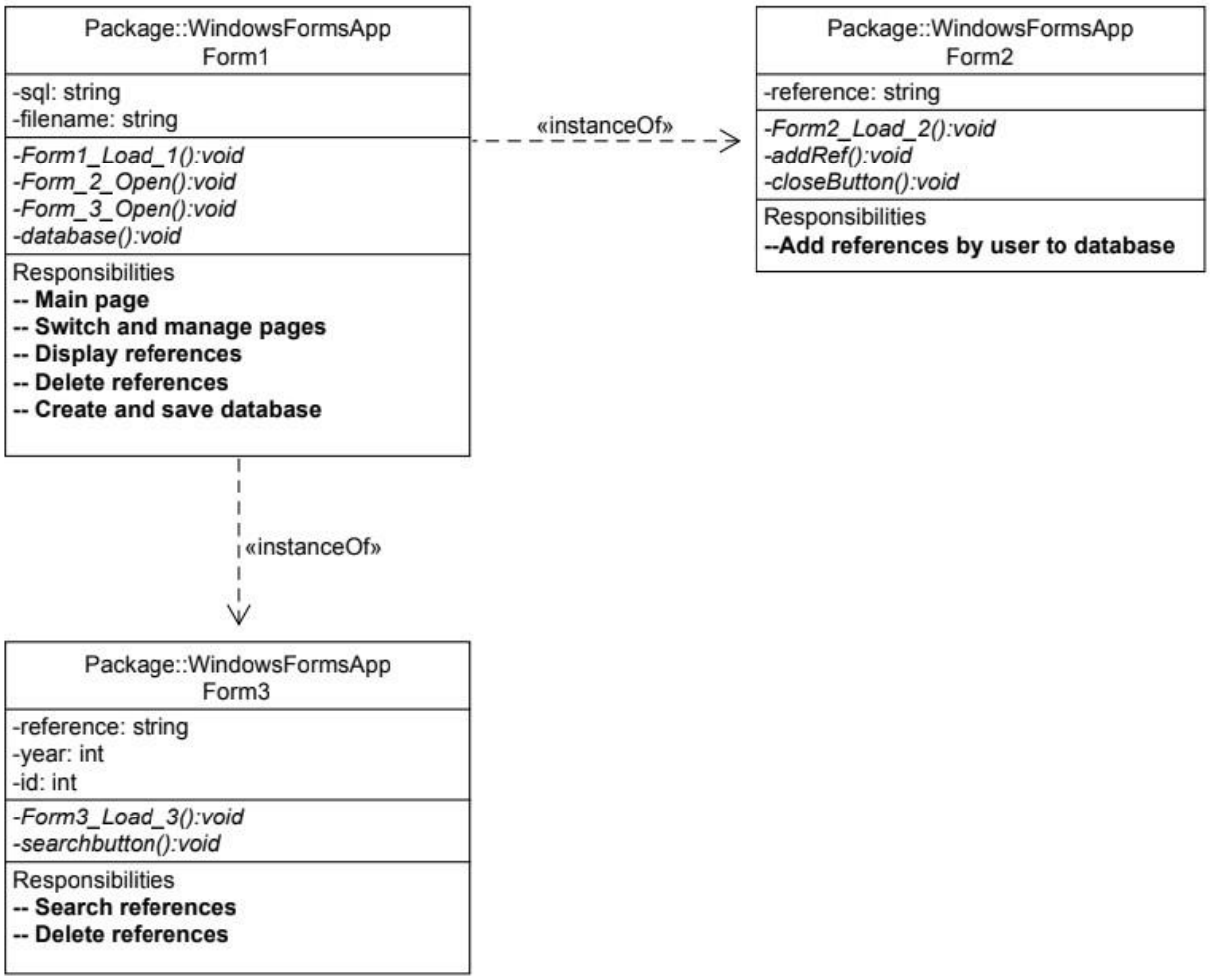


Figure: UML Class Diagram

