Design Document
For

Jewel Pledging Point

Concept Solutions

1 Introduction

This document describes the overall design of the proposed DB Web application and also includes the brief description of the User Interface (GUI) and its functionality.

1.1 Reference Documents

The following documents have been referred to design and develop the proposed Database Web application.

- Document.pdf
- www.tomjewett.com
- Quality DB.doc

2 Architectural Design

This section describes decomposition of various functions into physical units. It, also, describes the mechanism for communication between the different components.

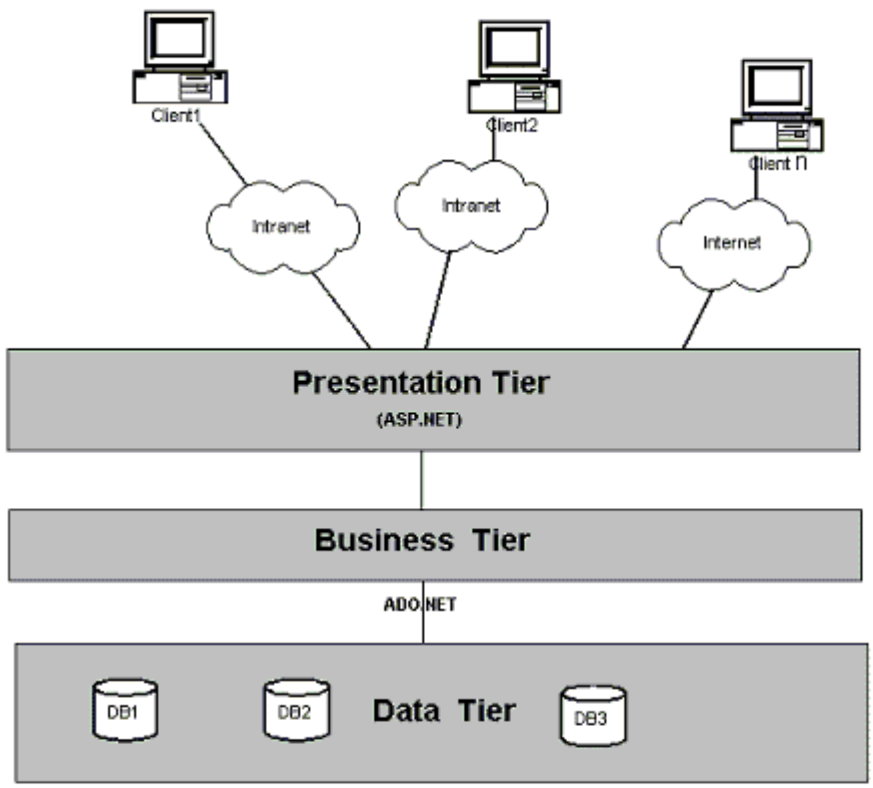
The decomposition description records division of the software system into physical design elements. It describes the way the system has been structured, and the purpose and function of each element.

2.1 N-Tier Architecture

The N-tier architecture organizes application logic into three major disjunctive tiers namely:

- Presentation Tier (Front end)
- Business Tier (Middleware)
- Data Tier (Backend)

The characteristic of the tier communication is that the tiers will communicate only to their adjacent neighbors. For example, The **Presentation Tier** will interact directly with the Business Tier and not with the Data Tier.



