References

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[4] http://www.comp.glam.ac.uk/pages/staff/tdhutchings/chapter4.html

[5] www.comp.glam.ac.uk/pages/staff/tdhutchings/chapter4/CHAPTER4.PPT

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Feasibility Study

Economic Feasibility

- ### System Requirements

Requirement	Technology / Method	Comments
Development Environment	**PHP** - Under general public license (LGPL)	Company does not need to buy the software development tools
DBMS	Oracle - Under company license	Company has already obtained license for Oracle
Work Station	Personal Computers	Staff already have PCs and can use the same without any cost
Server	Has to be purchased	Company will bare the cost
Software	-	Development of the system is done at no cost
Network	Intranet	Can use the internal network

Training

Users of the system can be trained within a period of one month. The training has to be done only for users in the Recovery Division and the basic knowledge in computer is available for the users.

Summery of Cost Involved

Description	Cost Rs.
Server	200,000
Training Materials	5,000
Refreshments (500 per person * 10 persons)	5,000
Total	210,000

Risk

There is a risk if management refused to bare the server cost due to reasons like changing existing management, changing company policies, etc. In such incident there is a possibility to share existing server which has required capacity.

4.2 Technical Feasibility

Resource Availability

Hardware - Personal Computers (All the employees have their own personal computers to do day today activities)

Software - Windows XP operating system / Microsoft Office / Dream Viewer (All the required software is available)

Technology Used

Developing Environments	PHP , Oracle
HTTP Server	Apache HTTP Server
Web Browser	Fire Fox , Internet Explorer
Designing Tool	Eclipse, Dream Viewer

Other than Oracle all the other technologies are freely available widely used in the software industry. Oracle can be obtained with the company license.

Development Risk

Following risks can be identified during the system development

Organizational Risk	There can be a risk due to changing management in the company and management will expect to reduce cost of working extra hours for employees which will not be able to bear.
Product Risk	Scope of the system will be changed during the development due to changing customer requirements. Also the business needs can be change
Project Risk	Risk in delivering the product according to the agreed time period due to reasons like • Lack of experience to develop a system • Personal issues with developers

Technical Know How

- Developer is familiar with the technologies required (PHP, Oracle)
- Developer is familiar in designing user interfaces which is helps to make the system more users friendly

4.3 Legal Feasibility

License - License for Windows Operating System and Oracle, the company has obtained already.

The proposed system does not need of licenses as the system will be developed by using open source software. (PHP)

Agreement - There is no such special agreement with the company to develop the system

Confidential Documents - There is no such confidential document involved since the data used by the developer is dummy data not the actual data

4.4 Cost Benefit Analysis

Tangible Cost – Initial Cost

- Server Purchase   Rs. 200,000

- Cost of Training   Rs. 25,000

Intangible Benefits

- Recovery customer details will be available at the correct time without any delay since it is automated. Recovery action process will be fast.
- Recovering period of bad debts will be less.
- Obtain effective usage of man hour due to reduction of inconvenient work load of recovery agents
- Help management to evaluate performance easily

System Architectural Design
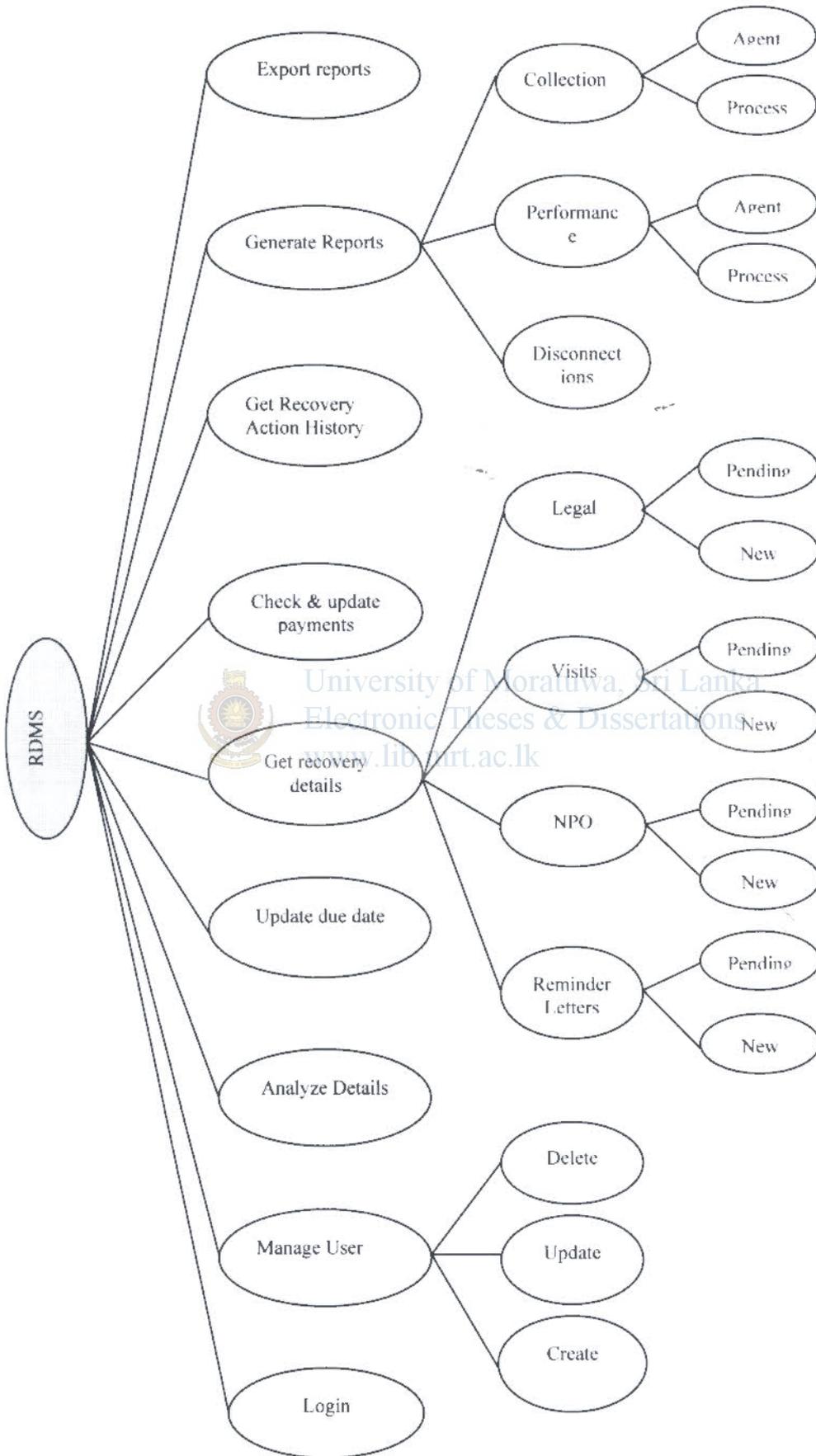
- RDMS
  - Export reports
  - Generate Reports
    - Collection
      - Agent
      - Process
    - Performance
      - Agent
      - Process
    - Disconnections
  - Get Recovery Action History
  - Check & update payments
  - Get recovery details
    - Legal
      - Pending
      - New
    - Visits
      - Pending
      - New
    - NPO
      - Pending
      - New
    - Reminder Letters
      - Pending
      - New
  - Update due date
  - Analyze Details
  - Manage User
    - Delete
    - Update
    - Create
  - Login

Design Diagrams

1. Check List

Use Case	Software Requirement	Use Case Description	Activity Diagram
Login	1, 2, 3, 4, 5	1	1
Send Recovery Customer Details	7	2	2
Update Due Date	12, 14	3	3
Monitor Due Date	15	4	4
Monitor Payments	15, 16	5	5
Send not paid customers	8	6	6
Get Details for Recovery Actions	9, 10, 11	7	7
Generate Reports	17, 18, 19, 22, 23, 25, 26, 27	8	8
Analyze and categorize details	7, 8	9	9

2. Data Dictionary

Abbreviation	Term	Description
PD	Both way Permanently Disconnected	Incoming and Outgoing disconnected Permanently
TD	Both way Temporary Disconnected	Incoming and Outgoing disconnected temporary
MIS	MIS Division	Management Information Systems Division
NPO	Not Paid for Other line	Customers with BPD number together with active number
B	One way Disconnect	Outgoing disconnect
RA 1st Reminder	Recovery Agent First Reminder Letter Process	Recovery Agent handling First Reminder Letter Process
RA Final Reminder	Recovery Agent Final Reminder Letter Process	Recovery Agent handling Final Reminder Letter Process
RA Legal	Recovery Agent Legal Process	Recovery Agent handling Legal Process
RA NPO	Recovery Agent NPO Process	Recovery Agent handling NPO Process
RA Visits	Recovery Agent Visits Process	Recovery Agent handling Visits Process
RDMS	Recovery Data Management System	Name of the Software System
Supervisor	Recovery Supervisor	Team Leaders of Recovery Department

3. Use-Case Descriptions

Name	3	Update due date
Actors		RA 1st Reminder ,RA Final Reminder, RA NPO, RA Visits
Pre-Conditions		1. Customer exists in the Action Process Lists 2. Recovery Action is taken against the Customer
Post-Conditions		1. Due date is updated in the Recovery Process Lists 2. Update Action Taken = 1 in Recovery Process Lists 3. Action Taken Date = system date
Flow of Action		1. Select Customer from Action Process Lists 2. If recovery action is taken update Due Date field in the Action Process Lists 3. Update Action Taken = 1 in the Action Process Lists 4. Update Action Taken Date = system date
Exceptions		1. Customer is not in the Action Process Lists 2. If recovery action is not taken

Name	4	Check Payments
Actor		System
Pre-Conditions		1. Recovery Action is taken and due date is updated in the Action Process Lists 2. Due date = (system date -1)
Post-Conditions		1. Update payment status in the Action Process Lists
Flow of Action		1. Access Action Process Lists 2. If Action Taken = 1 and Due date =(system date -1) check payments in the Billing Table 3. If Payment = Outstanding update payment status = FULL 4. If outstanding – payment < 1000 update payment status =PART 5. Update process name in the Customer Payment Status Table according to the selected Action Process List 6. Update payment amount & payment date in Action Process List
Exceptions		1. Due date is not updated 2. Due date !=(system date -1) 3. If outstanding – payment > 1000 or no payment from the customer within the period 4. Update payment status = NO

Name		Get details for 1st Reminder Letter Process
	5	
Actor		RA 1st Reminder
Pre-Conditions		1. Customer details exists in Main Action List Table 2. Process = 1 updated in the Main Recovery Action List
Post-Conditions		1. Update details in to Action Process List- Reminder letters Table 2. Update Action Taken = 0 in the Action Process List- Reminder letters Table
Flow of Action		1. Access Main Action List Table 2. If customer exists in Main Recovery Action List Table 3. If process = 1 and customer not in the Action Process List- Reminder letters Table, update Action Process List- Reminder letters Table 4. Set Action Taken = 0 in the Action Process List- Reminder letters Table 5. Show customer detail
Exceptions		1. Customer details not exists in Main Action List Table 2. Process not equals 1

Name	6	Get details for Final Reminder Letter Process
Actor		RA Final Reminder
Pre-Conditions		1. Customer details exists in Main Action List Table 2. Flag is updated in the Main Action List
Post-Conditions		1. Update details in to Action Process List-Final Reminder Table 2. Update Action Taken = 0 in the Action Process List-Final Reminder Table
Flow of Action		1. Access Main Action List Table 2. If customer exists in Main Action List Table 3. If process = 2 and customer not in the Action Process List-Final Reminder Table update in the Process List-Final Reminder Table 5. Set Action Taken = 0 in the Recovery Action Process List-Final Reminder Table 6. Show customer detail
Exceptions		1. Customer details not exists in Main Action List Table 2. Process not equals 2

Name	7	Get details for NPO Process
Actor		RA NPO
Pre-Conditions		1. Customer payment details updated in Action process list letters Table 2. Other lines are updated in the Action process list letters
Post-Conditions		1. Update customer details to Action Process List NPO Table 2. Update Action taken = 0 in Action Process List NPO Table
Flow of Action		1. Access Customer Action process list letters Table 2. If customer exists in the table check process name = Final Reminder 3. If payment status = NONE and active other line = true, Update customer details to Action Process List NPO Table 4. Set Action taken = 0 in Action Process List NPO Table 5. Show customer detail with active lines
Exceptions		1. Customer details not exists in Customer Payment Details Table 2. Process name not Final Reminder 3. Payment status = Yes 4. Active other line = false

