Iteration Plans
Library Management System

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Iteration #1

Iteration Period	2 Weeks
Iteration Objectives	• Define the requirements. • Analyse and design the system. • Write a project plan and a vision document. • Start the implementation by Create a book class.
Iteration Activities	After a meet that has been arranged with the customer. He has been asked to determine the minimum set of features to be supported, as well as the ideal system desired. The overall system needs and requirements had been clearly defined. This iteration will begin with a careful planning for the project. By the good planning process, it will improve our ability to fit the design to the way that the customer expects. The project plan will be written as well as the vision document. The system will also be analysed and designed in this iteration. In this step, a high-level design will be established, and specify the different parts of the system. Starting by analysing the system and define the required features to meet the system requirements and Identify the use cases that the system require. The analysis of the entire system will be performed and documented by the UML way of documenting. While documenting each use case, initiation will be identified, pre- and post-conditions, the primary flow as well as some additional ones. The flows will be described using activity diagrams. Robustness diagrams will be used to analyse the steps of a use case and validate the business logic for them. To specify more in detail what a use case is supposed to do sequence diagrams will be created. The next step in this iteration is to create a class “book” in the package “models” that represent a book, and for each book, we need the information id, title, author, genre, publish date, price, and description. Parameters for each information will be created as well as methods for setting and getting.

Iteration #2

Iteration Period	2 Weeks
Iteration Objectives	• Create a test plan and test cases. • Implement the following use cases and test them: - View a list of books. - Add a book.
Iteration Activities	In this iteration, we will create a test plan for the system and continue the implementation part of the system. Firstly in this iteration, a test plan and test cases should be created that will be used to verify and ensure that the system meets its design specifications and other requirements. By continuing the implementation part, we will create a method "getBooks()" in the class "GetBooksResource" to convert the book object into JSON object to answer the request in the web browser and show the book when the user calls the URL http://localhost:9090/#/books. The next step is to create a class "BookList" that contain an array list of "book" type to store the book in it and methods to get the book list and set it. While the database of our system is an XML file, we need a method to fetch the books from the file and convert them into book objects. In addition, we need a method to re-write the XML that we need to update the database when add, delete, or edit a book. The methods will be created in the class "booksDAO". By those methods, we should be able now to see the books of the database in a list in the system's main screen. Secondly, A method in the class "AddBookResource" should be created to add a book to the system by convert it into a book object. Then, we can use the methods that we created to add it to the book list and update the XML file so it will be added to the database. A test case will be done for this part by checking if the size of the book list has increased.

Iteration #3

Iteration Period	2 Weeks
Iteration Objectives	• Implement the following use cases and test them: - Delete a book. - Edit a book.
Iteration Activities	In this iteration, will continue to implement the rest of the features. We will create a method “deleteBook()” in the class “RemoveBookResource” to delete the book from the book list and then update the database so the book will not be available using the methods we created in the previous iteration. A test class should be created for this operation checks if the book list size has decreased. Finally, we will implement the final case “Edit a book” by creating a method “editBook()” in the class “EditBookResource” to edit the book information and then update the database.