

Enrollment Number: 2250731044

P. S. Sequeira



INDIRA GANDHI NATIONAL OPENUNIVERSITY

- 1. Project Synopsis Front Page**
- 2. Proforma for Approval of Project Proposal duly filled and signed by both the student and the Project Guide with date.**
- 3. Bio-data of the project guide with her/his signature and date.**
- 4. Synopsis of the project proposal.**



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Project Synopsis Front Page

- a) Student Name : Prem Vinod W Sequeira
- b) Enrollment Number : 2250731044
- c) Program Code : Bachelor of Computer Application (BCA)
- d) Course Code : BCSP-064
- e) Study Center code : 1632
- f) Regional Center & Code: Mumbai RC (49)
- g) Title of the Project : Customer Re-KYC Monitoring Application
- h) Project Guide Name : Rahul Meena



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES
IGNOU, MAIDAN GARHI, NEW DELHI – 110 068**

**II. PROFORMA OF BCA PROJECT PROPOSAL (BCSP-064)
(Project Title and Guides Details)**

Enrolment No: 2250731044 **Regional Centre Code:** 49 **Study Centre:** 1632

1. Name of Student : Prem Vinod W Sequeira

2. Address of the Student : Padmavati CHS Ltd, C-310, Sector 7, Plot No 18, Kamothe,
Navi Mumbai - 410209.

3.(a) E-mail: premsequeira@gmail.com

3.(b) Telephone/ Mobile No.: 98190 71542

4. Title of the Project : Customer Re-KYC Monitoring Application

5. Name of the Project Guide: Mr. Rahul Meena

5.(b) Designation of the Project Guide: Project Manager

6. Address of Project Guide: IDBI Intech Ltd., Plot No 39-41, Sector No 11, Belapur, Navi Mumbai - 400 614.

7. Qualification of the Guide* (Attach bio-data of the Guide)	Ph.D.	M. Tech.	B. Tech.	MCA	Any other
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***Note:** i. All the above mentioned Degrees must have been awarded in Computer Science/IT only
ii. A Guide should not guide more than 8 students of BCA at any point of time.

8. Industrial / Teaching experience of the Guide (in Years) 10+

9. Software Used for this Project: Oracle 19c for Database, Oracle Apex for application development, Core Java 1.8 for Backend data processing, CSS for font and front end designing, JavaScript for client side Input validation.

Note: 1. Use of Visual Basic and MS-Access as Front End and Back End respectively is forbidden.

But, you are permitted to use Visual Basic with other Software. Also, you can use MS-Access with other software.

2. The use of C or C++ programming languages is strictly prohibited for projects associated with database management.

Signature of the Student

Date: 15-10-2024

Signature of the Guide

Date: 15-10-2024

Important:

1. Attach this Proforma along with Guide's Bio-data and Project Synopsis in the Project Report.
2. Not more than one student is permitted to work on project.
3. Complete project as per the comments of Synopsis evaluator, then only submit your Project Report.

For Office Use Only



Approved



Not approved

.....
Signature, Designation, Stamp of
the Project Proposal Evaluator

Date:

Suggestions for Reformulating the Project:

Enrollment Number: 2250731044



**INDIA GANDHI NATIONAL OPEN UNIVERSITY
BIO-DATA OF PROJECT GUIDE**

Name : Mr. Rahul Meena

Date of Birth : 17th July 1985

Present Designation/ Profession: Manager

Residential Address : Flat no 203, Neera CHS, Sector 8, Sambha JI Nagar, belapur, Navi Mumbai.

Phone Number : +91 7201055455 **Email address:** rahulmeenagecbh@gmail.com

Academic Qualification

Degree	Branch/Specialization	University/Board	Year of Passing	Percentage of marks
M. Tech.	Computer Science	Birla Institute of Technology	2009	Grade 69 GPA

Teaching/Industry Experience:

Position/ Designation	University/ Institution	Period From - To
Manager	IDBI Bank Ltd.	Jan-2015 till Today
Assistant Professor	Government Engineer Collage Bharatpur, Rajasthan	June -2009 to May-2014



(Signature of the Guide)

BCSP-064 Synopsis

BACHELOR OF COMPUTER APPLICATIONS

Customer Re-KYC Monitoring Application



Submitted By

<Prem Vinod W Sequeira>

Enrollment No.: 2250731044

Under the guidance of

< Rahul Meena >

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1. **Title of the Project:**

*Customer Re-KYC Monitoring
Application*

2. Introduction and Objectives of the Project

Introduction:

As per RBI Master Direction : “Periodic data updating shall be carried out at least once in every 2 year for high risk customer, once in every 8 year for Medium risk customer, and once in every 10 years for low risk customer for the date of Account opening / last KYC updating date”.