Name	8	Get details for Visit Process
Actor		RA Visit
Pre-Conditions		1. Customer details updated in Action process list reminder letters and NPO 2. Process name is updated Action process list reminder letters and NPO 3. Payment status is updated in Action process list reminder letters and NPO
Post-Conditions		1. Update customer details to Action Process List Visit Table 2. Update Action taken = 0 in Action Process List Visit Table
Flow of Action		1. Access Action process list reminder letters table 2. If customer exists in the table check process name = Final Reminder and If payment status = NONE and active other line = false, or 3. Action Process List NPO and If action taken = 1 and payment status = NO 4. Update customer details to Action Process List

		Visit Table
		5. Set Action taken = 0 in Action Process List Visit Table
		6. Show customer detail
Exceptions		1. Customer details not exists in Action process list reminder letters and NPO Tables
		2. Process name not Final Reminder or Process name not NPO
		3. Payment status = yes
		4. Active other line = true

Name	9	Get details for Legal Process
Actor		RA Legal
Pre-Conditions		1. Customer details updated in Action Process List Visit Table
		2. Process name is updated in Action Process List Visit Table
		3. Payment status is updated in Action Process List Visit Table
Post-Conditions		1. Update customer details to Action Process List Legal Table
		2. Update Action taken = 0 in Action Process List Legal Table
Flow of Action		1. Access Action Process List Visit Table
		2. If customer exists in the table check process name = Visit and If payment status = NO
		3. Update customer details to Action Process List Legal Table
		4. Set Action taken = 0 in Action Process List Legal Table
		5. Show customer detail
Exceptions		1. Customer details not exists in Action Process List Visit Table
		2. Process name not Visit
		3. Payment status = yes

Name	10	Generate Disconnection List
Actor		Supervisor
Pre-Conditions		1. Customer details updated Action Process List reminder letters Table 2. Process name is First reminder 3. Payment status is updated in Action Process List reminder letters Table
Post-Conditions		1. Update comments in Action Process List reminder letters Table
Flow of Action		1. Access Action Process List reminder letters Table 2. If customer exists in the table check process name = 1st Reminder 3. If payment status = NO update comments 4. Show customer detail ready to disconnect
Exceptions		1. Customer details not exists in Action Process List reminder letters Table 2. Process name not 1st Reminder 3. Payment status = yes

Name	11	Generate Recovery Action History
Actors		RA 1st Reminder ,RA Final Reminder, RA NPO, RA Visits, supervisor
Pre-Conditions		1. Customer details updated in Recovery Action Process List Tables 2. Enter Customer contract Id
Post-Conditions		1. Show history details
Flow of Action		1. Access Action Process List Tables 2. Search for all details for the given contract Id
Exceptions		1. Customer details not exists in Action Process List Tables

Name	12	Create Performance Report
Actor		Supervisor
Pre-Conditions		1. Customer details updated in Action Process List Tables
Post-Conditions		1. Update allocated customers, action taken customers, pending customers and the action % in to the Performance Tables (process, agent)
Flow of Action		1. Access Action Process List Tables in the beginning of the day 2. Update no of customers allocated for each agent/process where the upload date = current date -1 in the Performance Tables(process/agent) 3. Update no of customers actionned for each agent/process where the upload date = current date -1 in the Performance Table(process/agent) (action =1) 4. Update no of customers pending for each agent/process where the upload date = current date -1 in the Performance Table(process/agent) (action =2) 5. Calculate % = No of Action Taken / No of Allocated *100%
Exceptions		1. Customer details not exists in Action Process List Tables

Name	13	Create Collection Report
Actor		Supervisor
Pre-Conditions		1. Customer details and the payment details updated in Action Process List Tables
Post-Conditions		1. Update actionned customers, paid customers, total payments and paid % details in to payment summery Tables(process/agent)
Flow of Action		1. Access Action process lists tables 2. Update no of customers actionned for each agent/process where the upload date = current date -1 in the payment Table (action =1) 3. Sum the no of customers where action =1 and payment status = full or part and update 4. Total the payments where Action =1 and payment status = FULL or PART and update 5. Calculate %, paid no/actionned no *100%
Exceptions		1. Customer details not exists in Action process lists Tables 2. Action not 1 3. Payment Status = No

Name	14	Create User
Actor		Supervisor
Pre-Conditions		1. Employee ID of the request party should be valid
Post-Conditions		1. Create user account for the requested ID 2. Update the user ID in the User Table
Flow of Action		1. Validate Employee ID 2. Update user name 3. Update password 4. update relevant process to the User ID 5. save records in the User Table
Exceptions		1. Employee ID not valid

| Name	15	Update User
Actor		Supervisor
Pre-Conditions		1. User ID should exists in the User Tahle
Post-Conditions		1. Update the process ID in the User Table with the new roles added or deleted
Flow of Action		1. Validate User ID exists in the User Table 2. Edit the process Id as requested 3. Update in the User Table
Exceptions		2. User ID not valid

| Name	16	Delete User
Actors		Supervisor
Pre-Conditions		1. User ID should exists in the User Table
Post-Conditions		1. Delete the user ID in the User Table
Flow of Action		1. Validate User ID exists in the User Table 2. Delete the User ID as per the request 3. Update in the User Table
Exceptions		1. User ID not valid