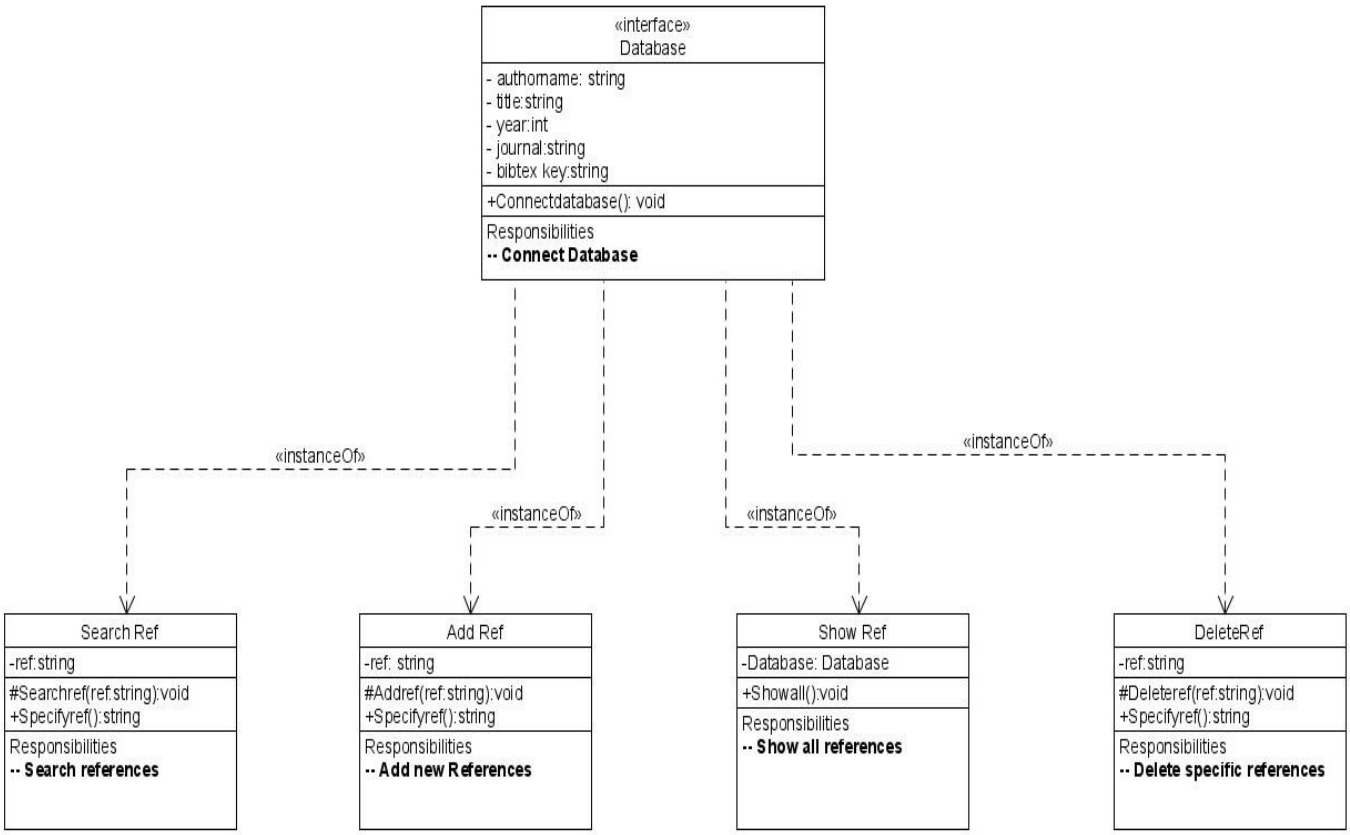


Figure: UML Class Dependency Diagram

5 Sequence Diagram