A Typical 3.Tier Architecture

Data Tier

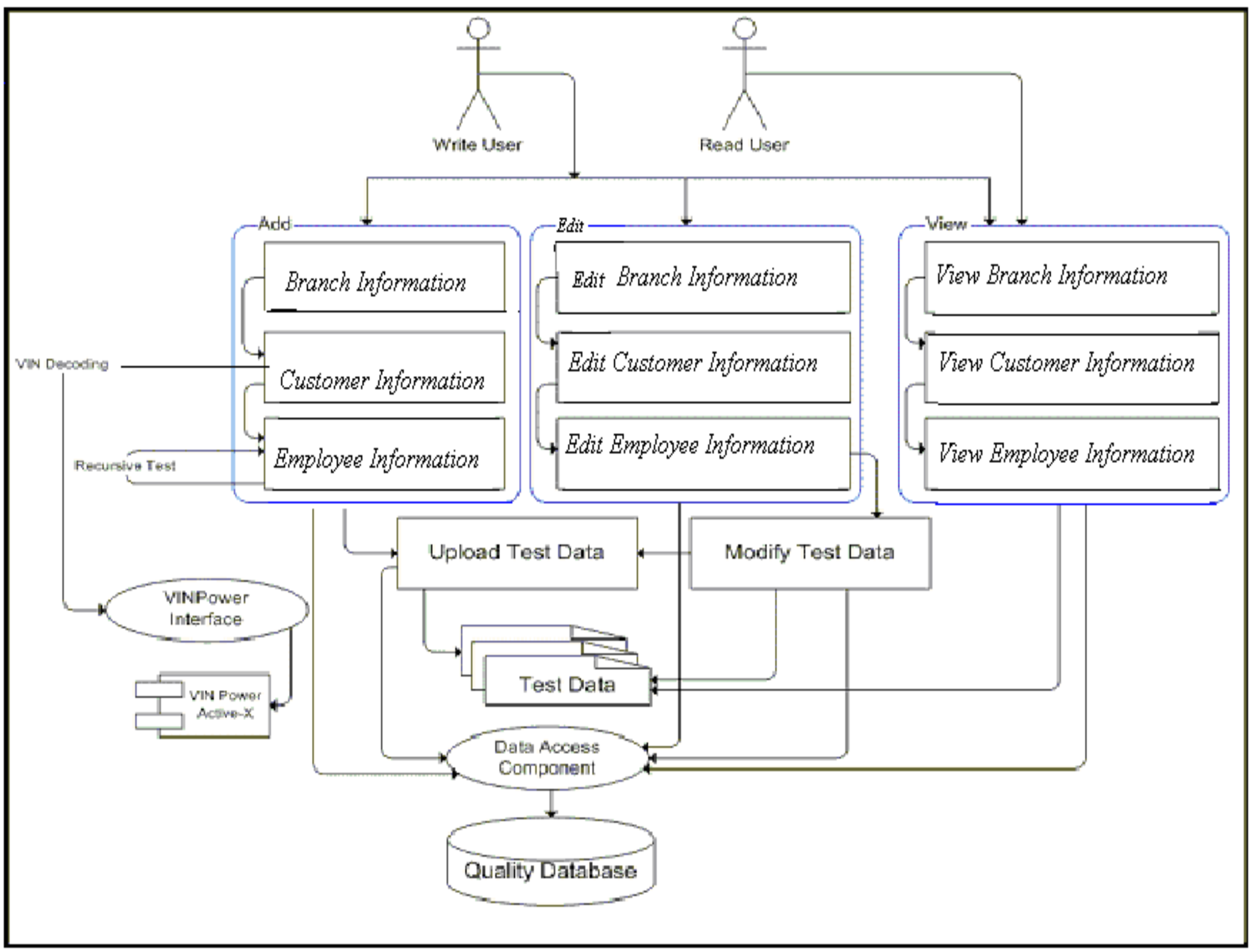
This Tier is responsible for retrieving, storing and updating Information and is basically the database backend of the system.

Business Tier
This tier will implement the main business specific logic of the application. It may be further divided into more components/tiers to perform business and relevant data access separately resulting in increased code transparency. This also isolates database changes not affecting the business logic.

2.2 DB Application Design

3 Operational design

This section gives a brief description of the Operational design of the proposed Database for Jewel Pledging Point.



Add

Using this module, the user can add the information like the Branch, Customer, Employee, Pledge, Payment & Cash and disposition in the database.

Modify
This module will help the user to manipulate the already existing added information.

View
Using this module, the user will be able to view the complete information on the Quality Database.

Role Based Security Model
Every user will be assigned a particular role to maintain and view the Database. Based on the Login and Password, the user will be assigned a role based on which the user can maintain and view the information.

4 Data model

4.1 Entity Relationship Diagram

4.2 Entity Description

In this section the normalized table design of tables in the Quality Database along with the primary keys, constraints and column properties are presented.

4.2.1 Table Name: BranchMaster

It stores the Branch information of the parts.

Column Name	Data Type	Length	Allow Nulls
BranchID **(PK)**	Varchar	50	N
BranchName	Varchar	50	N
Location	Varchar	50	N
Address	Varchar	350	N
LicenseNo	Varchar	50	N
BranchManagerID	Varchar	50	N
PhoneNumber	Varchar	50	N
EmailID	Varchar	50	N
Remarks	Varchar	250	Y

4.2.2 Table Name: CustomerMaster

It stores the Customer Information.

Column Name	Data Type	Length	Allow Nulls
CustomerID **(PK)**	Varchar	50	N
CustomerName	Varchar	50	N
CustomerAddress	Varchar	350	N
BranchID	Varchar	50	N
CustomerMobileNo	Varchar	50	N
CustomerEmailID	Varchar	50	N
CustomerTelePhoneNo	Varchar	50	N
CustomerPasswords	Varchar	50	N
CustomerRemarks	Varchar	250	Y

4.2.3 Table Name: EmployeeMaster

This stores the Employee information

Column Name	Data Type	Length	Allow Nulls
EmployeeID **(PK)**	Varchar	50	N
EmployeeName	Varchar	50	N
EmployeeAddress	Varchar	350	N
EmployeePhoneNo	Varchar	50	N
EmployeeEmailID	Varchar	50	N
BranchID	Varchar	50	N
EmployeeQualification	Varchar	50	N
EmployeeType	Varchar	50	N
Password	Varchar	50	Y

4.2.4 Table Name: PledgeMaster

This stores all the pledge details.

Column Name	Data Type	Length	Allow Nulls
PledgeID **(PK)**	Varchar	50	N
BranchID	Varchar	50	N
CustomerID	Varchar	50	N
EmployeeID	Varchar	50	N
PledgeDate	DateTime		N

PledgeItems	Varchar	50	N
PledgeWeight	Varchar	50	N
PledgeAmount	Varchar	50	N
WarningDate	DateTime		N
PledgeStatus	Varchar	50	N

4.2.5 Table Name : PledgeAccount

Stores all pledge account details.

Column Name	Data Type	Length	Allow Nulls
PledgeID	Varchar	50	N
Date	DateTime		N
Particulars	Varchar	50	N
Credit	Varchar	50	N
Debit	Varchar	50	N
Balance	Varchar	50	N
Remarks	Varchar	50	N

4.2.6 Table Name :CashBook

Stores all the cash information.