4.   Activity Diagrams

Login
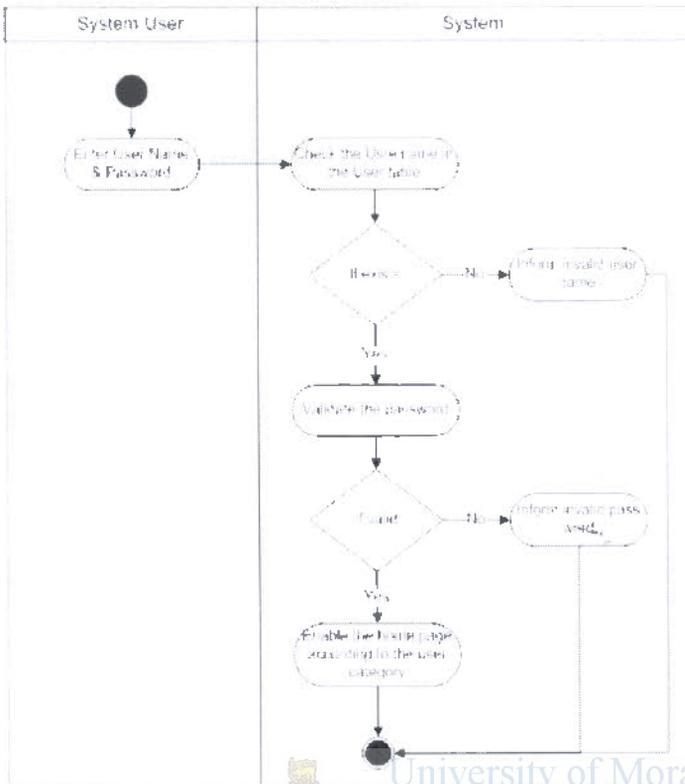
Update due date
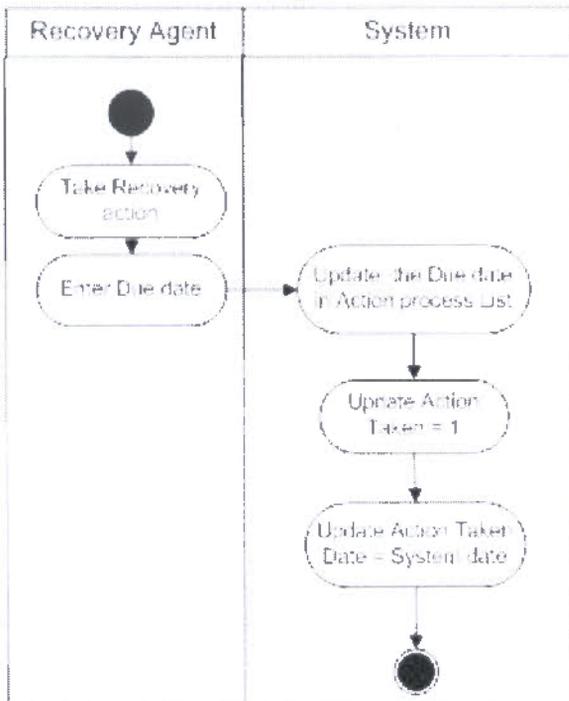
Check Payments
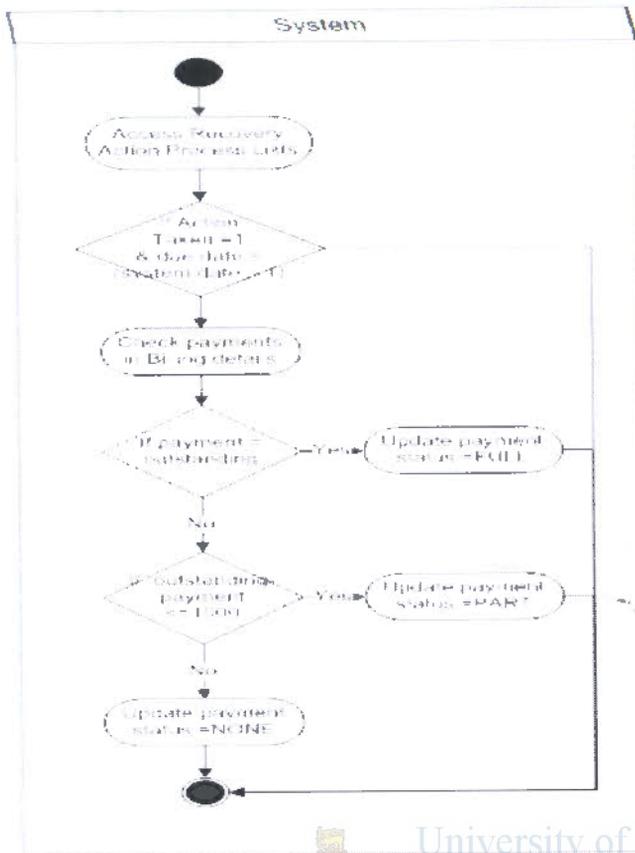
Create User
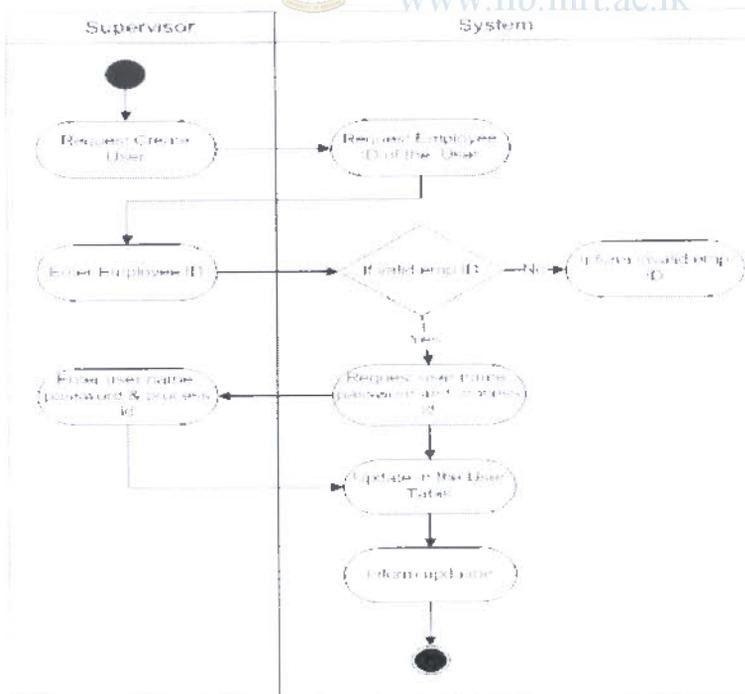
Update User
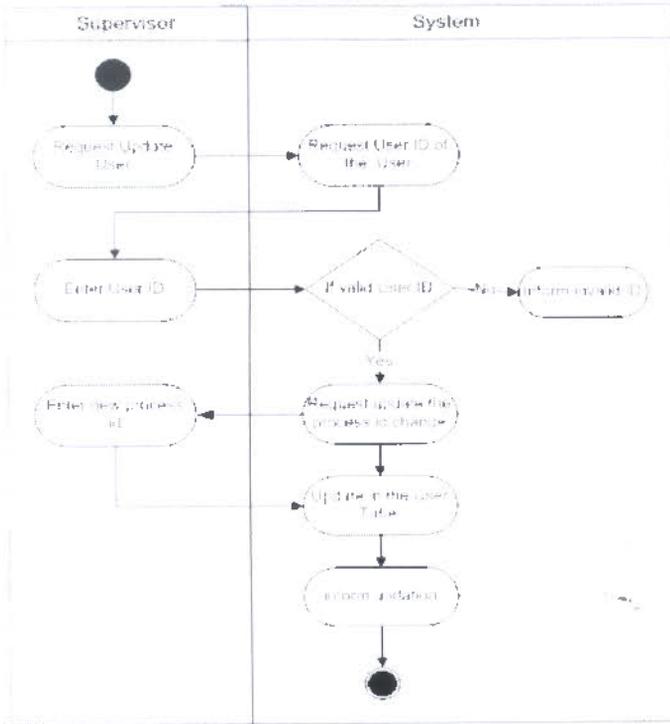
Delete User
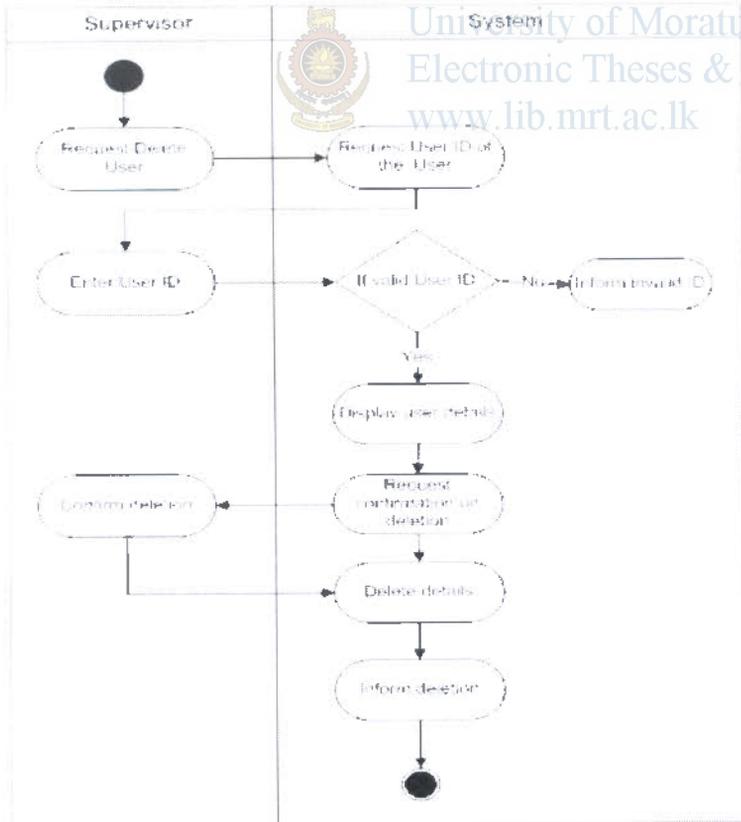
Get details from MIS
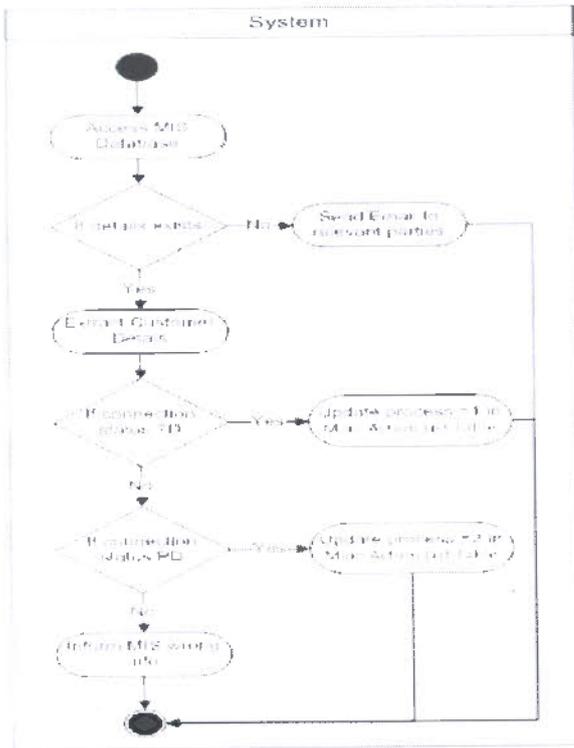
Get details for First Reminder
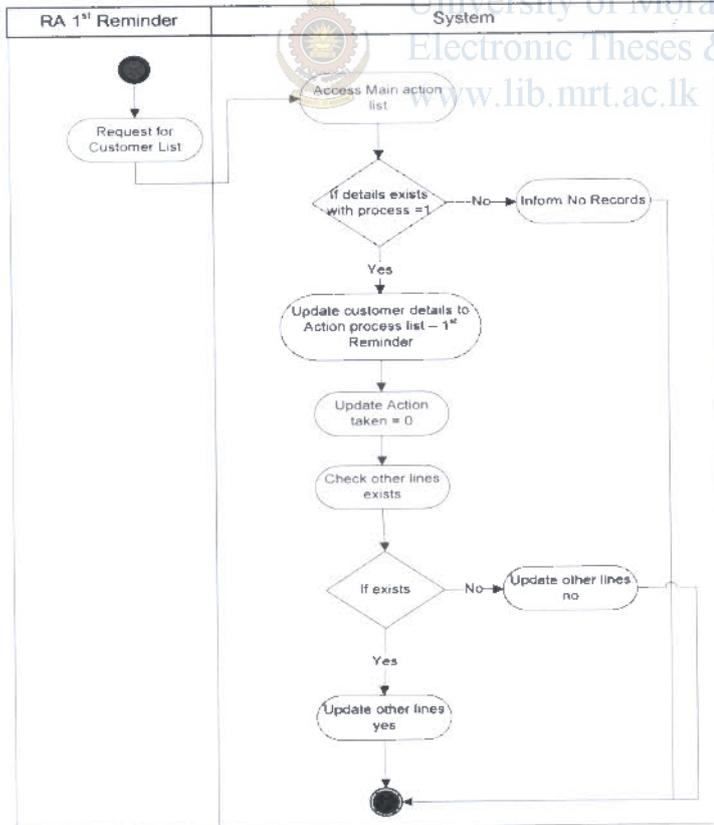
Get Details for Final Reminder
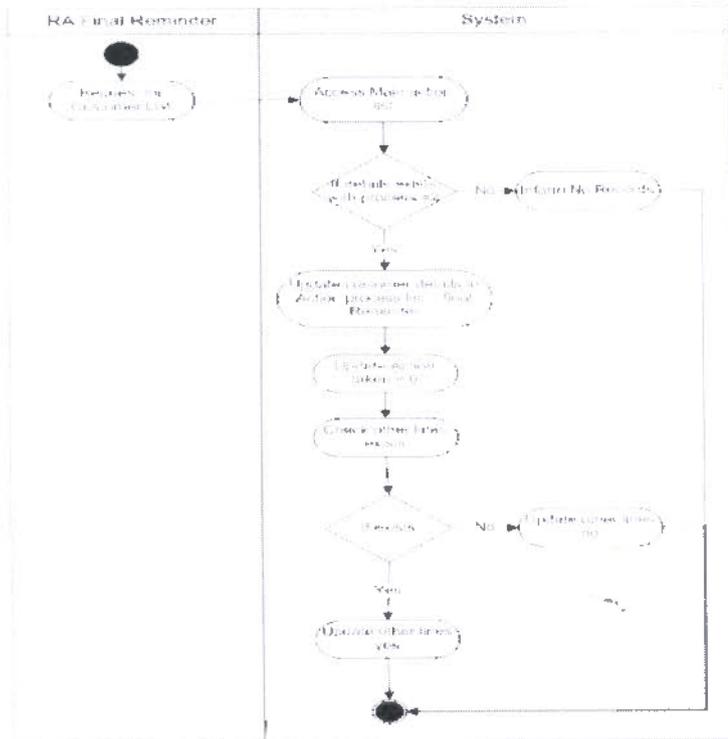
Get Details for NPO
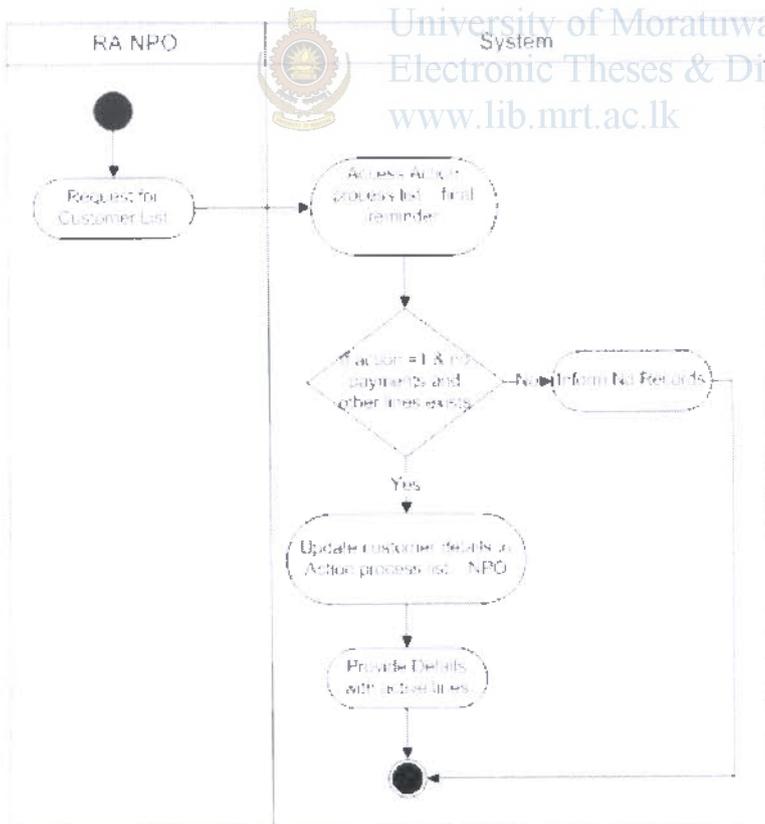
Get Details for Visits
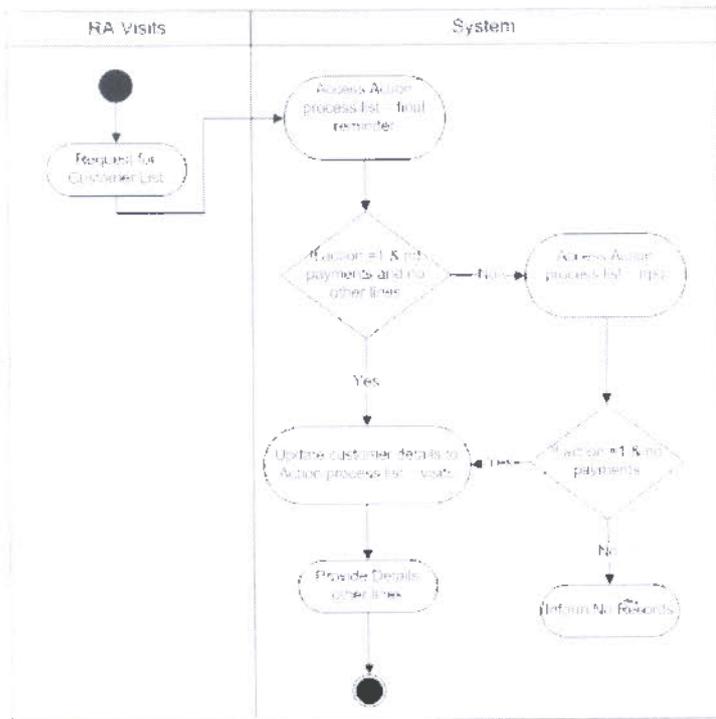
Get Details for Legal
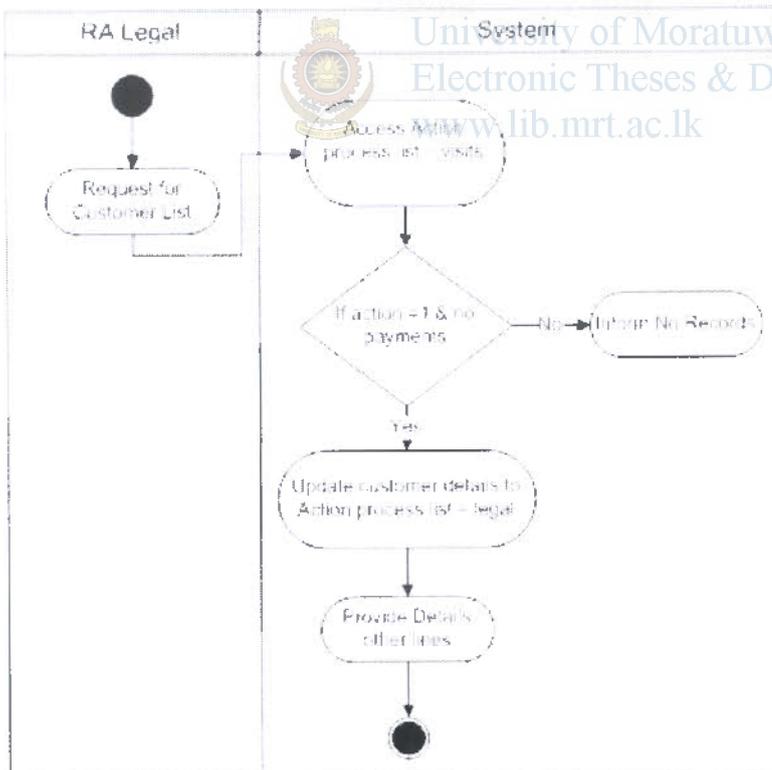
Generate Disconnection List