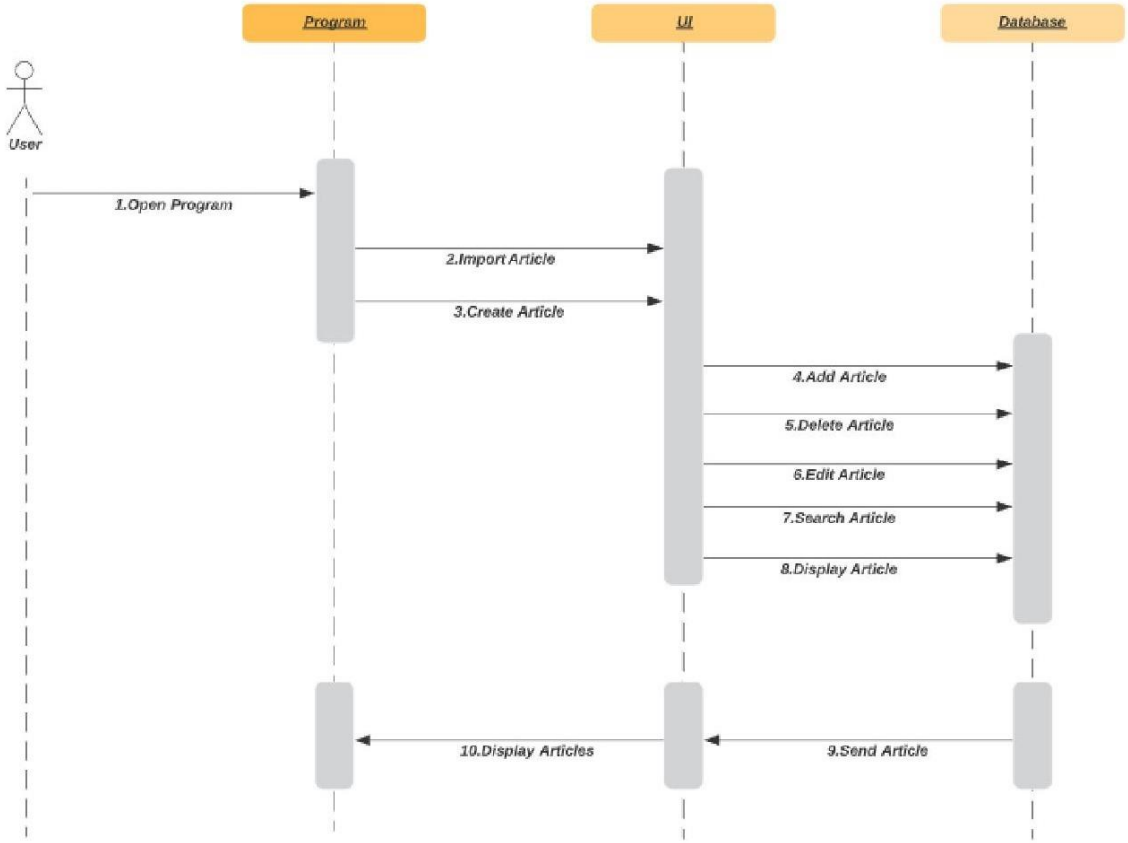
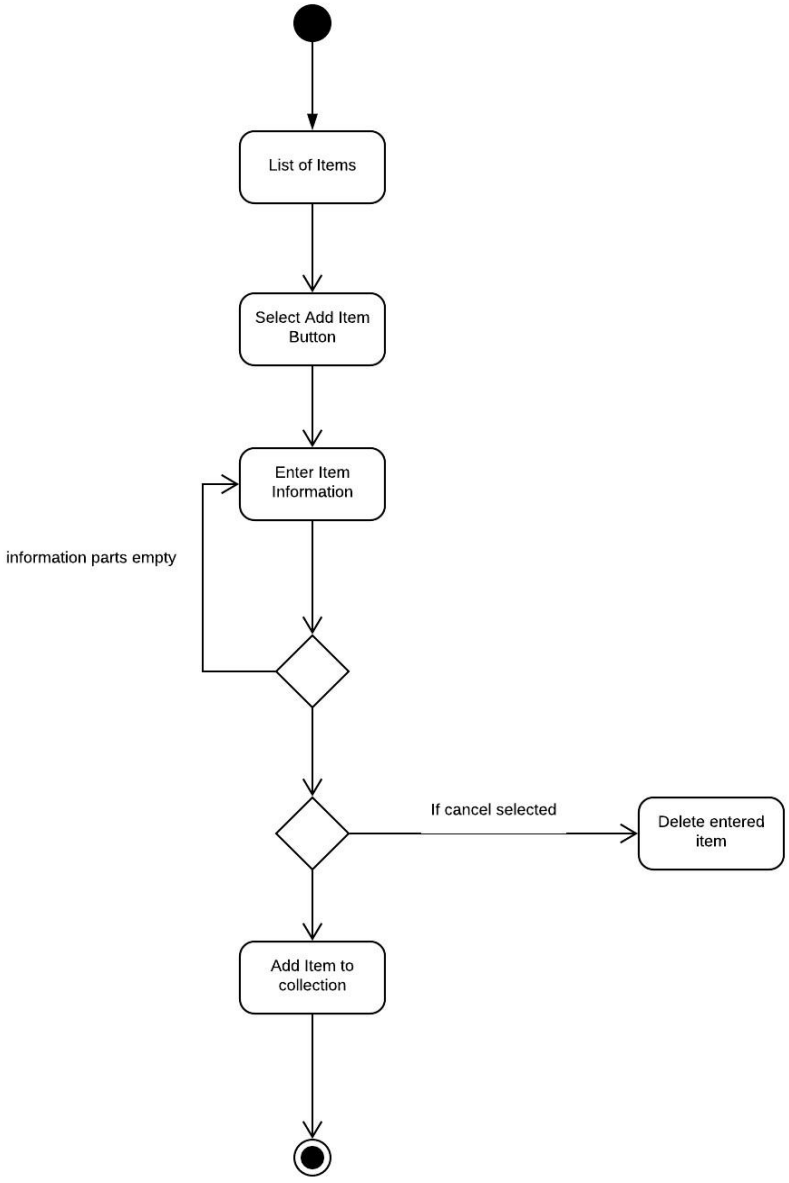


