Develop a application with following features:

1.  Login page

    a.  User Name and password authentication using DES 3 encryption algorithm

    b.  The user name and password should be saved in the database.

    c.  Two factor authentication – we can try to use some third party downloaded softwares for implementing two factor authentication.

2.  Drop down menu using java script to be implemented

3.  A Data Entry Master form for entry for entering customer information

    a.  Maker – Checker feature to be implemented

    b.  Maker user cannot be a authorizer.

    c.  Refer to the section 4 for the details on the fields to be displayed to the user.

    d.  Refer to the maker-checker.xls and navigation diagram for the maker checker work flow.

4.  A Form for upload of text file into the database.

    a.  The system should provide a provision for selecting the file to be uploaded from the machine where the application is running.

    b.  The code should fetch the file from the local machine and send the contents to the server.

    c.  The system should give provision for the selection of the Rejection Level Parameter to the user. The selection drop box will have two values:

        a.  R –  Record Level Rejection

        b.  F – File Level Rejection

    d.  The field level validations should be performed using a PL/SQL procedure and the validation rules should be stored in the database.

    e.  Refer to the table given below for the fields and their validations and also refer to the exercise 3 document for more details on upload.

| Sr # | Field Name | Data Type | Size | Mandatory | Validation | Screen Object |
|---|---|---|---|---|---|---|
| 1. | Customer ID | Number | 10 | Y | Auto-generated by code | Not Visible on Screen |
| 2 | Customer Code | Alpha- Numeric | 10 | Y | Primary Key | Text entry box |
| 3 | Customer Name | Alpha- Numeric | 30 | Y | Can accept only a-z, A-Z and 0-9 | Text entry box |
| 4 | Customer Address 1 | Alpha- Numeric | 100 | Y | | Text area |
| 5 | Customer Address 2 | Alpha- Numeric | 100 | N | | Text area |
| 6 | Customer Pin Code | Number | 6 | Y | Numeric 6 characters, should not be less than 6 characters | Text entry box |
| 7 | E-mail address | Alpha- Numeric | 100 | Y | Validate the e-mail address format | Text entry box |
| 8 | Contact Number | Number | 20 | N | | Text entry box |
| 9 | Primary Contact Person | Alpha- Numeric | 100 | Y | | Text entry box |
| 10 | Record Status | Alpha- Numeric | 1 | Y | N- New, M- Modified, D- Deleted, A= Authorized, R- Rejected | |
| 11 | Active/Inactive Flag | Alpha- Numeric | 1 | Y | | Drop Down |

| Sr # | Field Name | Data Type | Size | Mandatory | Validation | Screen Object |
|---|---|---|---|---|---|---|
| | | | | | A – Active, I - Inactive | |
| 12 | Create Date | Date | | Y | System date | |
| 13 | Created By | Alpha- Numeric | 30 | Y | Logged in user's id | |
| 14 | Modified Date | Date | | N | | |
| 15 | Modified By | Alpha- Numeric | 30 | N | | |
| 16 | Authorized Date | Date | | N | | |
| 17 | Authorized By | Alpha- Numeric | 30 | N | | |

Guidelines:

1. Refer to the maker-checker.xls and navigation diagram for the maker checker work flow.

2. Transaction management to be handled

3. Internationalization to be implemented

4. Logger implementation using log4j in case of java based application

5. The system should be designed in multi-layered architecture and there should be clear separation of front -end, controller logic, business logic, and database layer.