Get Recovery Action History

Create Performance Report

System

- Access Action Process List Tables in the beginning of the day
- Count customers allocated for each agent process where the upload date = current date -1 in the Action process lists
- Count customers actioned for each agent process where the upload date = current date -1 in the Action process lists
- Count customers pending for each agent process where the upload date = current date -1 in the Action process lists
- Calculate Performance %
- Update Performance tables process agent

Create Collection Report

System

- Access Action Process List Tables in the beginning of the day
- Count customers actioned for each agent process where the upload date = current date -1 in the Action process lists
- Count customers paid for each agent process where the upload date = current date -1 in the Action process lists
- sum payments for each agent process where the upload date = current date -1 in the Action process lists
- Calculate Payment
- Update payment tables process agent

5. Sequence Diagrams

Login
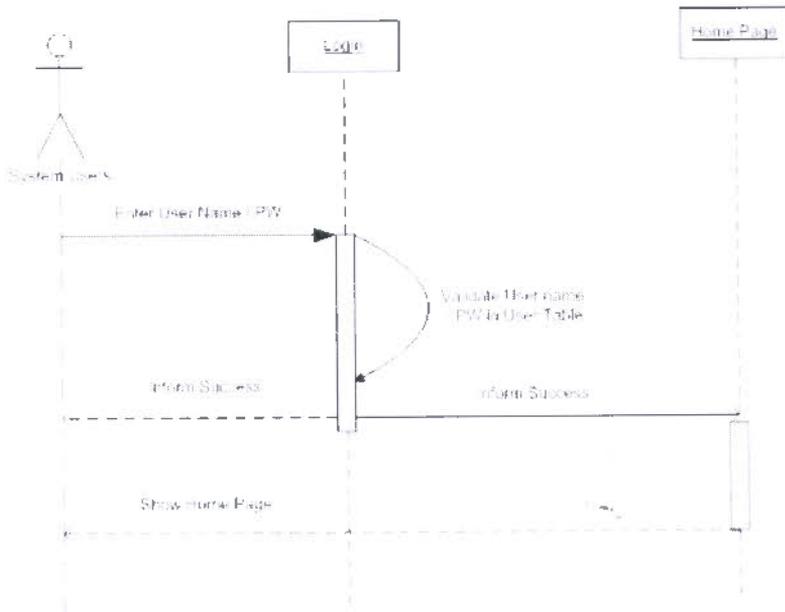
Get Details from MIS

Update Due Date
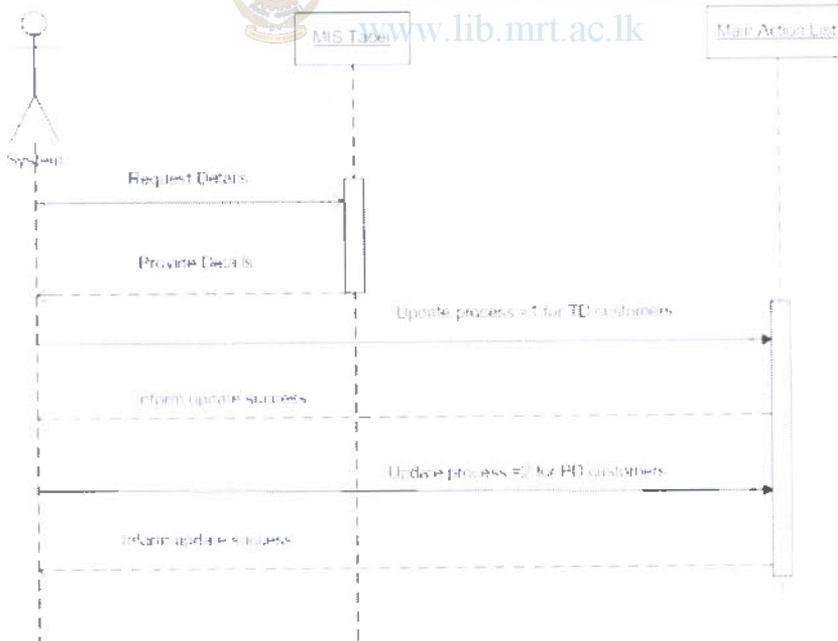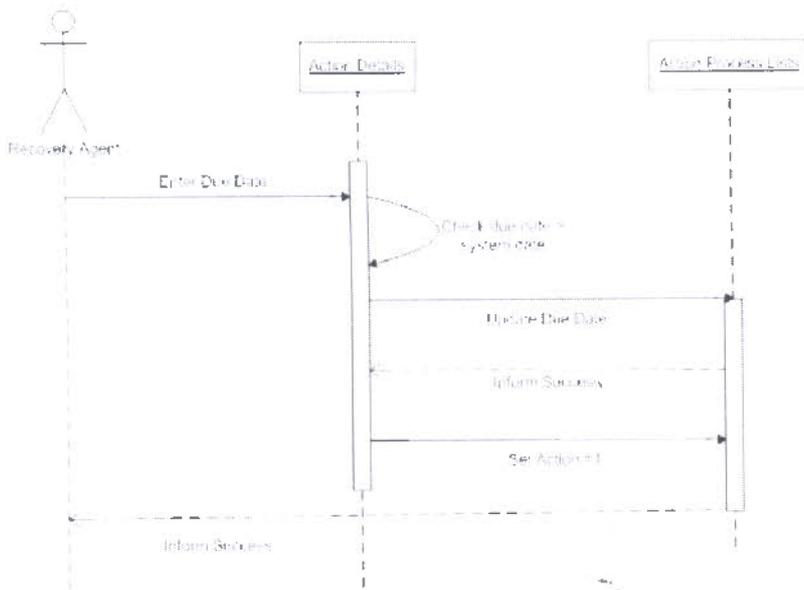
Check Payments
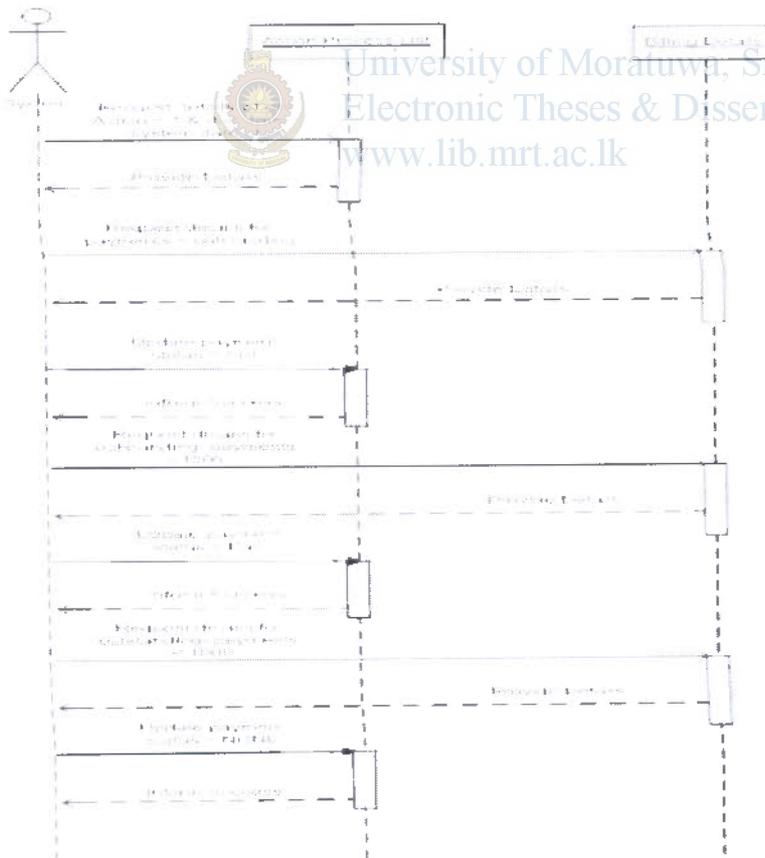
Update Reminder Letter Process

Actor: System

Main Action List — Action process List letters — Connections

Request details where system date = current date

Provide Details

Update details and set upload date = current date

Inform Success

Check other lines exists

Inform status

Update other line status

Get Details for First Reminder

RA - 1st reminder

Request details

Request details where ...

provide details

Show details

RA - 1st Reminder

Request pending details

Request details where process = 1 & action = ...

