Chapter

1

SECTION I: REQUIREMENTS GATHERING

Understanding Business Requirements

The Business Workflow

Our client is a large book seller. It has to compete with a large number of similar businesses in this business space.

Profit margins in this space do not permit a large degree of price point manipulation. Hence, to remain competitive in this space and provide its customers the best deals, our book seller decided to implement a computerized book sales system. The system proposed is the computerization of the entire workflow of the book seller's business model.

The workflow begins as follows:

A visitor visits the book shop.

The book seller gathers the visitor's requirements.

The visitor/buyer may provide the following parameters to explain the requirements:

❑   Book Name

❑   Author Name(s)

❑   ISBN

❑   An idea about the contents of the book

The book seller based on the inputs received from the visitor and the domain knowledge that the book seller possesses, searches the book and provides it to the visitor.

The book seller also accepts orders over the telephone. Orders accepted over the telephone are served as follows:

❑   The buyer calls the book shop

❑   Enquires about a book usually by its name or an ISBN number

❑   The book seller accepts the order, indicates the invoice amount and the shipping charges

❑   Delivers the book(s) and collects the payment [by cash]

The book seller recognizes the closure of a firm order when:

❑   A visitor confirms buying the book(s)

The book seller:

❑   Generates an invoice

❑   Collects the payment either by:

    o   Cash

    o   Credit Card

❑   Hands over the selected book(s) to the customer in a carry bag

The visitor after buying the book(s) becomes a customer to the book seller

Problems Faced By The Book Seller

The book seller cannot:

❑   Do an efficient physical search of the book(s) that map to the buyer requirements

❑   Keep track of the available customers and their transaction history

❑   Inform all the available customers about the new books that have arrived. This prevents from having a business relationship with the buyers

❑ Physically display the books mapping the buyer's requirements before they buy due to space limitation in the book shop. This prevents the book seller from serving several visitors at a time

❑ Categorize books [such as Database, Web Programming, .Net, Java and so on], due to such a large number of books, regularly hitting the market

❑ Provide author details to the buyers

❑ Provide sample chapters to the buyer before they buy

❑ Keep track of top selling titles

❑ Keep track of the publishers and the books that belong to them

To serve the buyers, the book seller requires thorough knowledge of the book contents and the author details.

With so many books in the market, it's simply not possible to keep such knowledge.

The book seller has therefore proposed to computerize the business workflow. This will help track and maintain the book and author details.

The Proposed System

This section describes the application requirements. This document is intended to be used by the project team that will design and implement the system.

Project Scope

❑ Moving away from the standard method of selling books via the physical book shop

❑ Enhanced Registration system

❑ Shopping Cart

❑ Payment Gateway

❑ Rich admin functionalities

❑ Better user experience for the end-users i.e. book buyers

❑ Reporting capabilities

Intended Users

This application is intended to be used by:

❑ Book shop's internal resources, employees as well as the bookshop owner for administrative and collaborative purposes

❑ Book buyers i.e. End users who are external to the book shop

This application is expected to run on both an intranet as well as an extranet.

Product Features

Product features can be broadly categorized into the following groups:

❑ Challenge and Response [Login] for backend

   o   Remember Me

   Ability to remember the username and password [if chosen to]

❑ General Administrative [Back-end] features

   o   Manage Countries

   Ability for one or more book shop employees with sufficient privileges to administer Countries. This includes Adding, Editing and Deleting Countries

   o   Manage Cities And States

   Ability for one or more book shop employees with sufficient privileges to administer Cities and states. This includes Adding, Editing and Deleting Cities and States

   o   Manage Authors

   Ability for one or more book shop employees with sufficient privileges to administer Authors. This includes Adding, Editing and Deleting Authors

   o   Manage Publishers

   Ability for one or more book shop employees with sufficient privileges to administer Publishers. This includes Adding, Editing and Deleting Publishers

   o   Manage Categories

   Ability for one or more book shop employees with sufficient privileges to administer Categories. This includes Adding, Editing and Deleting Categories

   o   Manage Users

   Ability for one or more book shop employees with sufficient privileges to administer System Users. This includes Adding, Editing and Deleting System Users

- o   Manage Books

    Ability for one or more book shop employees with sufficient privileges to administer Books. This includes Adding, Editing and Deleting Books

❑ Reporting capabilities for transactions performed

Ability for one or more book shop employees with sufficient privileges to view the transactions [books purchased] performed by the end users on a particular day

❑ Challenge and Response [Login] for End Users

- o   Remember Me

    Ability to remember the username and password [if chosen to]

- o   Forgotten Password Retrieval

    Ability to retrieve the forgotten password based on the following inputs:

    - ▪   Email Address

    - ▪   Username

    - ▪   Birth date

❑ End Users [Front-end] features

- o   New Releases

    Ability to display a list of book names that were recently released

- o   Top Titles

    Ability to display a list of book names that were most viewed

- o   Updated Books

    Ability to display a list of book names that were recently updated

- o   Our Authors

    Ability to display a list of available author names

- o   Our Publishers

    Ability to display a list of available publisher names

- o   Search

    - ▪   Ability to suggest:

        - •   Book/Author/Publisher Names as the user keys in the first few characters to begin the search

    - ▪   Ability to search:

        - •   Books

        - •   Authors

- Publishers

Using keywords such as book name, author name, ISBN, cost of the book, synopsis, about authors, degree of the author, email address and so on

❑ Registration Features

Ability to register end users with the capability to prevent automated software registration using Captcha

❑ Directory of available books [Category Wise]

Ability to view and browse book names segregated under category heads

❑ Popular Searches [Tag Clouds]

Ability to view the search tags [keywords] that were searched the most

❑ Session Management

Ability to maintain session across all the front-end / back-end pages

❑ Payment Gateway using Google Checkout

Ability to buy books using internal shopping cart and transfer the cart information [individual book details: Book Name, Price] to Google Checkout for processing payment using Credit Card

❑ Transaction Tracking

Ability to maintain a history of transaction initiated and successfully completed via shopping cart

❑ Payment and Delivery Tracking

Ability to update and view the payment and delivery status of a transaction

❑ Image Storage Mechanism

Ability to store and retrieve images such as Cover Page, Author Photograph in the database using BLOB

❑ PDF Storage Mechanism

Ability to store and retrieve PDF files such as Sample Chapter, Table of Contents in the database using BLOB

❑ Prevent automated software from performing bulk registrations

Ability to prevent automated software from performing bulk registrations using a third party tool called Captcha

Operating Environment

Operating system

Windows: All flavors that support Java EE 5 & MySQL 6
Linux: All flavors that support Java EE 5 & MySQL 6

External Software Applications

Java EE 5 SDK Update 5 [with JDK 6u7] - Built On GlassFish App Server
MySQL Community Server 6.0