Further RBI has asked ED's to ensure that their internal KYC policy and processes on updating / periodic updating of KYC are transparent and adverse actions against the customer should be avoided, unless warranted by specific regulatory requirements.

Despite repeated communications through SMS, Notices, emails customer had failed to update KYC for which Bank is forced to take necessary action by freezing the accounts.

The Bank is taking necessary action by freezing the accounts manually for those customers who failed to update periodic KYC as per their respective risk. This manual process is lead to delay in freeze of accounts thereby whole process is defeated. The automated process will be save the time and efforts of the Bank official and would also ensure timely freezing of accounts of the KYC non-compliant customers.

Hence it is proposed to freeze the accounts with freeze code as below.

Ref Code	Reference Code Description
NRKYC	Re-KYC Pending - DCCT

Objectives:

- 1. Efficiency:** Our primary objective is to aim on streamline the dining experience, reducing wait times, and ensuring that customers can enjoy their meals without unnecessary delays.
- 2. Transparency:** The *Customer Re-KYC Monitoring Application* is committed to transparency in Account freezing, and availability ensuring that bank user have all the information they need to make informed choices.
- 3. Sustainability:** We are committed to sustainable practices, including reducing food waste and promoting eco-friendly options in our restaurant.
The left-over food is donated to poor people on everyday basis so there's no wastage for left-over and goes to right hands instead of getting wasted
- 4. Convenience:** A key objective of The *Customer Re-KYC Monitoring Application* is mark freeze customer account on right time and generate required reports to the bank user as well as various dashboard to Executive directors committee all times.
- 5. Customer Satisfaction:** Ultimately, our goal is to create user friendly web base application through that bank user can communicate or solved the end user queries related Re-KYC.
- 6. Accessibility:** The *Customer Re-KYC Monitoring Application* is accessible to all Bank user over the PAN India over the intranet not internet.

3. Project Category

(RDBMS/OOPS/Networking/Multimedia/Artificial Intelligence/Expert Systems etc.)

Web based Application Development.

4. Analysis (DFDs at least up to second level , ER Diagrams/ Class Diagrams/ Database Design etc. as per the project requirements).

DFDs (Data Flow Diagram):

DFDs illustrate the flow of data within the system, showcasing the processes, data sources, data stores, and external entities involved. At a high level, a DFD for Form finite could include the following components:

1. External Entities:

- 1) End Users
- 2) Administrator User

2. Processes:

- 1) Data Uploaded by EDW Department,
- 2) Data Upload Authorization by APU Department,
- 3) Start Data backend process,
- 4) Fetch data from table
- 5) Send to CBS for Flag Updating,
- 6) Get response from CBS
- 7) Update respective record in local table.

3. Data Sources:

- 1) Data uploaded by EDW Department user.

4. Data Stores:

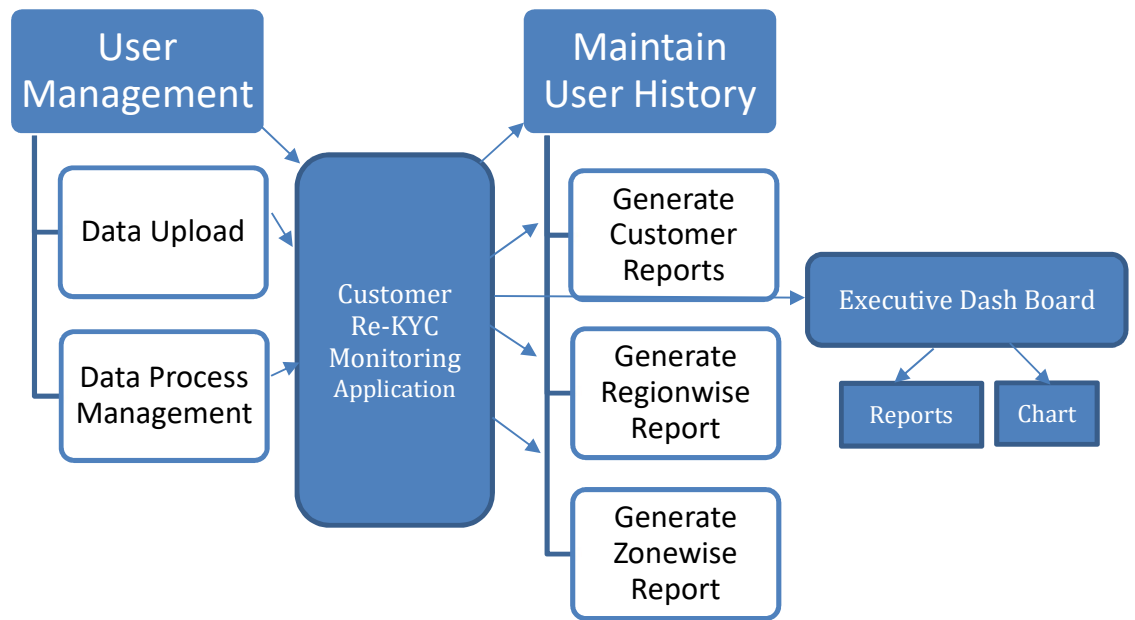
- 1) Record store in local table as data uploaded by EDW Department user
- 2) Store response received from web API in local table,