provide details

Show details

Get Details for Final Reminder

Update NPO
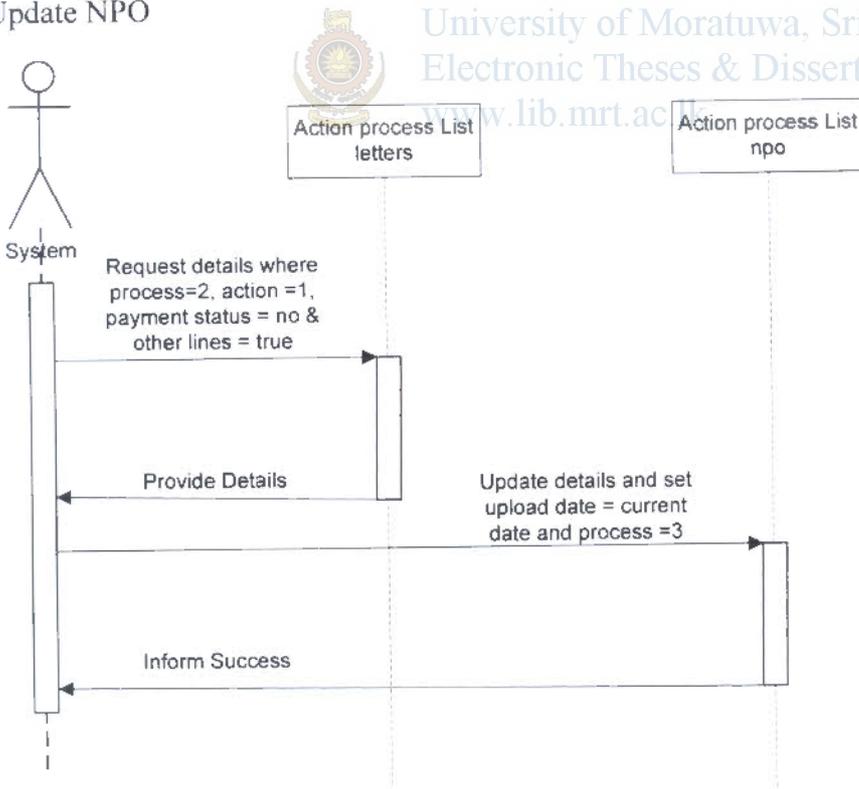
Get Details for NPO
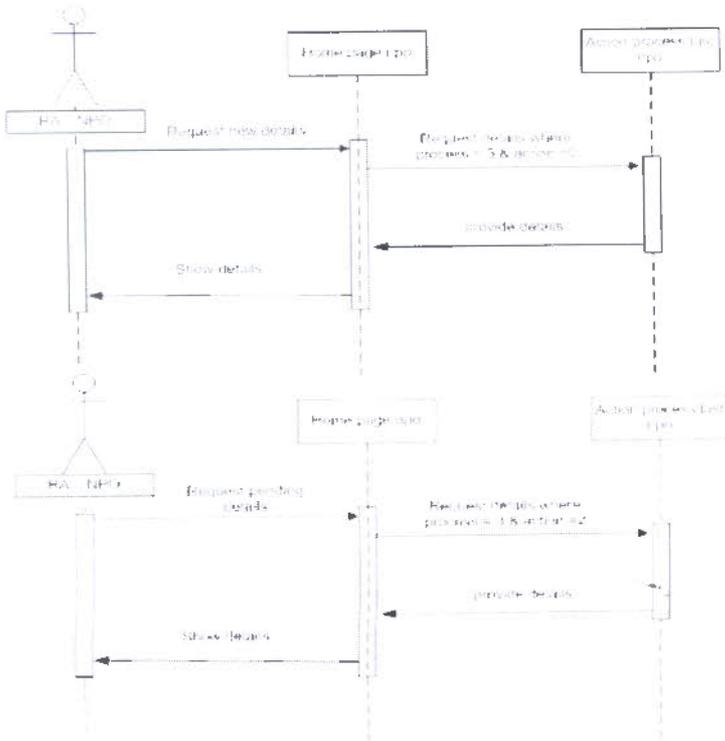
Update Visits
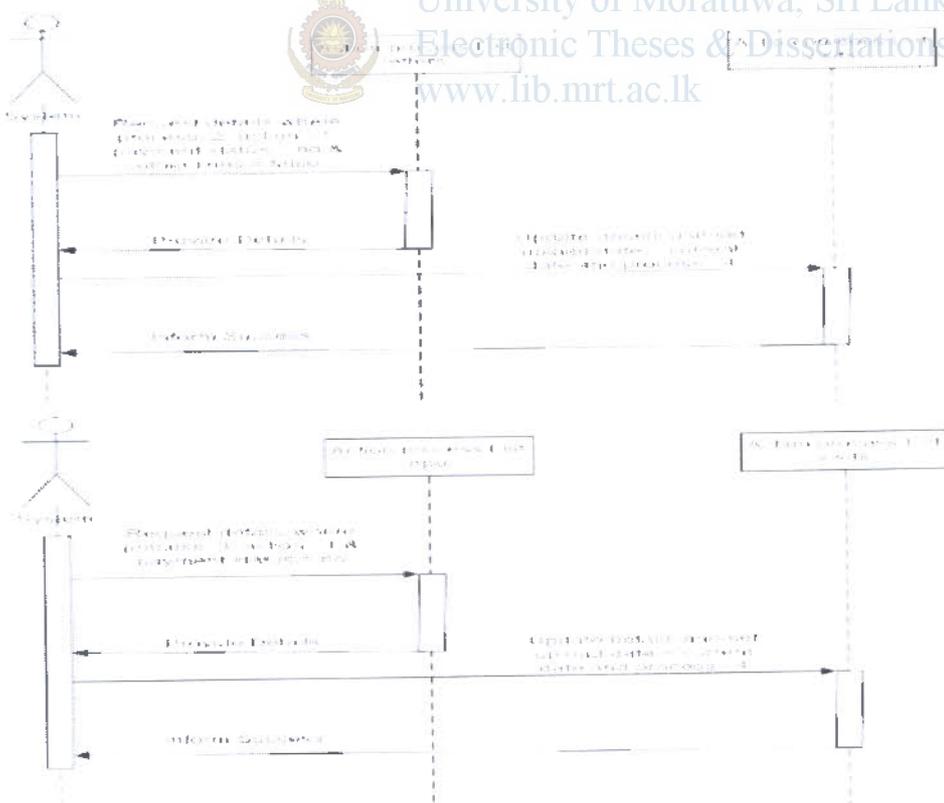
Get Details for Visits
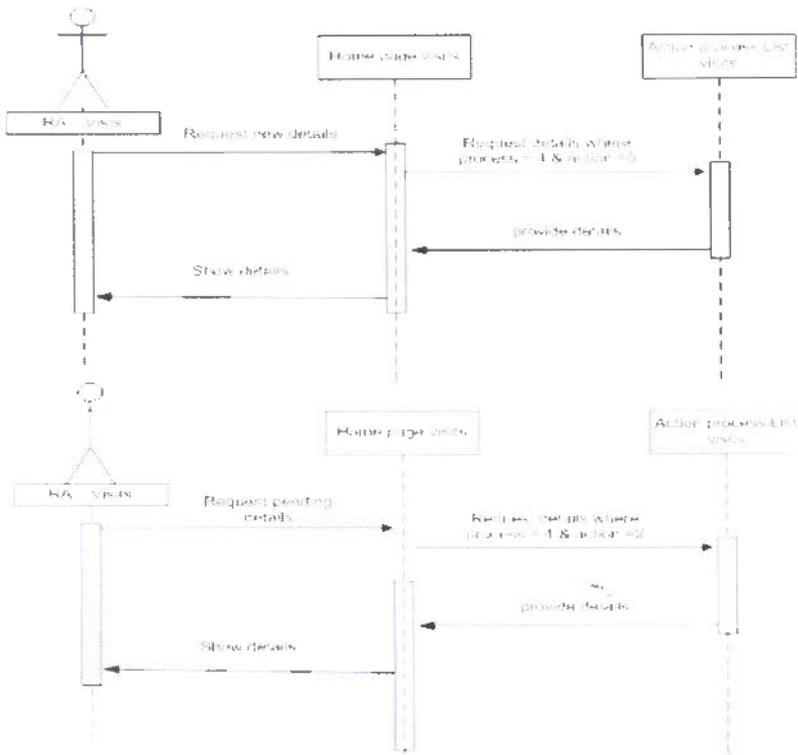
Home page visits

Action process List visits

RA visits

Request new details

Request details where process = 4 & action = 0

provide details

Show details

Home page visits

Action process List visits

RA visits

Request pending details

Request details where process = 4 & action = 2

provide details

Show details

Update Legal

Action process List visits

Action process List legal

System

Request details where process=4, action =1, & payment status = no

Provide Details

Update details and set upload date = current date and process =5

Inform Success
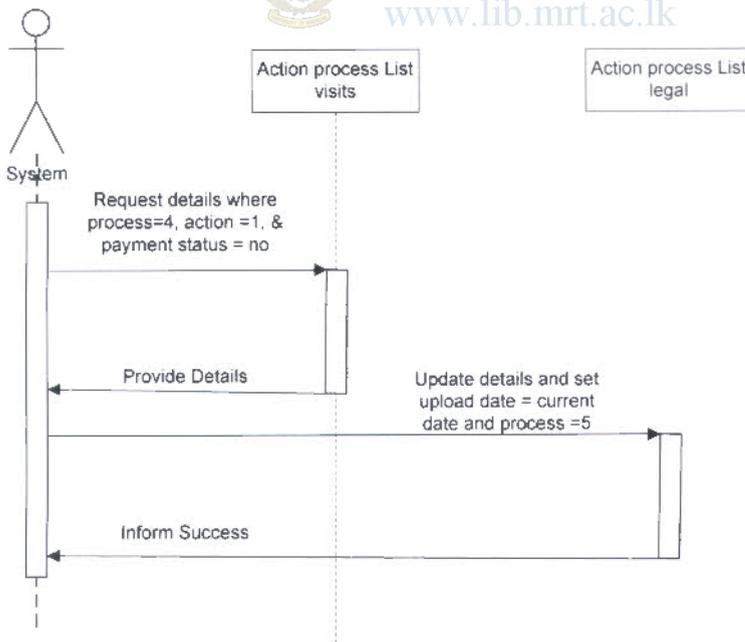
Get Details for Legal
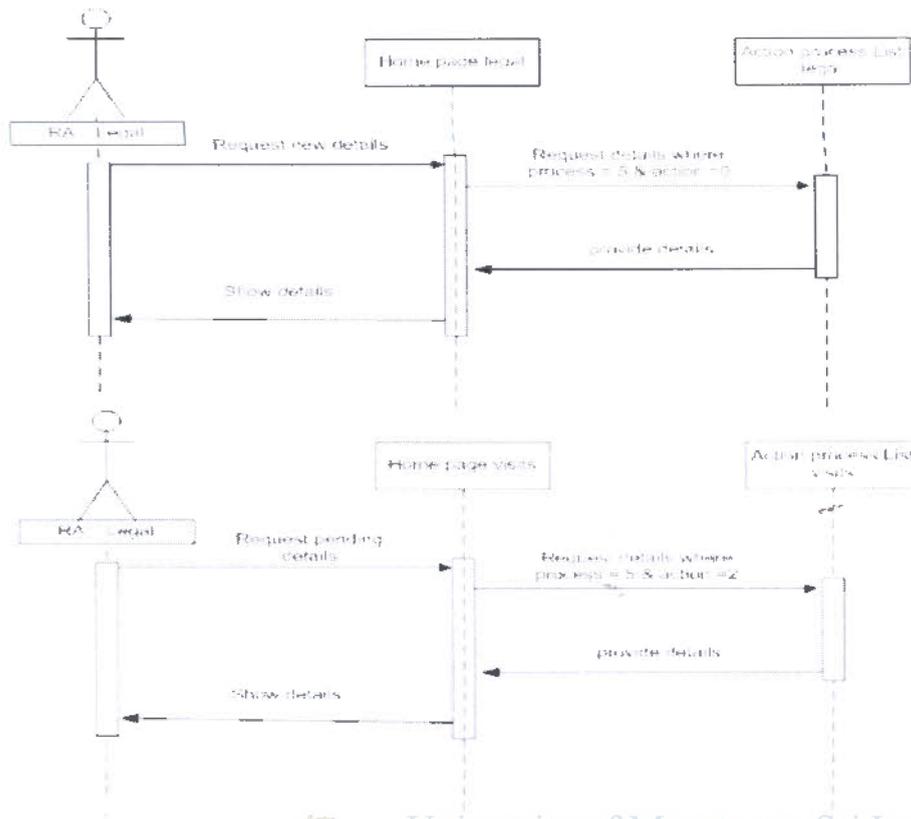
Get Disconnections Details
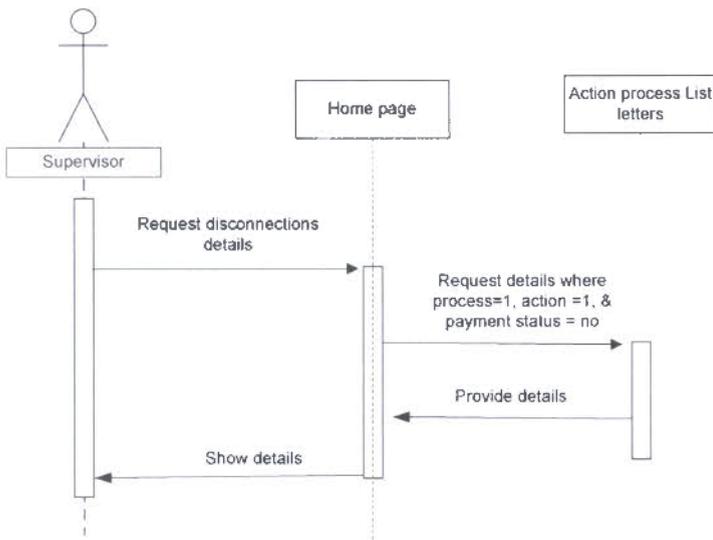
Update Performance Tables (process/ agent)
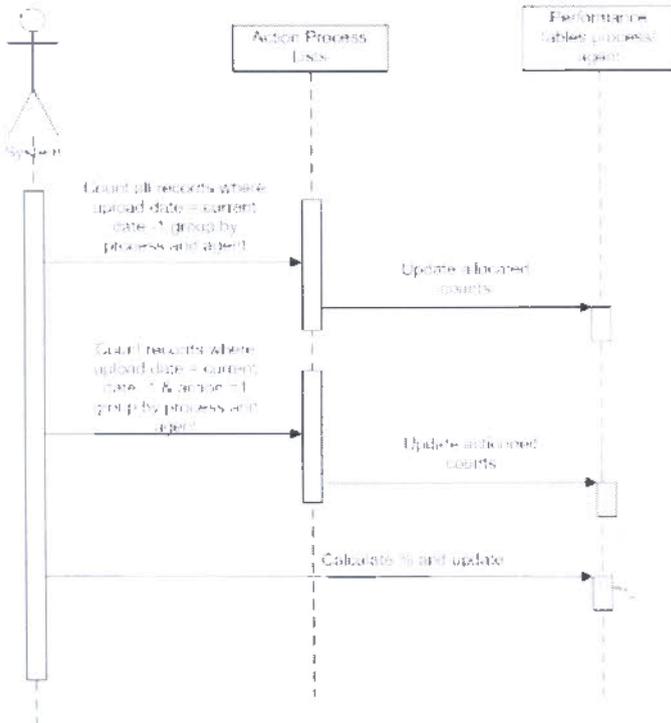
Update Payment Tables (process/ agent)
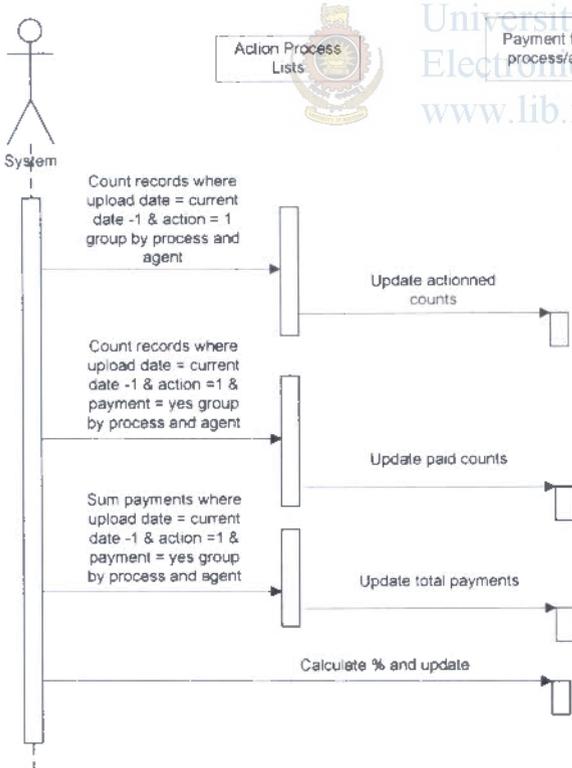
6. Class Diagram
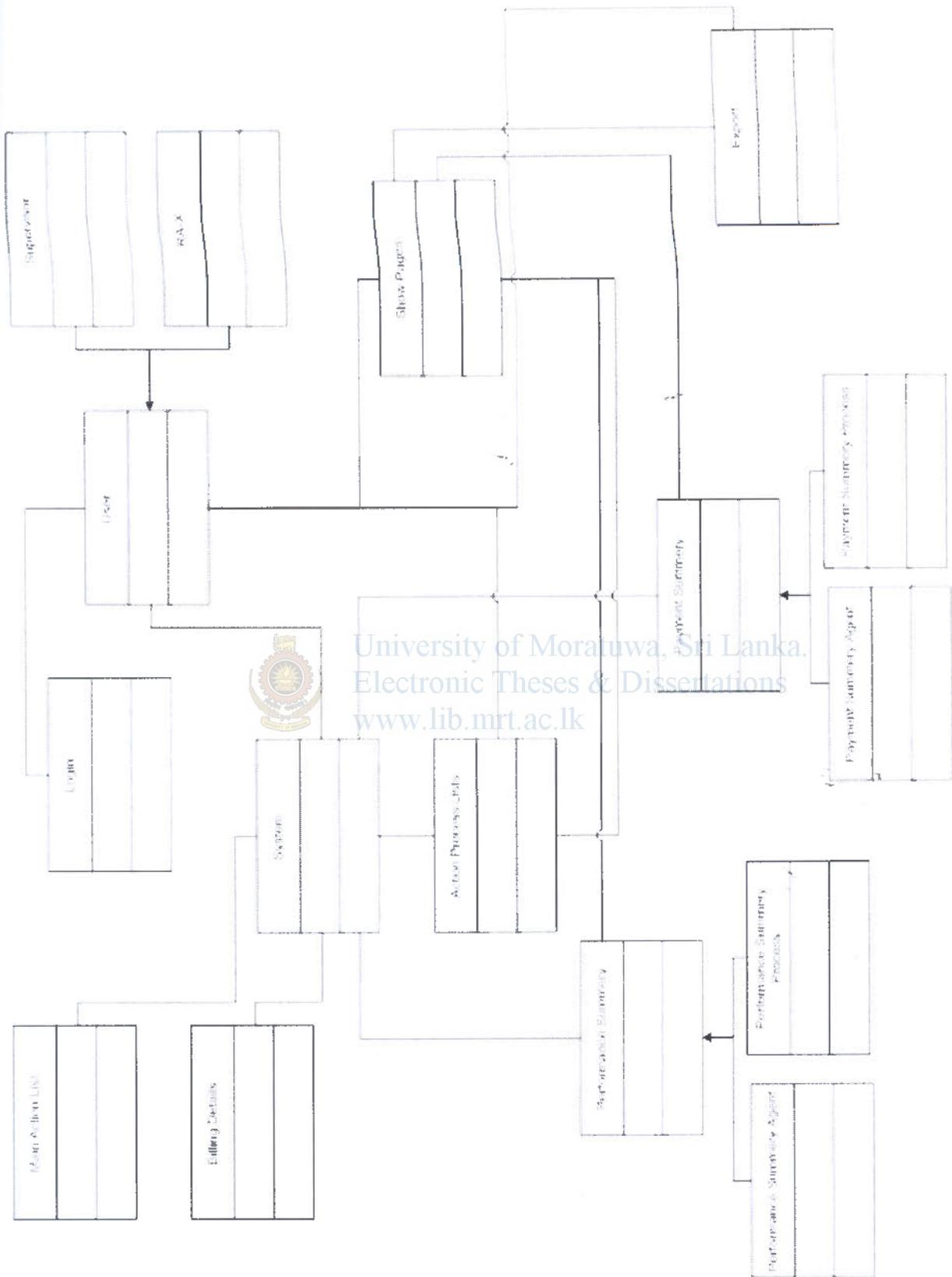
Data Base Design