Column Name	Data Type	Length	Allow Nulls
Date	DateTime		N
BranchID	Varchar	50	N
Particulars	Varchar	250	N
Credit	Varchar	50	N
Debit	Varchar	50	N
Balance	Varchar	50	N

5 Detailed design / Program specifications

This Section describes the detailed design and the program specifications for the proposed DB Application.

5.1 User interface Template

This template will be used in all the page of the existing DB Application.

5.1.1 Content form

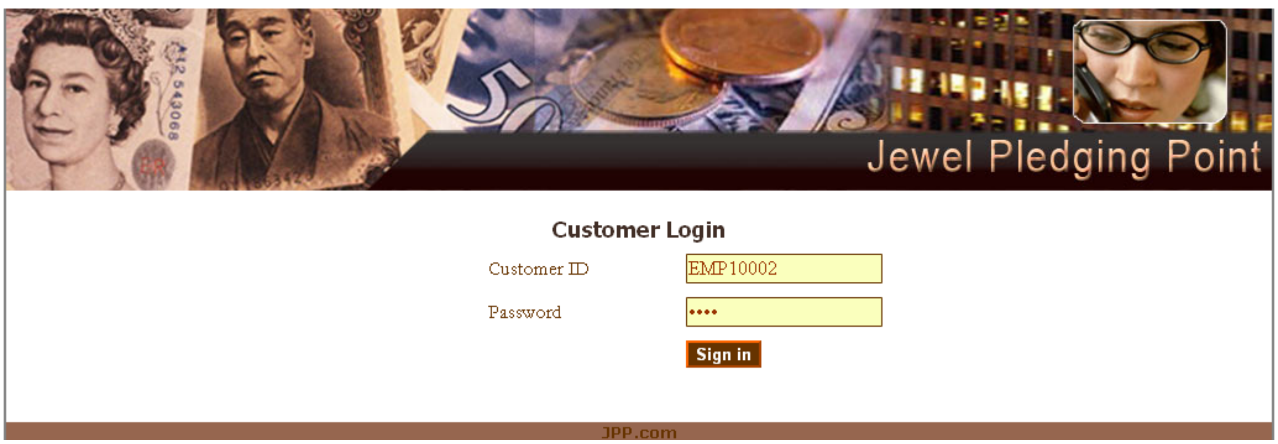
5.2 User Interface / Screen

This Section describes the User Interface (GUI) of the proposed system and also gives a brief description of its functionality.

5.2.1 Login Screen

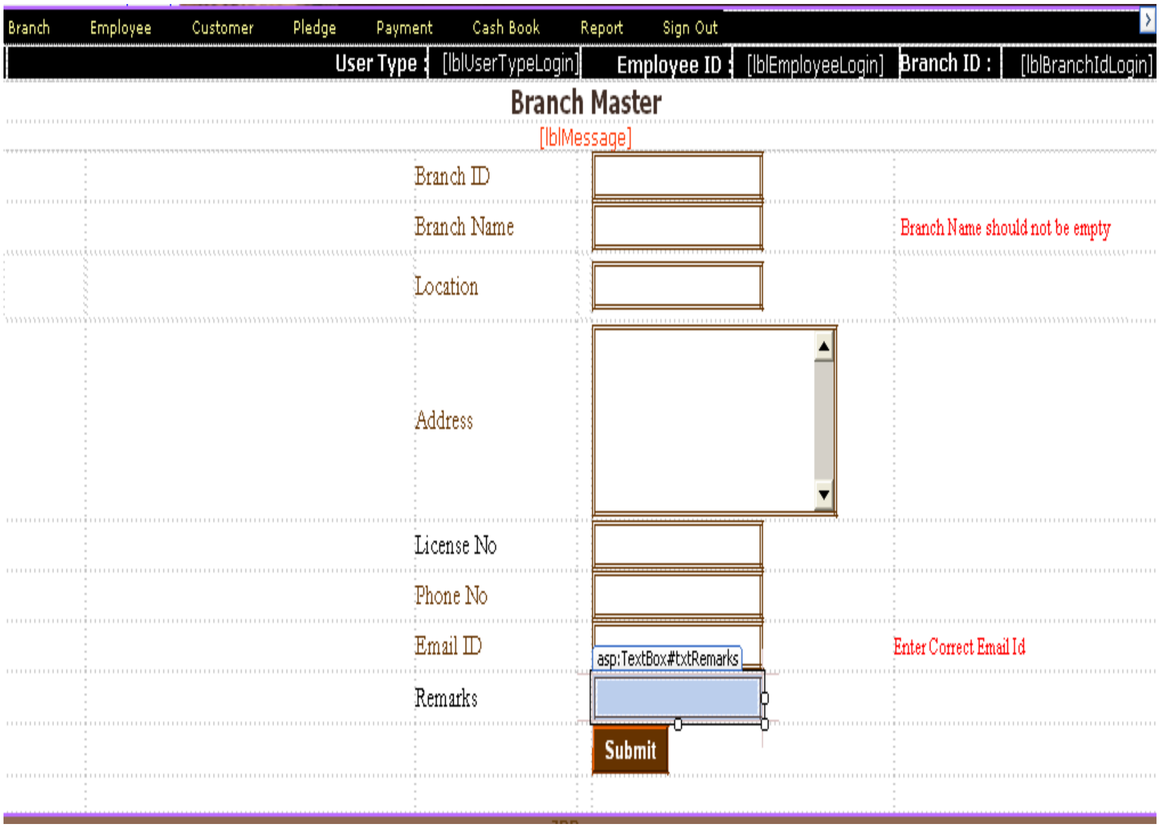
This Screen will help the user to login to the application. On successful entering of login name and password and clicking 'Login', the user will be validated and redirected to the Branch Page (GUI).