Data Flow Diagram (DFD) for the *Customer Re-KYC Monitoring Application*

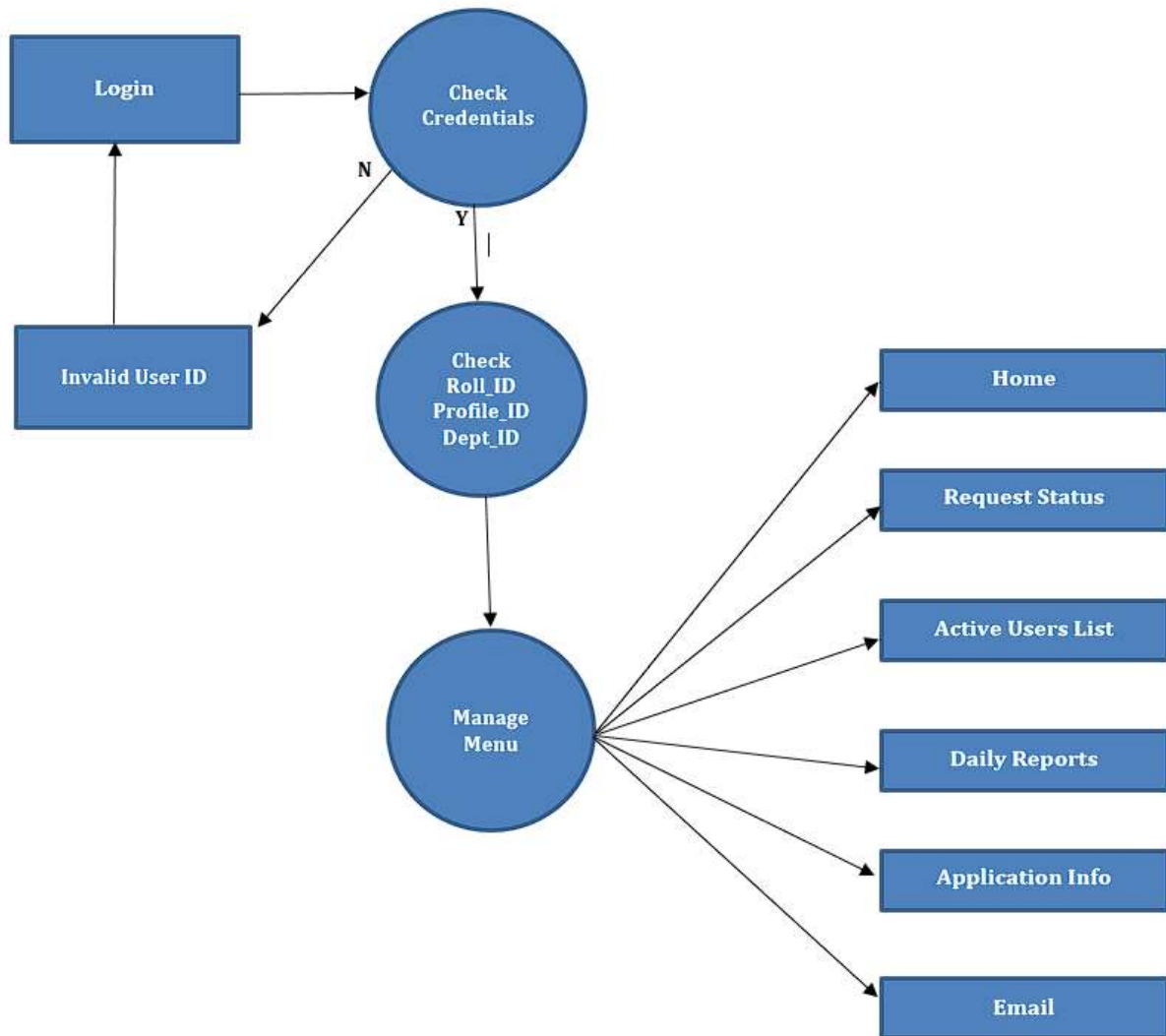
Level 0 DFD



Level 1 DFD



Level 2 DFD



In this DFD, **At Level 0**, the EDW Department entity interacts with *Customer Re-KYC Monitoring Application*.