1. **Entity Relationship Diagram**
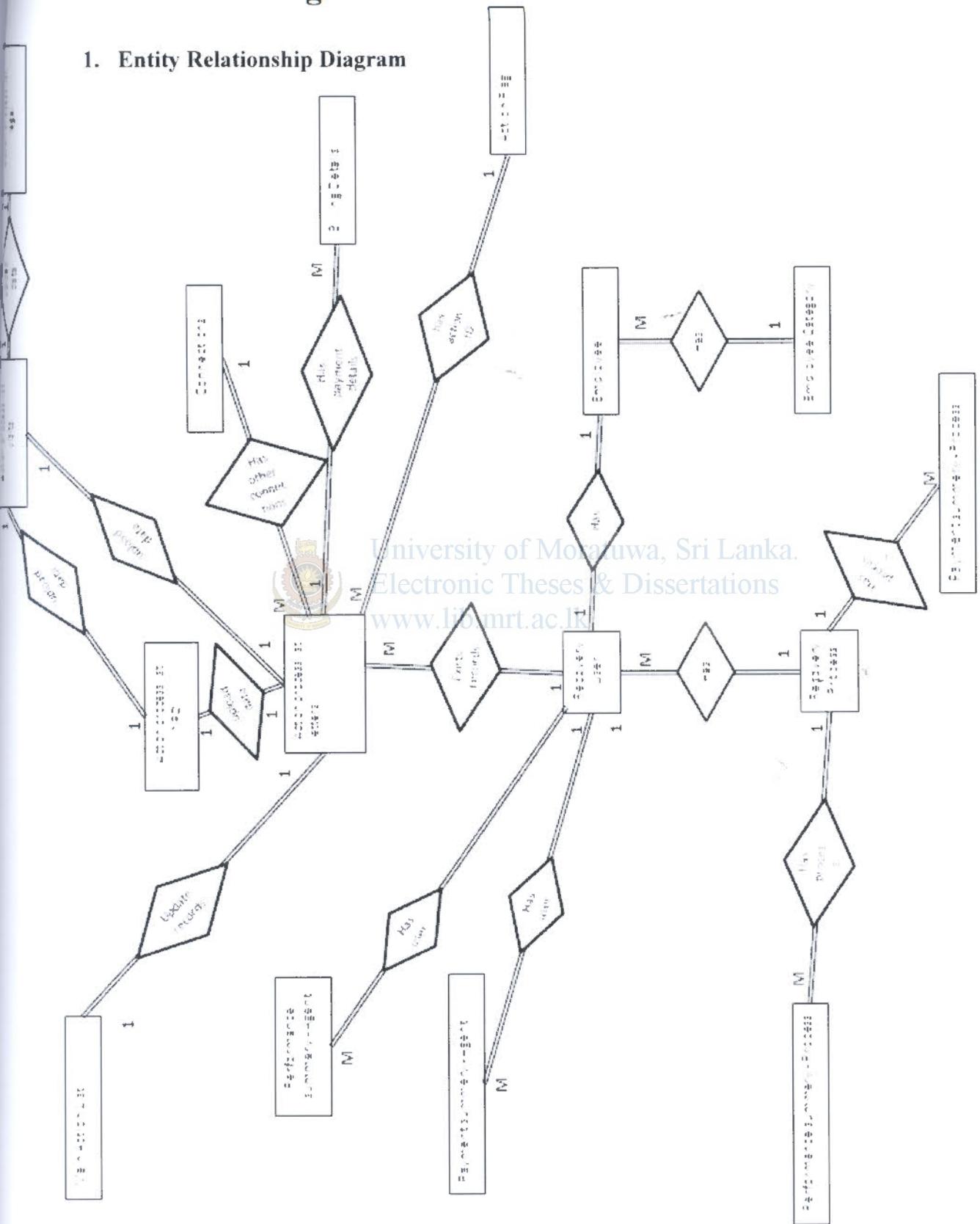
2. Relationship Diagram
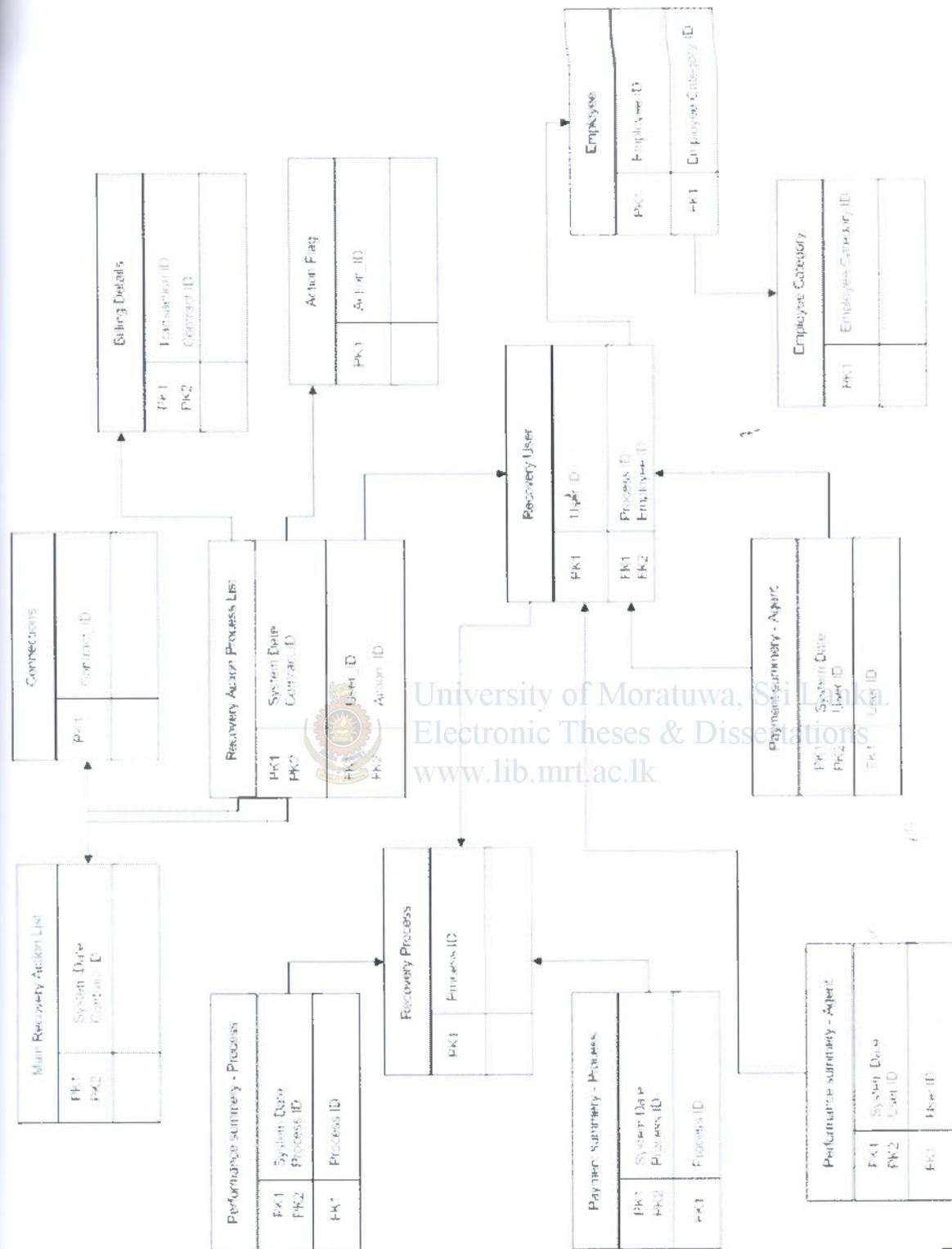
3. Sample Create Table Queries

Employee Table

```
CREATE TABLE EMPLOYEE
(EMPLOYEE_ID VARCHAR (10) PRIMARY KEY,
EMPLOYEE_NAME VARCHAR (50) NOT NULL,
EMP_CATEGORY_ID VARCHAR (10),
LOCATION VARCHAR (20),
FOREIGN KEY (EMP_CATEGORY_ID) REFERENCES employee_category (EMP_CATEGORY_ID) ON
DELETE SET NULL ON UPDATE CASCADE)
```

