- **Suggest a suitable project model for the below scenario**

- **Draw the use case diagram for the same**

- **Draw the sequence diagram for the same**

Project Title: Development of a Lost Articles and Letters Reconciliation System

Abstract of the project

A Post Office wants to improve its efficiency by delivering the lost letters and lost articles (which are sent in parcels) in a short period of time. Currently it takes about 3 months for a lost letter or a lost article to reach the correct destination. A machine reads addresses on letters. The ones, which could not be read by machine, are sorted by human intervention. Even after this, the address is not readable, it becomes a lost letter. Articles that fall out of the parcel become lost articles. When the sender/receiver calls up or contacts the post office for their letter/article, a manual note is made and then this note is sent to the warehouse where lost articles and lost letters are kept. The reconciliation process of finding the lost letter/article is manual and sometimes wrong letter/article(s) is sent.

You have to develop a system, which captures the above functionality and reduce the turnaround time from 3 months to 10 working days. This is an Intranet application.

Functional components of the project

Following is a list of functionality of the system. More functionality that you find appropriate can be added to this list. And, in places where the description of functionality is not adequate, you can make appropriate assumptions and proceed.

Users of the system : Employees of the Post Office. There are various groups for the system. For example, groups which have rights to enter master data, groups having rights update only articles or only letters, groups having rights to enter/update/delete data for complaints by customers, groups having the rights to reconcile etc..

User will start with the login page in which username and password are entered. This screen should also provide a functionality to change the password. To change the password, it should ask for the old password, new password and confirm new password. [Please Note : You can additionally add the functionality of generating letters in the word format from the application. These letters will be sent to the customer and these will describe about their complaint status and approximately when will they receive their lost item. There can be types of letters like Complaint Status Type, Additional Information Required Type, Lost Article Type, etc. The Complainants Address should be filled automatically in the letter from the database. A separate module for printing will be required.]

Based on the group, to which the user belongs, relevant modules are shown.

Modules are
- User and Group Master – which captures the master data for the users and groups and the rights for that group
- Lost Articles Master –Categorize the articles and assign keywords to the article. Each article will have set of attributes (Make, Manufactured by, Color, etc). These attributes will defer based on the category of article. Entry will be done for each of the lost article and a unique alpha numeric number is generated for that article.
- Lost Letter Master – Different kinds of letters like Postcard, Telegram, etc can be categorized and entry is done for each of the lost letter type. Generate a unique alpha numeric number for each type of letter.
- Complaints Handling– This module will capture data about the sender or receiver, media type- phone, fax, mail, Lost Letter/Article description. While capturing the lost article, the category is decided and attributes are filled. Once the data is entered about this, a unique alfa numeric number is generated for the complaint and shown to the user of the system. After the Unique Complaint Number generation data for the customer letter (Complaint Acknowledgement Type Word Format) is fed in to the system.
- Complaint Reconciliation – Here for each complaint a reconciliation is done, where in the lost letters are matched with the PinCodes, Street, Name of the master letter records and lost articles are matched with the attributes of the master article attribute records. A manual search is done on some PinCode and Street and if the system has these records, it will be shown to the user. On selecting one of the correct records, status of the complaint is changed to found. Similarly for lost articles status is changed to found. After this, data for the customer letter(Letter/Article Found Type Word Format) is fed into the system.
- Printing Module – Here system user can see all the different types of letters to be generated and corresponding to the letter type, all the unique complaint numbers are seen. Selecting any one complaint and on print it will generate a letter in word format (Templates need to be put on the server side) which will fetch the appropriate data from the database.
- Help – Describing operation of the whole application

In addition to this , we can have a help link on each of the modules.