There are two mainly 2 different types of users: 1. Admin User who Managing all the users creation, modification or deletion activity.

At Level 1, *Customer Re-KYC Monitoring Application* manages all the overall system.

It responsible to send data to CBS as well as update the received response from CBS and also maintain the status of request for generating reports. This helps in getting the process more similar and completes the cycle from end to end points request.

The User Login and Registration are linked with the database and as per user profile menu will be visible to end user.

At Level 2, The Admin user as well departmental user flows with the Login and connecting with the databases, validate the user credentials.

It checks all the credentials from the database and the user is logged in. The main module is linked with the Home Page, Menu Page, Report Modules to generate the various reports and Inquiry.

ER Diagrams (Entity-Relationship Diagrams):

ER diagrams help model the entities, relationships, and attributes within a system. *Customer Re-KYC Monitoring Application*, entities are such as Bank Normal user, and Admin User. This defines all the relationships between these entities and their attributes to create a comprehensive ER diagram.

Entities: as branch_master, master_data, rekyc_data_edw, rekyc_error_desc.

The relationship between the entities are as follows:

1. Master_data: Its store master data.

Attributes: ID (*Primary Key*), Description, rcre_id, rcre_time.

2. User_master: It Represents user information with department ID, Role and Profile ID.

Attributes: user_id (*Primary Key*), sol (*Foreign Key with Branch master table*), Full name, email_address, grade and status.

3. User_master_hst: Represents the audit/history record for a user.

Attributes: user_id (*Foreign Key with user_master table*), sol_id (*check validate not Null*).

4. Branch_master: Represents list of all Branches with district, state, and region name

Attributes: sol_id (*Primary Key*), branch_name, dist_name, state_name, regn_name, zone_name, status.

5. process_control_management: Represents the data processing is start or stop by whom and when.

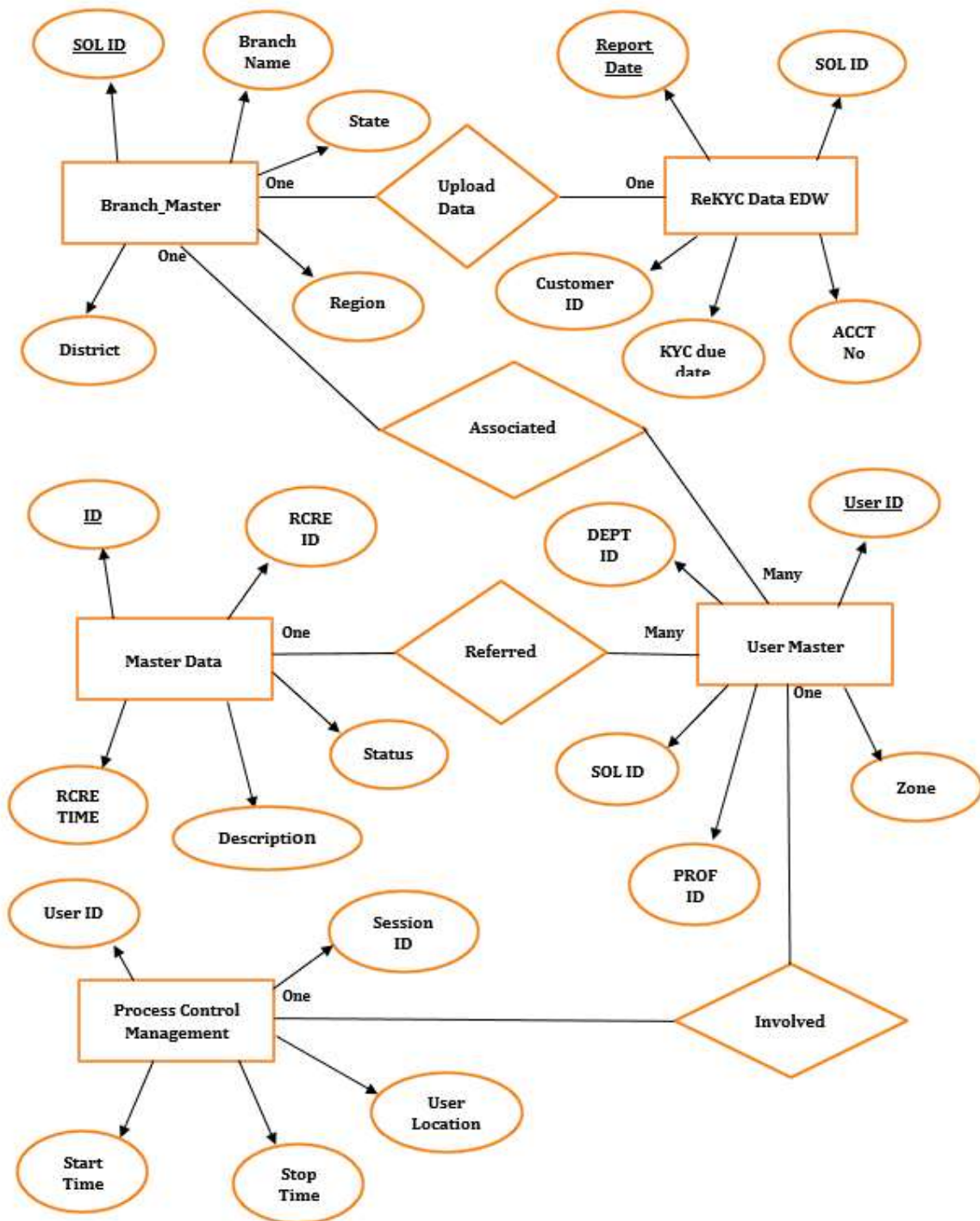
Attributes: user_id (*Foreign Key with user_master table*), user_location, status.