Recovery User Table

```
CREATE TABLE RECOVERY_USER
(USER_ID VARCHAR (10) PRIMARY KEY,
EMPLOYEE_ID VARCHAR (10),
PASS_WORD VARCHAR (10) NOT NULL,
PROCESS_ID VARCHAR (20),
FOREIGN KEY (PROCESS_ID) REFERENCES recovert_process (PROCESS_ID) ON DELETE SET NULL
ON UPDATE CASCADE,
FOREIGN KEY (EMPLOYEE_ID) REFERENCES employee (EMPLOYEE_ID) ON DELETE SET NULL ON
UPDATE CASCADE)
```

Main Action List Table

```
CREATE TABLE MAIN_ACTION_LIST
(SYSTEM_DATE DATE,
CONTRACT_ID VARCHAR (20),
MOBILE VARCHAR (10) NOT NULL,
CONNECTION_STATUS VARCHAR (10),
ID VARCHAR (15) NOT NULL,
ID_TYPE VARCHAR (10),
NAME VARCHAR (100),
ADDRESS_NO VARCHAR (50),
ADDRESS_STREET VARCHAR (100),
ADDRESS_TOWN VARCHAR (100),
CREDIT_TYPE VARCHAR (20),
CATEGORY VARCHAR (20),
OUTSTANDING INT (20),
CURRENT_STATUS_DATE DATE,
DEPOSIT_AMOUNT INT (20),
PROCESS_ID VARCHAR (20),
PRIMARY KEY (SYSTEM_DATE, CONTRACT_ID),
FOREIGN KEY (CONTRACT_ID) REFERENCES CONNECTIONS (CONTRACT_ID))
```

Connections Table

```
CREATE TABLE CONNECTIONS
(CONTRACT_ID VARCHAR (20) PRIMARY KEY,
MOBILE VARCHAR (10) NOT NULL,
ID VARCHAR (15) NOT NULL,
ID_TYPE VARCHAR (10),
PRE_POST VARCHAR (10),
CONNECTION_STATUS VARCHAR (10))
```

GUI Design

1. GUI Description

__All forms__
two sides - left & right
two sides separate by a margin
bgcolor light ash
main headings font 14 pixel
link font 10 pixel. color blue

__Left hand side__
main menu headings font 12 pixel
sub menu headings font 10 pixel
font color black
selected heding is bold

Error messages
size 400x60 pixel
align center
font 10 pixel
font color black
margin 1 pixel
border color black
padding 5 pixel
bgcolor white

symbol

Success messages
size 400x60 pixel
align center
font 10 pixel
font color black
margin 1 pixel
border color black
padding 5 pixel
bgcolor white

symbol

Left hand side heading	Heading Type	Right hand side description		
		page01	page02	page03
Home	main heading (menu)	Table with a main heading		
Change Password	sub heading under 'Home'	3 label arranged in horizontally - size 10 pixel		
		3 text areas in front of each label - size 8 pixels		
		3 buttons - align to right side of the form		
Log out	sub heading under 'Home'	Label with a main heading - align center		
		One button align center		
First Reminder Letter Process	sub heading under 'Recovery Customer Lists'	5 labels arranged in vertically - size 10 pixel	Table with 6 headings - size 12 pixel	5 labels align left arranged vertically - size 10 pixel
		- drop down menues in front of first - labels - size 10 pixel	separate links right hand of each row of the table	2 labels align right arranged vertically - size 10 pixel
		2 labels infront of last label - size 8 pixel	Two labels - size 10 pixel followed by horizontal spin buttons	5 text areas in front of each label - size 10 pixel
		2 text areas infront of each label - size 10 pixel following with another 2 labels - size 10 pixel	3 buttons - align to right side of the form	label align to left - size 10 pixel
		3 buttons - align to right side of the form		table with 5 headings with vertical scroll bar
				Two check boxes arranged vertically and align left
				label align to left - size 8 pixel
				3 text areas following with the label align to right size 8 pixel
				3 labels under each text area, size 8 pixel
				label align to left - size 10 pixel and followed by a text area, size 10 pixel
				one button align to right, size 12 pixel

All the other subheadings other than legal process under 'Recovery customer list' has same right hand side descriptions. Legal Process subheading consists only the page01.

Customer History	sub heading under 'Reports	1 label, size 10 pixels follwed by a text area, size 10 pixel, align left	4 labels arranged in vertically - size 10 pixel	
		1 label, size 08 pixels, align left	2 labels align right arranged vertically - size 10 pixel	
		2 labels infront of the second label followed by 2 text areas, size 10 pixels	6 text areas in front of each label - size 10 pixel	
		2 labels infront of each text area, size 10 pixels	table with 10 headings - size 12 pixel	
		3 buttons - align to right side of the form	2 labels - size 10 pixel followed by horizontal spin buttons	
			2 buttons - align to right side of the form	

Performance Report	sub heading under 'Reports'	1 label, size 15 pixels followed by 1 drop down menu size 15 pixels align left	2 labels align left arranged horizontally - size 10 pixel	
		1 label, size 5 pixels align left	2 text areas in front of each table	
		2 labels infront of the second label followed by 2 text areas size 10 pixels	table with 5 headings - size 12 pixel	
		2 labels infront of each text area, size 10 pixels	2 labels - size 10 pixel followed by horizontal spin buttons	
		3 buttons - align to right side of the form	2 buttons - align to right side of the form	
Collection Report	sub heading under 'Reports'	1 label, size 15 pixels followed by 1 drop down menu size 15 pixels align left	2 labels align left arranged horizontally - size 10 pixel	
		1 label, size 5 pixels align left	2 text areas in front of each table	
		2 labels infront of the second label followed by 2 text areas, size 10 pixels	table with 5 headings - size 12 pixel	
		2 labels infront of each text area, size 10 pixels	2 labels - size 10 pixel followed by horizontal spin buttons	
		3 buttons - align to right side of the form	2 buttons - align to right side of the form	
Disconnection List	sub heading under 'Reports'	1 label, size 5 pixels align left	2 labels align left arranged horizontally - size 10 pixel	
		2 labels infront of the label followed by 2 text areas, size 10 pixels	2 text areas in front of each table	
		2 labels infront of each text area, size 10 pixels	table with 5 headings - size 12 pixel	
		2 labels, size 15 pixels align left followed by 2 drop down menu, size 15 pixels	2 labels - size 10 pixel followed by horizontal spin buttons	
		3 buttons - align to right side of the form	2 buttons - align to right side of the form	
Add User	sub heading under 'Manage User Account'	- labels align left, size 15 pixels arranged vertically		
		- text areas infront of each label, size 15 pixels align left		
		all - text areas are editable		
		3 buttons - align to right side of the form		
Edit User	sub heading under 'Manage User Account'	- labels align left, size 15 pixels arranged vertically		
		- text areas infront of each label, size 15 pixels align left		
		first & last text areas are editable and second and third text areas are not editable		
		3 buttons - align to right side of the form		
Delete User	sub heading under 'Manage User Account'	- labels align left, size 15 pixels arranged vertically		
		- text areas infront of each label, size 15 pixels align left		
		first text area is editable and last 3 text areas are not editable		
		3 buttons - align to right side of the form		

2. Sample GUI Screen Shots (Super User – Main GUIs)

Login

Home Page

Change Password

Confirmation – Changing Password

Logout

Recovery Data Management System

User Name _____

Password _____

LOGIN

Powered by Hiranth Liyanawaduge
Version 1.0 – Copyright 2008

Get Recovery Customer Lists 1 – E.g. First Reminder Letter Process Details

S-1.1   First Reminder Letter Process

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summary

Manage User
New User
Edit User
Delete User

List Type   All
            Pending List
            New List
Date   From   To

Wk	Mon	Tue	Wed	Thu	Fri	Sat	Sun
49	1	2	3	4	5	6	
50	8	9	10	11	12	13	
51	15	16	17	18	19	20	
52		23	24	25	26	27	
1	29	30	31				

Today is Mon, 22 Dec 2008

OK   RESET   CANCEL

Get Recovery Customer Lists 2 – E.g. First Reminder Letter Process Details

All ---> FROM 20081215 TO 20081215

UPLOAD DATE	CONTRACT ID	MOBILE	STATUS	OUTSTANDING	PROCESS ID	USER	
2008-12-15	1094149	273762	T	4000	1	Hiranthi	show other lines
2008-12-15	1276444	3028747	T	8000	1	Hiranthi	show other lines
2008-12-15	260309	387453	T	3000	1	Hiranthi	show other lines
2008-12-15	279185	680644	T	10000	1	Hiranthi	show other lines
2008-12-15	3613365	3410752	T	5000	1	Hiranthi	show other lines
2008-12-15	3710641	3824181	T	2500	1	Hiranthi	show other lines
2008-12-15	4496401	3639236	T	10000	1	Hiranthi	show other lines
2008-12-15	4496409	3639735	T	5500	1	Hiranthi	show other lines
2008-12-15	4976521	3908590	T	8000	1	Hiranthi	show other lines
2008-12-15	5025585	3938832	T	5500	1	Hiranthi	show other lines
2008-12-15	5633863	2516445	T	3000	1	Hiranthi	show other lines
2008-12-15	5732073	2982551	T	2500	1	Hiranthi	show other lines
2008-12-15	98877	391561	T	4000	1	Hiranthi	show other lines
2008-12-15	10242	308797	T	2000	1	Hiranthi	show other lines
2008-12-15	1638806	535932	T	3000	1	Niduli	show other lines
2008-12-15	2292104	3547877	T	4000	1	Niduli	show other lines
2008-12-15	3805272	3856705	T	5000	1	Niduli	show other lines
2008-12-15	406230	637322	T	1000	1	Niduli	show other lines
2008-12-15	4094423	332777	T	1500	1	Niduli	show other lines
2008-12-15	5165492	231113	T	1500	1	Niduli	show other lines

BACK

Get Recovery Customer Lists 3 – E.g. First Reminder Letter Process Details

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summary

Manage User
New User
Edit User
Delete User

Name	MR E	Contract ID	1276444
Address	112 COSME GARDENS WATTARANTENNE PL KANDY	Mobile	3028747
		Action	FIRST REMINDER LETTER
Identification	720651114V	Captured Date	2008-12-15

Other Lines Under the Identification

CONTRACT ID	MOBILE	ID	ID TYPE	PRE_POST	CONNECTION STATUS
3087222	3769459	720651114V	NIC	PRE	B
4976521	3908590	720651114V	NIC	POST	T
5757738	2996604	720651114V	NIC	PRE	B

Update Due Date
Keep Pending

Date   20081215   yyyymmdd

Comments   First Reminder Letter sent

Update Action   Cancel

Get Recovery Customer Lists 4 – E.g. First Reminder Letter Process Details

S-1.1.1.1.1   Customer Details

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summary

Manage User
New User
Edit User
Delete User

Details are Properly Updated!

OK

All the other GUIs to get details for other processes (final letter, NPO, Visits, Legal) are similar

Get Customer History - 1

S-1.6   Find Recovery Action History

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summary

Manage User
New User
Edit User
Delete User

Customer Contract ID   2654344

Recovery Action Process   Reminder Letters
                            Reminder Letters
                            Visits
                            Legal

OK   RESET   CANCEL

Get Customer History - 2

| | S-1.6.1 | | | | | Customer History | | | | | | |

CONTRACT ID - 2654344   PROCESS - Reminder Letters

UPLOAD DATE	CONTRACT ID	MOBILE	STATUS	ID	NAME	ADDRESS NO	ADDRESS STREET	ADDRESS TOWN	OUTSTANDING	PROCESS ID	ACTION DATE	PAYMENT STATUS
2008-12-17	2654344	3656148	D	801331297V	B	NO 105 MAWELA	TALAKOLAHINNA	BALANGODA	3500	2		
2008-10-17	2654344	3656148	D	801331297V	B	NO 105 MAWELA	TALAKOLAHINNA	BALANGODA	3500	2	2008-11-16	NO
2008-12-15	2654344	3656148	D	801331297V	B	NO 105 MAWELA	TALAKOLAHINNA	BALANGODA	3500	2	2008-12-17	

EXPORT   CANCEL

Generate Performance Report – 1- By Agent

S-1.7	Recovery Performance

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summary

Manage User
New User
Edit User
Delete User

Performance of   Recovery Agent
                  Recovery Agent
Date   Recovery Process

To   20081215   yyyymmdd

OK   RESET   CANCEL

Generate Performance Report – 2- By Agent

	S-1.7.2	Recovery Agent Performance		
UPLOAD DATE	USER ID	ALLOCATED NO	ACTIONED NO	ACTIONNED %
2008-12-15	Danusha	6	0	0
2008-12-15	Hiranthi	14	2	14
2008-12-15	Kovidi	14	2	14
2008-12-15	Nidab	6	0	0
2008-12-15	u_1226	4	3	75
2008-12-15	u_1228	10	4	40