Figure: Sequence Diagram

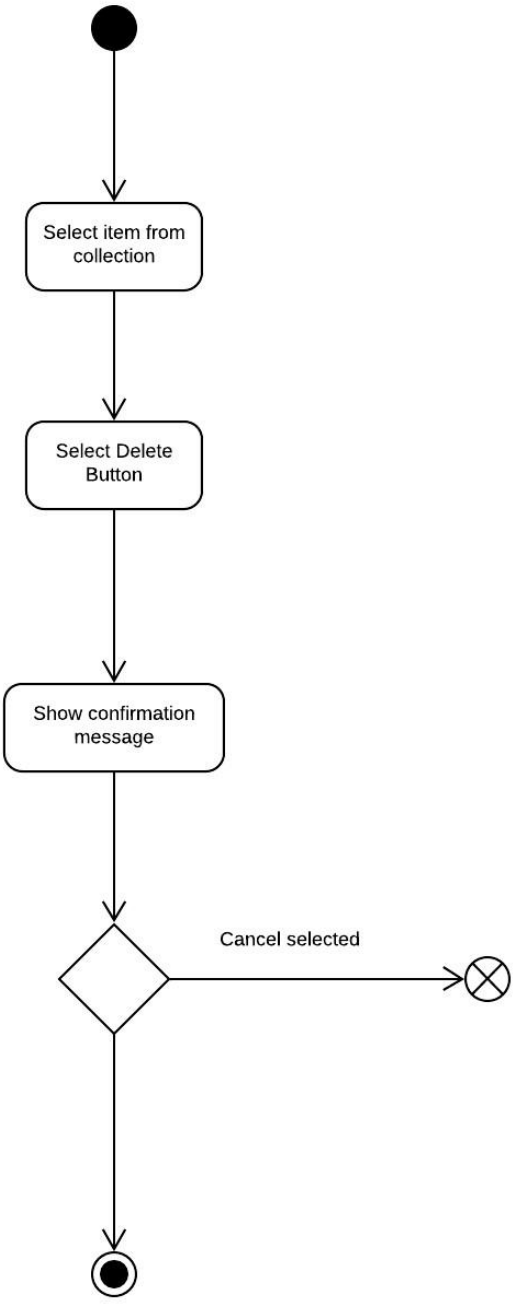
When the user opens the program, the system will display the main screen which contains a collection of items. The user can import new items to the system with their information. Adding, deleting, editing, searching and displaying items by using its database.

6 Activity Diagrams

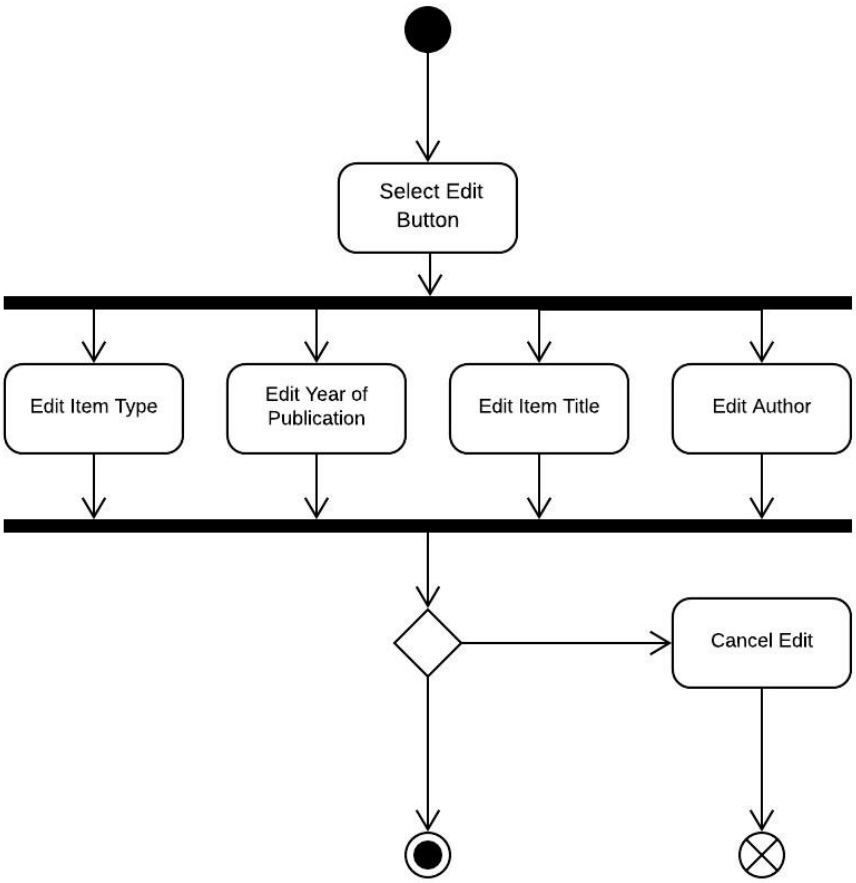
6.1 Add New Item



6.2 Delete Item



6.3 Edit Item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