Identify the Relationships

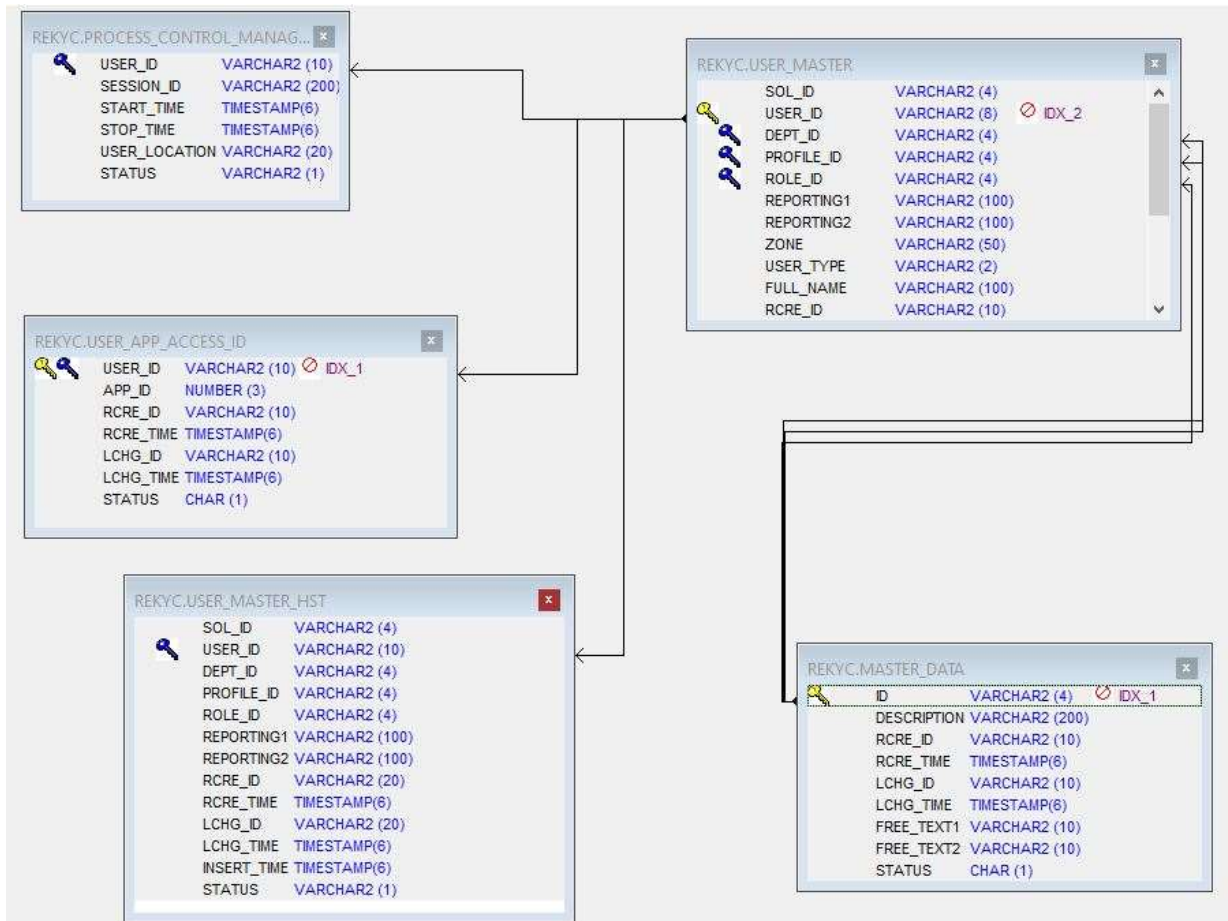
From the foreign key constraints we can refer the following relationships