Customer Login



5.2.2 Add Branch Information

Using this Interface user can Add batch information.



The Branch Master screen allows the user to enter information of a branch. Once the user fills in the information and 'Submit' button is clicked, the information is stored in the database for further usage in future pages.

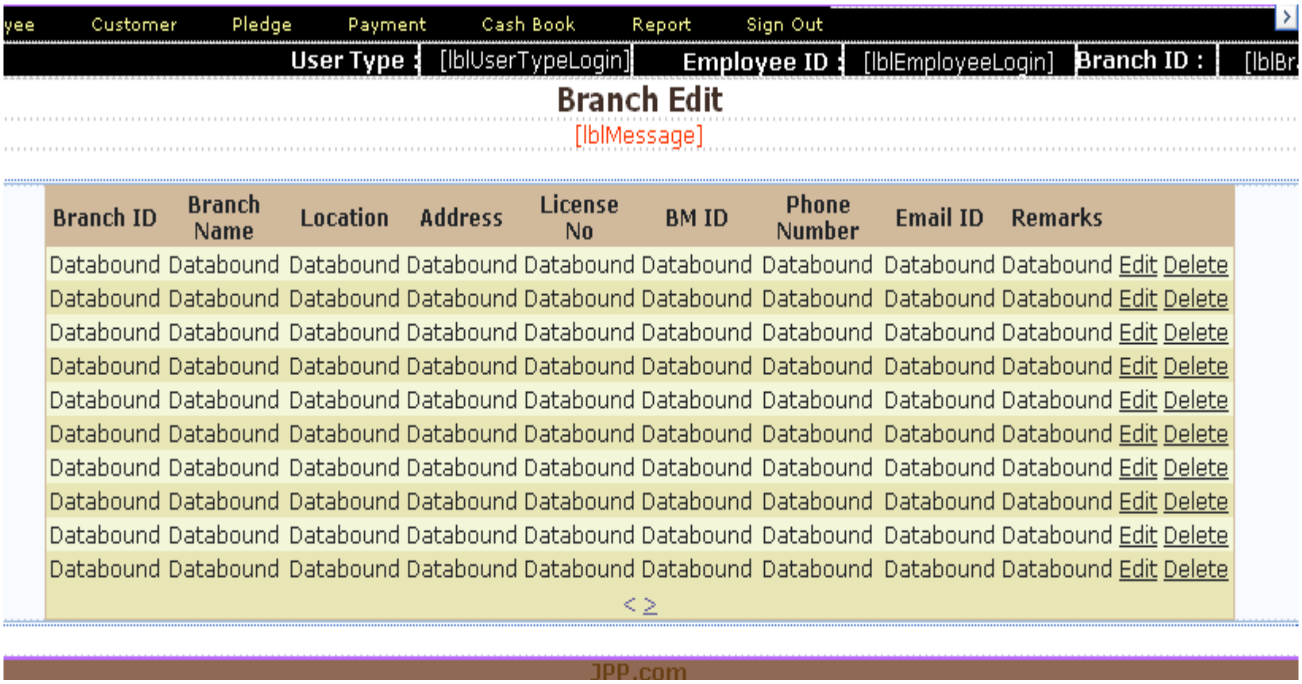
On Page Load

- The BranchID is generated automatically when the page loads. Submit is enabled.

Submit:

- Enter the details of Branch and Click on **'Submit'** button. A new BranchID along with its details are created.
- On clicking **'Submit'** button the page will be redirected to **'BranchEdit'** page.

5.2.3 Branch Edit



This screen is used to modify the contents of Branch. Only the user who has logged in, have the rights to modify the branch information.

On Page Load

- Branch datagrid is populated with the entire existing branch information.