EXPORT   CANCEL

Generate Collection Report – 1 – By Process

Recovery Collection

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summary

Manage User
New User
Edit User
Delete User

Collection of — Recovery Process
Recovery Agent
Recovery Process

Date — From — yyyymmdd

To — 20081215 — yyyymmdd

OK   RESET   CANCEL

Generate Collection Report – 2 – By Process

S-1.8.1 — Recovery Process Collection

UPLOAD DATE	PROCESS ID	ACTION NO	PAID NO	PAID %
2008-12-15	1	2	1	50
2008-12-15	2	2	0	0
2008-12-15	3	3	1	33
2008-12-15	4	4	0	0

EXPORT   CANCEL

Generate Disconnection List - 1

S-1.9   Disconnection List

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summery
Collection Summery

Manage User
New User
Edit User
Delete User

| Date | From | 20081017 | 🗓 | yyyymmdd |
| | To | 20081017 | 🗓 | yyyymmdd |

OK   RESET   CANCEL

Generate Disconnection List - 2

S-1.9.1   Daily Disconnection List

FROM - 20081017   TO - 20081017

UPLOAD DATE	CONTRACT ID	MOBILE	CONNECTION STATUS	PROCESS ID	ACTION DATE	USER ID	PAYMENT STATUS	COMMENTS
2008-10-17	10242	308797	T	1	2008-12-13	Kowdi	NO	Letter Sent
2008-10-17	2292104	3547877	T	1	2008-12-13	Niduli	NO	Test
2008-10-17	3613365	3410752	T	1	2008-10-17	Niduli	NO	
2008-10-17	3805272	3856705	T	1	2008-10-17	Niduli	NO	
2008-10-17	1276444	3028747	T	1	2008-10-17	Niduli	NO	Letter Sent

EXPORT   CANCEL

Export Report – 1

Daily Disconnection List

FROM - 20081017   TO - 20081017

UPLOAD DATE	CONTRACT ID	MOBILE	CONNECTION STATUS	PROCESS ID	ACTION DATE	USER ID	PAYMENT STATUS	COMMENTS
2008-10-17	10242	308797	T	1	2008-10-17	Kowdi	NO	Letter Sent
2008-10-17	2292104	3547877	T	1	2008-12-13	Nidult	NO	Test
2008-10-17	3613365	3410752	T	1	2008-10-17	Nidult	NO	
2008-10-17	3805272	3856705	T	1	2008-10-17	Nidult	NO	
2008-10-17	1276444	3028747	T	1	2008-10-17	Nidult	NO	Letter Sent

[EXPORT]   [CANCEL]

Opening Report.csv

You have chosen to open

Report.csv

which is a: Microsoft Office Excel Comma Separated Values File
from: http://localhost

What should Firefox do with this file?

Open with   Microsoft Office Excel (default)

Save to Disk

[OK]   [Cancel]

Export Report – 2

UPLOAD_DATE	CONTRACT_ID	MOBILE	STATUS	PROCESS_ID	ACTION_DATE	USER_ID	PAYMENT STATUS	COMMENTS
10/17/2008	10242	308797	T	1	10/17/2008	Kowdi	NO	Letter Sent
10/17/2008	2292104	3547877	T	1	12/13/2008	Nidult	NO	Test
10/17/2008	3613365	3410752	T	1	10/17/2008	Nidult	NO	
10/17/2008	3805272	3856705	T	1	10/17/2008	Nidult	NO	
10/17/2008	1276444	3028747	T	1	10/17/2008	Nidult	NO	Letter Sent

Delete User – 1

Removed User in RDMS !

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summery

Manage User
New User
Edit User
Delete User

UserDetails are Deleted from the System!

OK

Admin User – To Run Scheduled Tasks - Daily

AD-1

Welcome To the Admin Tool !

Home
Change Password
Logout

Recovery Reports
First Reminder
Final Reminder
Non Pay Other
Customer Visits
Legal Action

Reports
Disconnection List
Customer History
Performance Summary
Collection Summery

Manage User
New User
Edit User
Delete User

Add Process ID	01	Asign Users	07
Update Letter Process	02	Performance Agent	08
Update Other Lines	03	Performance Process	09
Update NPO Process	04	Collection Agent	10
Update Visits Process	05	Collection Process	11
Update Legal Process	06	Update Payments	12

Test Cases

Test component	Activity(s)	Expected Result	Status
Add User	Click on the link "Add User"	A page to enter user_id, password, employee id and process id together with 3 buttons "Create","Reset","Cancel"	Success
	Enter not exists user id and click create	Error message box "no user exists"	Success
	Enter correct user id and other fields click create	A page that displays "User details are successfully created" together with a button "Ok"	Success
	Click ok	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Edit User	Click on the link "Edit User"	A page to enter User id and other three text fields named password and employee id are read only and process id is editable together with a button "search"	Success
	Enter not exists user id and click search	Error message box "no user exists"	Success
	Enter correct user id and click search	A page that displays all the user information user name password, employee id and process together with 3 buttons "update", "reset", "cancel"	Success
	Click update	A page with a message "user details are successfully updated" together with a button "ok"	Success
	Click ok	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Delete User	Click on the link "Delete User"	A page to enter user id and other three text fields named password, employee id and process are read only together with a button "search"	Success
	Enter not exists user id and click search	Error message box "no user exists"	Success
	Enter correct user id and click search	A page that displays all the user information user name password, employee id and process together with 3 buttons "delete", "reset", "cancel"	Success
	Click delete	A page with a message "user details are successfully deleted" together with a button "ok"	Success
	Click ok	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Change Password	Click on the link "Change Password"	A page to enter user id, old password, new password and confirm new password 3 buttons "change", "reset", "cancel"	Success
	Enter not exists user id and click search	Error message box "no user exists"	Success
	Enter correct user id and click change	A page that displays "successfully changed password" together with a button "Ok"	Success
	Click change	A page with a message "user details are successfully deleted" together with a button "ok"	Success
	Click ok	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Get details for First Reminder Letter Process	Click on the link " First Reminder Letter Process"	A page to select 4 criteria List type, outstanding, customer type and date range together with 3 buttons "ok", "reset", "cancel"	Success
	Select 4 criteria and click ok	Details shown as requested in a form of alarms, each alarm has a button "show other lines"	Success
	Click show other lines	A page that displays other lines that are exists to the selected customer Same page it allows to enter due date, option to keep pending and also comments if necessary, together with a button "update action"	Success
	Click update action	Previous set of alarms are shown here together with the updated details	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Get details for Final Reminder Letter Process	Click on the link " Final Reminder Letter Process"	A page to select 4 criteria List type, outstanding, customer type and date range together with 3 buttons "ok", "reset", "cancel"	Success
	Select 4 criteria and click ok	Details shown as requested in a form of alarms, each alarm has a button "show other lines"	Success
	Click show other lines	A page that displays other lines that are exists to the selected customer Same page it allows to enter due date, option to keep pending and also comments if necessary, together with a button "update action"	Success
	Click update action	Previous set of alarms are shown here together with the updated details	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Get details for NPO Process	Click on the link "NPO Process"	A page to select 4 criteria List type, outstanding, customer type and date range together with 3 buttons "ok", "reset", "cancel"	Success
	Select 4 criteria and click ok	Details shown as requested in a form of alarms, each alarm has a button "show other lines"	Success
	Click show other lines	A page that displays other lines that are exists to the selected customer Same page it allows to enter due date, option to keep pending and also comments if necessary, together with a button "update action"	Success
	Click update action	Previous set of alarms are shown here together with the updated details	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Get details for Visits Process	Click on the link "Visits Process"	A page to select 4 criteria List type, outstanding, customer type and date range together with 3 buttons "ok", "reset", "cancel"	Success
	Select 4 criteria and click ok	Details shown as requested in a form of alarms, each alarm has a button "show other lines"	Success
	Click show other lines	A page that displays other lines that are exists to the selected customer Same page it allows to enter due date, option to keep pending and also comments if necessary, together with a button "update action"	Success
	Click update action	Previous set of alarms are shown here together with the updated details	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Get details for Legal Process	Click on the link "First Reminder Letter Process"	A page to select 4 criteria List type, outstanding, customer type and date range together with 3 buttons "ok", "reset", "cancel"	Success
	Select 4 criteria and click ok	Details shown as requested in a form of alarms, each alarm has a button "show other lines"	Success
	Click show other lines	A page that displays other lines that are exists to the selected customer. Same page it allows to enter due date, option to keep pending and also comments if necessary, together with a button "update action"	Success
	Click update action	Previous set of alarms are shown here together with the updated details	Success
	Click reset	Empty the text fields allowing user to enter new details	Success
	Click cancel	Go to the home page	Success

Test component	Activity(s)	Expected Result	Status
Get Recovery History	Click on the link "Customer History"	A page to enter contract id and to select the required process together with 3 buttons "ok", "reset", "cancel"	Success
	Enter details and click ok	An HTML report will be shown with customer history details requested together with 2 buttons "export", "cancel"	Success
	Click export	Details in the report will be export in to CSV format	Success
	Click cancel	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success

Test component	Activity(s)	Expected Result	Status
Get Performance Report	Click on the link "Performance Report"	A page to select the report type (process agent) and option to select the date range together with 3 buttons "ok","reset","cancel"	Success
	Enter details and click ok	An HTML report will be shown with performance details as per the request together with 2 buttons "export", "cancel"	Success
	Click export	Details in the report will be export in to CSV format	Success
	Click cancel	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success

Test component	Activity(s)	Expected Result	Status
Get Collection Report	Click on the link "Collection Report"	A page to select the report type (process agent) and option to select the date range together with 3 buttons "ok","reset","cancel"	Success
	Enter details and click ok	An HTML report will be shown with collection details as per the request together with 2 buttons "export", "cancel"	Success
	Click export	Details in the report will be export in to CSV format	Success
	Click cancel	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success

Test component	Activity(s)	Expected Result	Status
Get Disconnection List	Click on the link "Disconnection List"	A page select the date range together with 3 buttons "ok","reset","cancel"	Success
	Enter details and click ok	An HTML report will be shown with customer details to be sent for disconnections as per the request together with 2 buttons "export", "cancel"	Success
	Click export	Details in the report will be export in to CSV format	Success
	Click cancel	Go to the home page	Success
	Click reset	Empty the text fields allowing user to enter new details	Success

QUESTIONAIRE SYSTEM EVALUATION
Recovery Data Management System

		Disagree	1	2	3	4	5	Agree
01	It was simple to use this system						✓	
02	I can effectively complete my work using this system						✓	
03	I am able to complete my work quickly using this system						✓	
04	I am able to efficiently complete my work using this system						✓	
05	I feel comfortable using this system						✓	
06	It was easy to learn to use this system						✓	
08	The system gives error messages that clearly tell me how to fix problems						✓	
09	Whenever I make a mistake using the system, I recover easily and quickly						✓	
10	On-screen messages provided with this system is clear						✓	
11	It is easy to find the information I needed					✓		
12	The information provided for the system is easy to understand					✓		
13	The information is effective in helping me complete the tasks						✓	
14	The organization of information on the system screens is clear						✓	
15	The interface of this system is pleasant						✓	
16	I like using the interface of this system					✓		
17	This system has all the functions and capabilities I expect it to have					✓		
18	Overall, I am satisfied with this system						✓	

List down if any improvements to the system:

1. Better if can add a help menu for this system

2. ....

3. ....

4. ....

J.G. Krishantha

17th September 2008

User Manual – For Super User

1. Login to the System

Current GUI reference No	Activity	Result GUI reference No
1	Enter user name & password	S-1

2. Change Password

Current GUI reference No	Activity	Result GUI reference No
S-1	Click change password	S-1.13
S-1.13	Enter old password, new password, confirm password & click change	S-1.13.1
S-1.13	Click reset	S-1.13
S-1.13	Click cancel	S-1

3. Logout

Current GUI reference No	Activity	Result GUI reference No
S-1	Click logout	1

4. Get First Reminder Letter Process Details

Current GUI reference No	Activity	Result GUI reference No
S-1	Click First Reminder Letter Process	S-1.1
S-1.1	Select list type – new or pending and enter the date range and click ok	S-1.1.1
S-1.1	Click reset	S-1.1
S-1.1	Click cancel	S-1
S-1.1.1	Click show other line	S-1.1.1.1
S-1.1.1	Click back	S-1.1
S-1.1.1.1	Select update due date or keep pending, enter date, enter comments and click update action	S-1.1.1.1.1
S-1.1.1.1	Click cancel	S-1.1.1
S-1.1.1.1.1	Click ok	S-1.1.1