- 1) **MASTER_DATA** and **USER_MASTER**: One-to-Many relationship. One record in MASTER_DATA table can be referenced by multiple users in USER_MASTER using Key DEPT_ID, PROF_ID, ROLE_ID column.
- 2) **USER_MASTER** and **PROCESS_CONTROL_MANAGEMENT**: One-to-One relationship. At a time only one ADMIN user can control the process, **START** or **STOP** process.
- 3) **BRANCH_MASTER** and **USER_MASTER**: one-to-many relationship. Multiple user can associated with USER_MASTER.
- 4) **BRANCH_MASTER** and **RE-KYC_DATA_EDW**: one-to-one relationship. At a time only one user from IT Department user can upload data in RE-KYC_DATA_EDW table.

Entity Relationship Diagram for *Customer Re-KYC Monitoring Application*



Class Diagram for *Customer Re-KYC Monitoring Application*



Above Class diagram is generated using TOAD utility (Tool for Oracle Application Developers)

Database Design:

Table: master_data

Field	Data Type	Size	Constraint	Description
ID	VARCHAR2	4	Primary Key	This column has value of ID
DESCRIPTION	VARCHAR2	200		This column has value of Description
RCRE_ID	VARCHAR2	8		This column has value of record created user ID
RCRE_TIME	TIMESTAMP	6		This column has value of record created Date with time
LCHG_ID	VARCHAR2	8		This column has value of last changed record user ID
LCHG_TIME	TIMESTAMP	6		This column has value of last changed record Date with time
FREE_TEX1	VARCHAR2	10		Additional field for future
Status	CHAR	1		This column has value of record status Default 'A' for Active

Table: **process_control_management**

Field	Data Type	Size	Constraint	Description
USER_ID	VARCHAR2	8	Foreign Key with user_master table	This column has value of login User ID
SESSION_ID	VARCHAR2	200		This column has value of user Session ID
START_TIME	TIMESTAMP	6		This column has value of process start Date with time
STOP_TIME	TIMESTAMP	6		This column has value of process stop Date with time
USER_LOCATION	VARCHAR2	20		This column has value of login user IP address
Status	CHAR	1		This column has value of record status Default 'A' for Active

Table: rekyc_error_desc

Fields Name	Type	Size	Constraint	Description
ERROR_CODE	VARCHAR2	10	Primary Key	This column has Error Code No
ERROR_DESC	VARCHAR2	50		This column has value Error Code details description
FREE_TEXT	VARCHAR2	10		Additional Field for future.
FREE_TEXT1	VARCHAR2	10		Additional Field for future.
STATUS	Character	1		Status of record.

Table: **user_master**

Field	Data Type	Size	Constraint	Description
USER_ID	VARCHAR2	8	Primary Key	This column has value or User ID
SOL_ID	VARCHAR2	4	Foreign Key with branch_master table	This column has value of User Sol ID
DEPT_ID	VARCHAR2	4	Foreign Key with master_data table	This column has value of User Department ID as per Master Data Table.
PROF_ID	VARCHAR2	4		This column has value of User Profile ID as per Master Data Table.
ROLE_ID	VARCHAR2	4		This column has value of User Role ID as per Master Data Table.
REPORTING1	VARCHAR2	8		This column has value of User Reporting EIN as per Oracle HRMS as on date.
REPORTING2	VARCHAR2	8		This column has value of User Next Reporting EIN as per Oracle HRMS as on date.
ZONE	VARCHAR2	50		This column has value of User Sol Zone Name