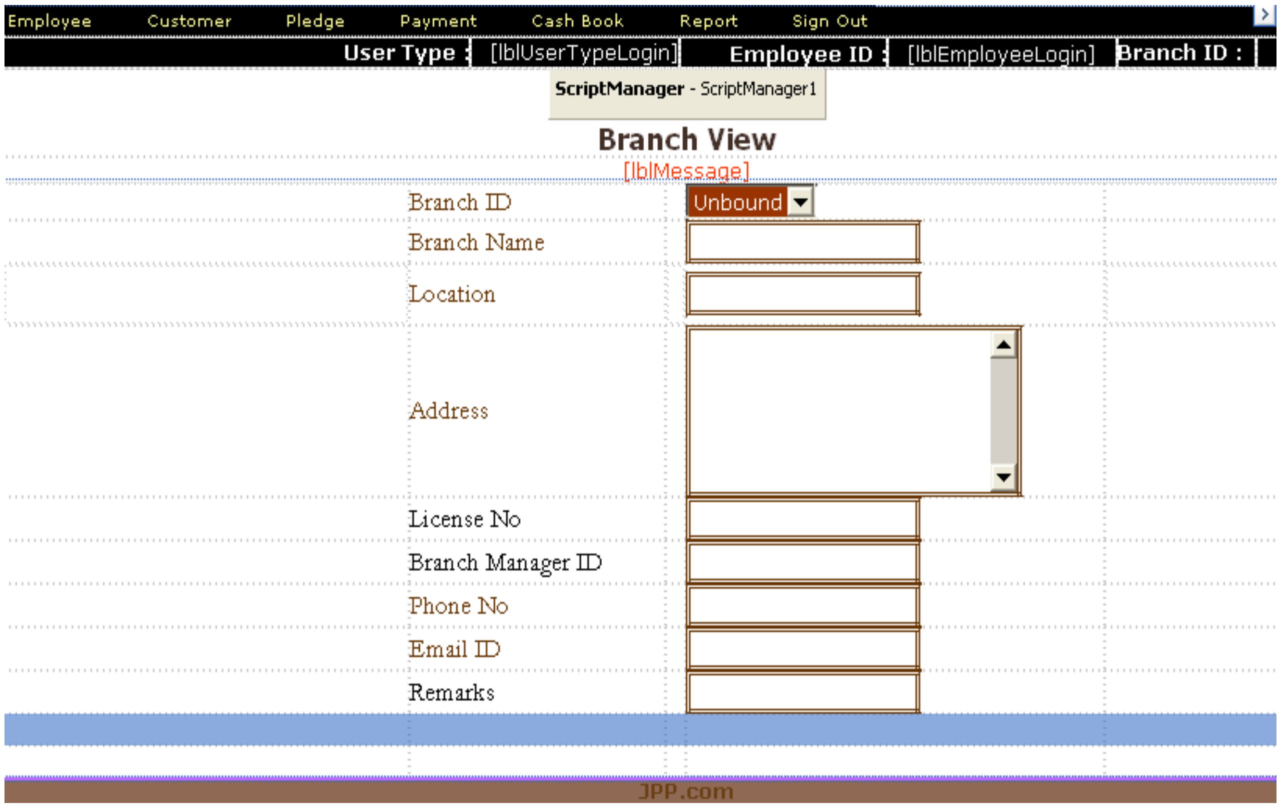
Edit/Delete:

- On click of Edit link button, the Update and Cancel link buttons will appear.
- On clicking Update link button, it will update the branch details.
- On clicking Cancel button, it will go back to Edit.
- On click of Delete button all branch details gets deleted. But if there are no records present for the selected branch then message is displayed to the user.
- The record for selected Branch gets updated. Record is updated in the datagrid.

Data Grid:

- All the information can be seen in Data Grid.
- If any information is updated or deleted, it will affect the Data Grid.

5.2.4 View Branch Information



Using this interface we can view branch information.

On Page Load

- This will take the user to the screen where he/she can view the Branch details for the selected BranchID.

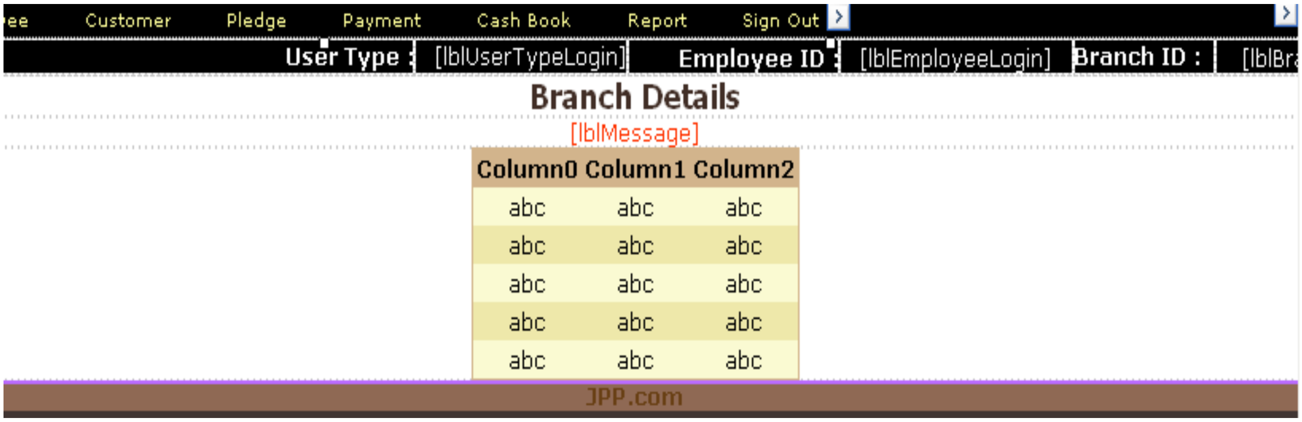
DropDownList:

- All the Branch IDs are populated in the dropdownlist automatically.
- When any Branch ID from dropdownlist is selected, all the other details of that particular Branch ID is displayed.

Script Manager:

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.

5.2.5 Branch Details



This screen is used to view all the Branch Detials that has been entered.

On Page Load

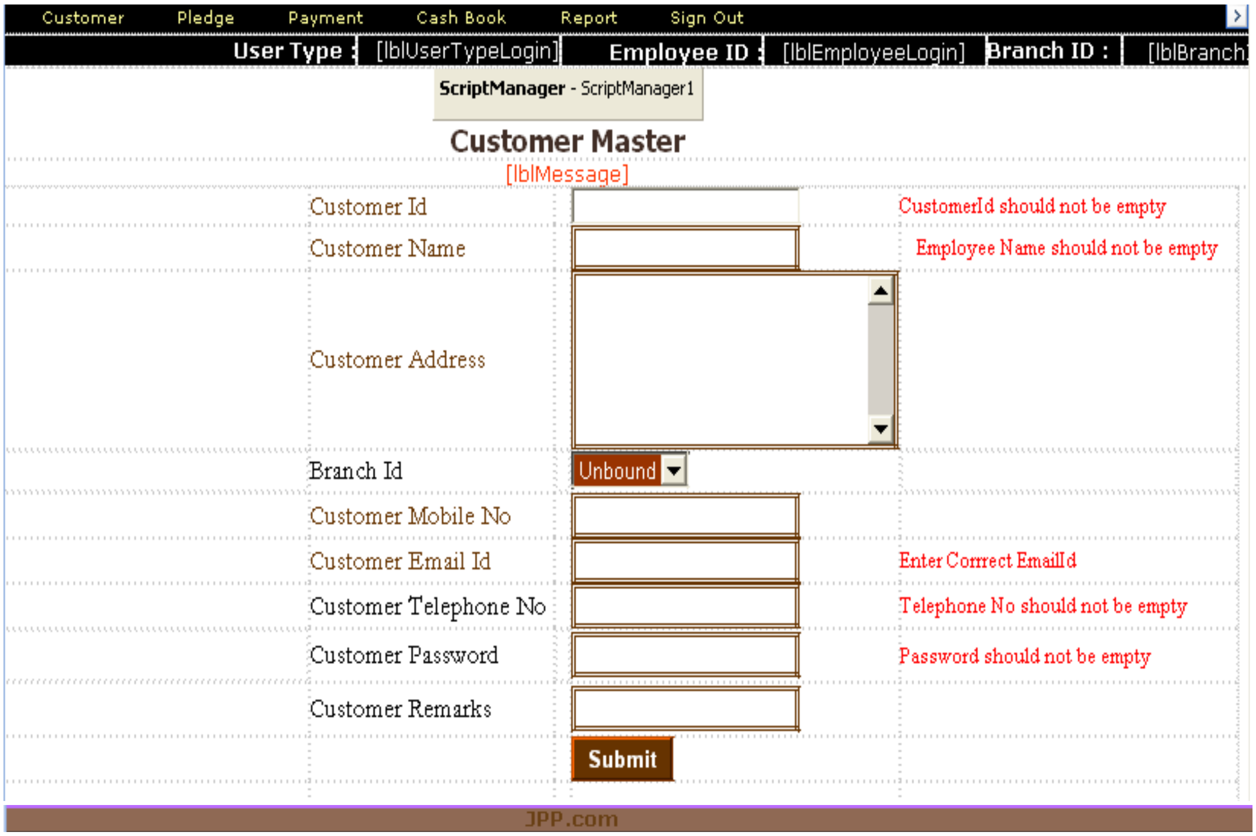
- The Branch Details are populated in the Grid View when the page is loaded.

Grid View:

- The Branch Details are populated in the Grid View and the user can view the details.

5.2.6 Add Customer Information

Using this Interface user can Add Customer information.



The Customer Master screen allows the user to enter information of a Customer. Once the user fills in the information and 'Submit' button is clicked, the information is stored in the database for further usage in future pages.

On Page Load

- The CustomerID is generated automatically when the page loads. Submit is enabled.

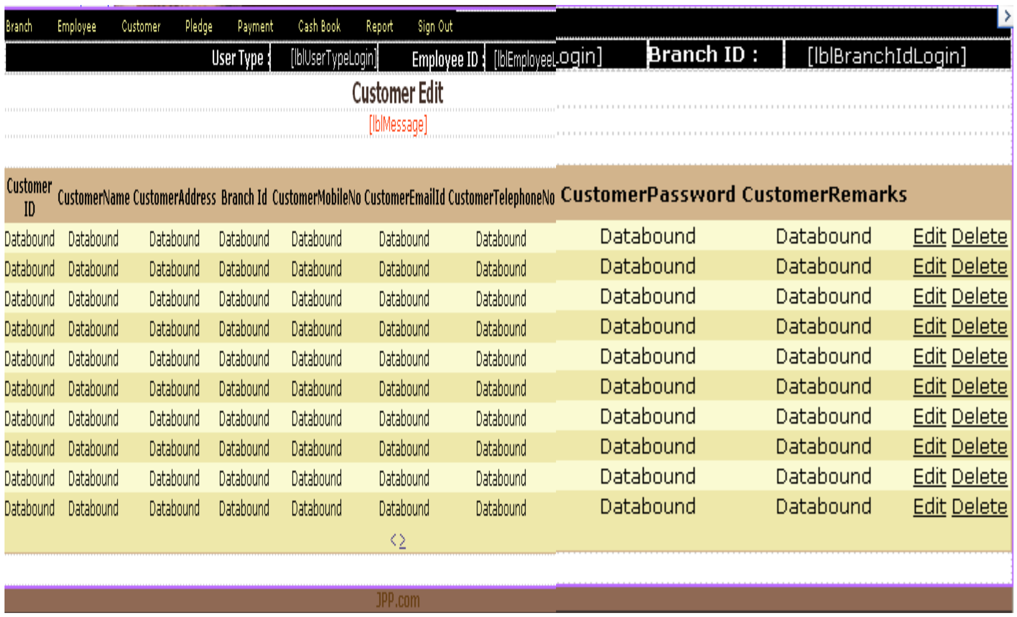
Submit:

- Enter the details of Customer and Click on **'Submit'** button. A new CustomerID along with its details are created.
- On clicking **'Submit'** button the page will be redirected to **'CustomerEdit'** page.