Table: **user_master_history**

Fields Name	Type	Size	Constraint	Description
USER_ID	VARCHAR2	8	Index Key without Null value	This column has value or User ID
SOL_ID	VARCHAR2	4		This column has value of User Sol ID
DEPT_ID	VARCHAR2	4		This column has value of User Department ID as per Master Data Table.
PROF_ID	VARCHAR2	4		This column has value of User Profile ID as per Master Data Table.
ROLE_ID	VARCHAR2	4		This column has value of User Role ID as per Master Data Table.
REPORTING1	VARCHAR2	8		This column has value of User Reporting Officer.
REPORTING2	VARCHAR2	8		This column has value of User Second Reporting Officer
RCRE_ID	VARCHAR2	8		This column has value Record created User EIN
RCRE_TIME	Time	6	Default Sysdate	Record created Time. Default value will be Current Timestamp
LCHG_ID	VARCHAR2	8		This column has value Last change User EIN
LCHG_TIME	TIMESTAMP	6		Record Last Changed Date with Time.
INSERT_TIME	TIMESTAMP	6	Default Sysdate	Record Inserted Date with Time.
STATUS	Character	1		Status of record.

Table Name: **rekyc_data_edw**

Fields Name	Type	Size	Constraint	Description
REPORT_DATE	DATE		Primary Key	This column has value of data for the month.
KYC_DUE_DATE	DATE			This column has value customer KYC due date
SOL_ID	VARCHAR2	4	Foreign key refered with branch_master table	Customer Account Branch ID.
CUSTOMER_ID	VARCHAR2	9		Customer ID
ACCT_NO	VARCHAR2	16		Customer Account Number
CUSTOMER_NAME	VARCHAR2	100		Customer Account Name
SCHM_CODE	VARCHAR2	5		Account Scheme Code
SCHM_TYPE	VARCHAR2	5		Account Scheme Type
SCHM_DESC	VARCHAR2	100		Account Scheme Description
ACCT_OPN_DATE	DATE			Account Open Date
RISK_CAT	VARCHAR2	6		Account Risk Category
PROCESS_FLG	CHAR	1		Record process Flag
PROCESS_STATUS	CHAR	1		Request process Status
RCRE_TIME	TIMESTAMP	6	Default Sysdate	Record Created Time

Table Name: **rekyc_data_hst**

Fields Name	Type	Size	Constraint	Description
UPLOAD_DATE	DATE		Primary Key	This column has value of data for the month.
KYC_DUE_DATE	DATE			This column has value customer KYC due date
REQ_NO	VARCHAR2	14		Unique Serial No Generate by Application
REQ_DATE	TIMESTAMP	6		Request Time - send to CBS
RES_DATE	TIMESTAMP			Response Time - received from CBS
SOL_ID	VARCHAR2	4		Customer Account Branch ID.
CUSTOMER_ID	VARCHAR2	9		Customer ID
ACCT_NO	VARCHAR2	16		Customer Account Number
PROCESS_FLG	CHAR	1		Record process Flag
PROCESS_STATUS	CHAR	1		Request process Status
RCRE_TIME	TIMESTAMP	6	Default Sysdate	Record Created Time

Table Name: **branch_master**

Fields Name	Type	Size	Constraint	Description
SOL_ID	VARCHAR2	4	Primary Key	This column has value of Branch ID.
BRAN_NAME	VARCHAR2	100		This column has value Branch Name
DISTRICT	VARCHAR2	30		District Name
STATE	VARCHAR2	30		State Name
REGION	VARCHAR2	30		Region Name
ZONE	VARCHAR2	30		Zone Name
RCRE_ID	VARCHAR2	8		Record Created user ID
RCRE_TIME	TIMESTAMP	6	Default Sysdate	Record Created Time
LCHG_ID	VARCHAR2	8		Record last changed user ID
LCHG_TIME	TIMESTAMP	6		Record last changed Time
STATUS	CHAR	1		Record Status

5. A complete structure which includes: Number of modules and their description to provide an estimation of the student's effort on the project. Data Structures as per the project requirements for all the modules. Process Logic of each module. Testing process to be used. Reports generation (Mention tentative content of report).

Designing a complete structure for *Customer Re-KYC Monitoring Application*, including modules, data structures, process logic, testing process, and report generation, is a complex task. Below, I'll provide a high-level outline to help you get started, but keep in mind that the actual implementation can vary based on the specific requirements and scale of your project.

1. Number of Modules and Their Description:

1. **User Login and Authentication:** It validate the User ID and password from AD Server and HR database. And on the basis of user profile set the application modules.
2. **Home Page:** It display the current status of data processing using Dashboard.
- 3 **Process Control:** Through the menu Admin user can control Data processing. User can handle process to Start or Stop.
- 4 **Request Status:** It allows users to know the Customer Account Status in single Account or multiple Accounts.
- 5 **User Maintenance:** It handles by Admin user to Activate or De-Activate user and also maintain the user modification history record.
- 6 **Active User List:** It generate the Active User list with user ID Name and role, profile.
- 7 **Daily Reports:** It generate the various report like Region wise, Zone wise, Branch wise, Scheme Code wise, Scheme Type wise. Through this various reports user can come to know the status of Data processing.