DropDownList:

- All the Branch IDs are populated in the Dropdownlist. Any ID can be selected by the Customer.

5.2.7 Customer Edit



This screen is used to modify the contents of Customer. Only the user who has logged in, have the rights to modify the Customer information.

On Page Load

- Customer datagrid is populated with the entire existing Customer information.

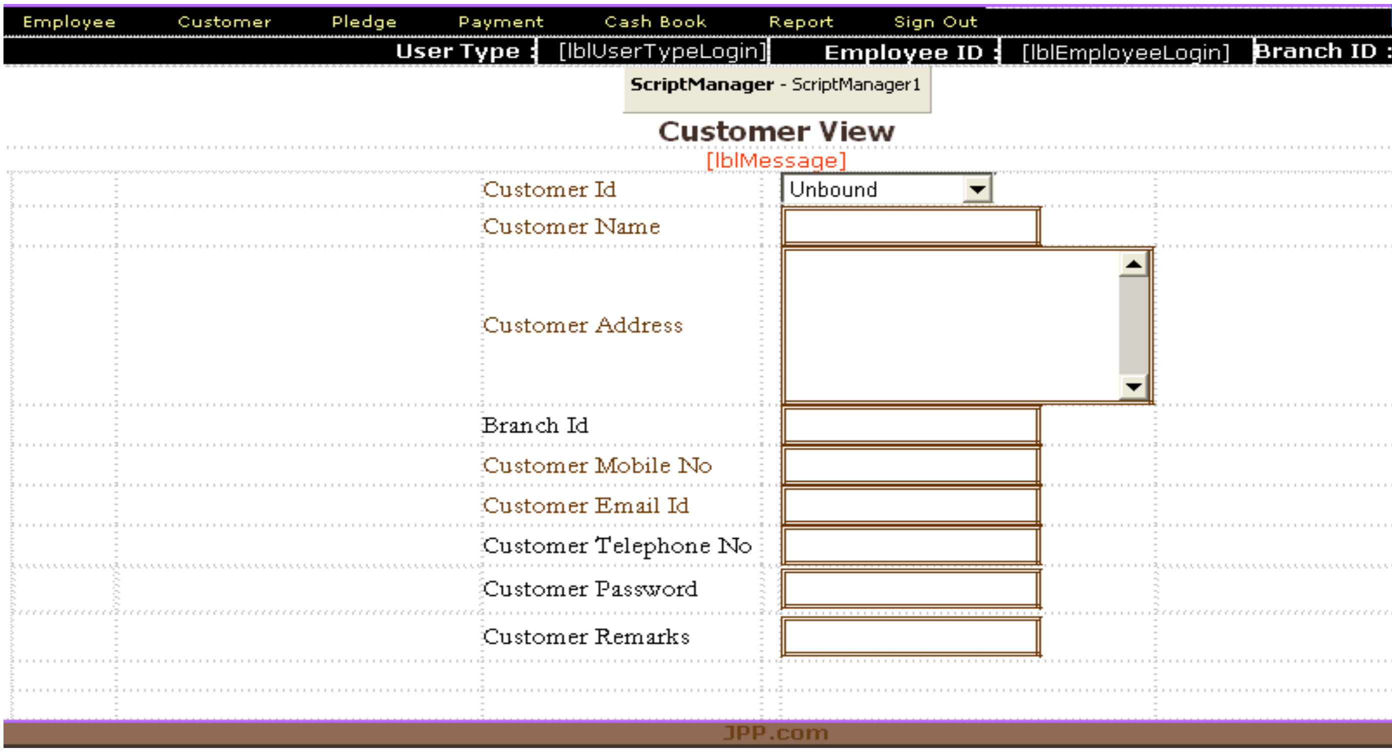
Edit/Delete:

- On click of Edit link button, the Update and Cancel link buttons will appear.
- On clicking Update link button, it will update the Customer details.
- On clicking Cancel button, it will go back to Edit.
- On click of Delete button all Customer details gets deleted. But if there are no records present for the selected Customer then message is displayed to the user.
- The record for selected Customer gets updated. Record is updated in the datagrid.

Data Grid:

- All the information can be seen in Data Grid.
- If any information is updated or deleted, it will affect the Data Grid.

5.2.8 View Customer Information



Using this interface we can view Customer information.

On Page Load

- This will take the user to the screen where he/she can view the Customer details for the selected CustomerID.