8 **Testing Process**

- a. **Unit Testing:** Test individual functions and methods within modules.
- b. **Integration Testing:** Test how different modules interact with each other.
- c. **User Acceptance Testing:** Involve real users to ensure the system meets their requirements.
- d. **Performance Testing:** Assess the system's response time and scalability.
- e. **Security Testing:** Evaluate the system's security, including authentication and

data protection.

9 Reports Details:

- a.* Region wise Report.
- b.* Zone wise Report.
- c.* Branch wise Report.
- d.* Request Failure Report.

10 Management Level Reports:

- a.* Scheme wise Report.
- b.* Top 5 List summary.
- c.* Executive Dash board.

11 Branch User Reports:

- a.* Request Processed Report
- b.* Request Un-Processed Report.

6. Tools / Platform, Hardware and Software Requirement specifications

Tools / Platform / Services:

For the development of *Customer Re-KYC Monitoring Application*, the following tools and platforms can be considered:

1. **Oracle Apex 24.1:** A widely used front-end framework for building front-end web applications.
2. **HTML / CSS / JavaScript:** These are the three core technologies used in web development. HTML is the backbone which gives structure and content to webpage. CSS is used for styling and formatting content. JavaScript is dynamic and high-level programming language and used for input validation from client side.
3. **Tomcat Web Server:** used for deployment of Web Application.
4. **Oracle 19c Database:** Oracle is a popular database for the purpose of data storage as system known for its flexibility, scalability, and ease of use.
5. **SVN:** This server is used for Software Version maintain and application backup.

Hardware Requirements:

The most common set of requirements defined by any operating system or software application is the physical computer resources also known as hardware. It should be generally checked for testing and development purpose:

1. **Processor:** Intel Core i3 or equivalent.
2. **RAM:** 8GB or higher.
3. **Storage:** At least 256GB SSD or 500GB HARDDRIVE.
4. **Display:** 1280x800 resolution or higher / lower mobile screens.

Software Requirements:

The software requirements deals with defining software resource requirements and prerequisites that needs to be installed on a computer to provide optimal functioning of an application. Here are the key requirements for making software application:

1. User Operating System : Windows.
2. Application & DB Server : Linux Red Hat version 11.0.
3. Oracle 19c or above : Oracle 19c or above version must be installed
: on remote database server for data storage
purpose.
4. Apex Software : Oracle Apex version 24.x must have to install on
remote database.
5. Web Server : The Tomcat version 9.x or above web server
must be installed on remote application server.

7. Are you doing this project for any Industry / Client? : No

8. Future scope and further enhancement of the project

The future scope and potential enhancements for *Customer Re-KYC Monitoring Application* are significant, and they can provide numerous opportunities for improving the user experience, expanding functionality. Here's an in-depth exploration of possible future enhancements:

1. **Analytics and Reporting:** There are various Business level reports like Region wise, Zone wise Branch wise report. Through this various report Bank management can come know area wise Re-KYC pending from customer and with the help of this Bank/financial Institute can find out reason for non-compliance of customer Re-KYC and can arrange camp for customer Re-KYC as additional service.
2. **Branch User Reporting:** In the application there are two type of inquiry Customer ID base and Account Base. As best service part branch user can real time check the customer Re-KYC Status and guide to them for Re-KYC compliance.
3. **Integration with Other Systems:**
 - *API Integration:* Connecting with third party services for improved data validation such as RBI compliance, CIBIL.
 - *Cross -Platform Capabilities:* Ensuring compatibility in various Financial systems and regulatory frameworks across different regions.
4. **Regulatory Compliance Adaption:**
 - *Dynamic Compliance:* Creating the system that automatically updates to reflect changes in local and international regulations.
 - *Audit Trails:* Maintaining comprehensive logs for audits and compliance reviews, ensuing accountability.
5. **Real-Time Notifications:** Implement real-time notifications to inform customers for Re-KYC of their accounts via eMail and SMS.
6. **Customization and Scalability:**
 - *Modular Architecture:* Allowing organizations to customize features based on their specific needs and regulatory environments.
 - *Scalable Solutions:* Designing the application to handle varying volumes of data as business grow.

By focusing on these areas a *Customer Re-KYC Monitoring Application* can evolve to meet the increasing demands for security compliance and user experience in the financial sector.