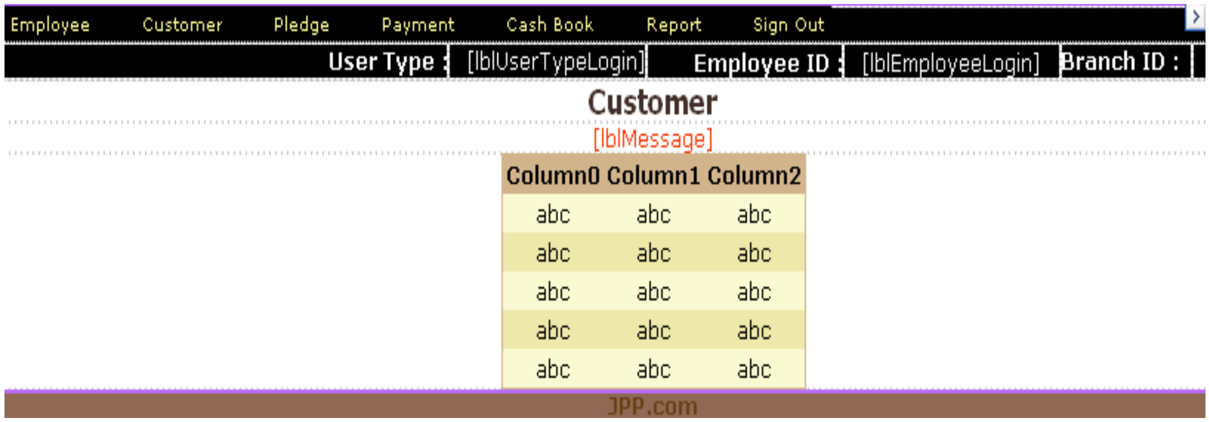
DropDownList:

- All the Customer IDs are populated in the dropdownlist automatically.
- When any Customer ID from dropdownlist is selected, all the other details of that particular Customer ID is displayed.

Script Manager:

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.

5.2.9 Customer Details



This screen is used to view all the Customer Detials that has been entered.

On Page Load

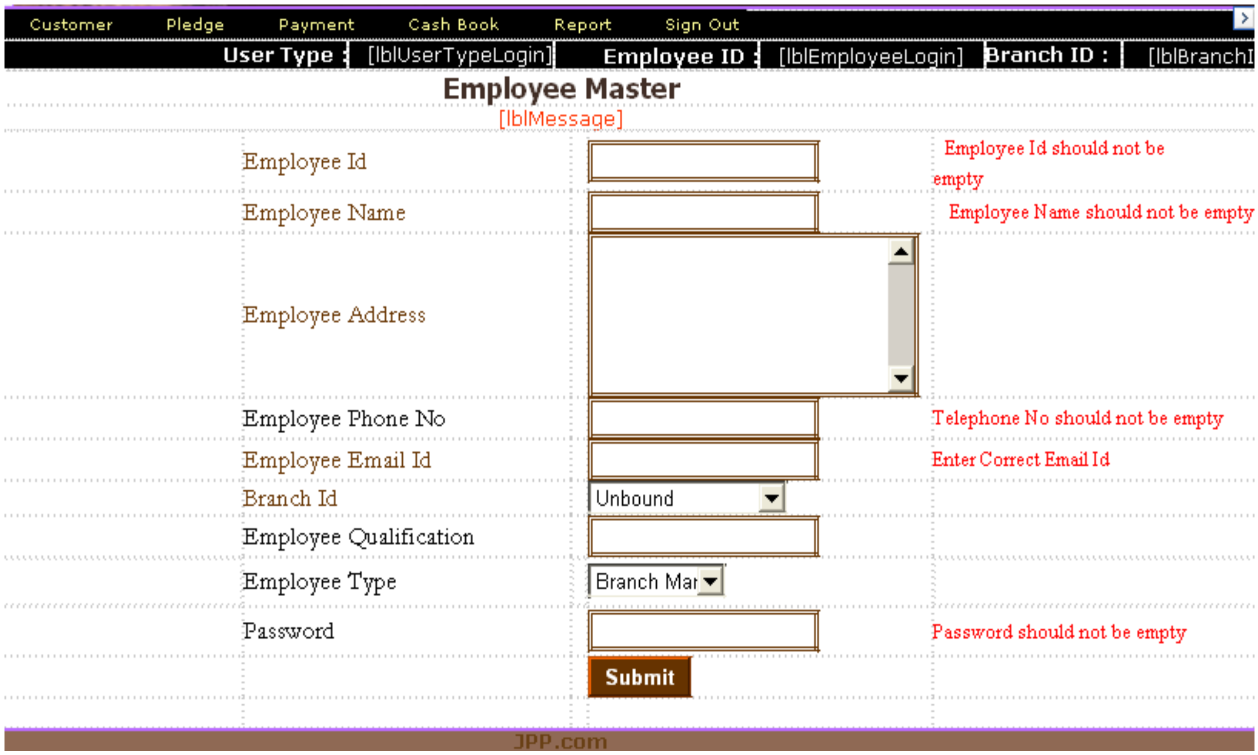
- The Customer Details are populated in the Grid View when the page is loaded.

Grid View:

- The Customer Details are populated in the Grid View and the user can view the details.

5.2.10 Add Employee Information

Using this Interface user can add employee information.



The Employee Master screen allows the user to enter information of an Employee. Once the user fills in the information and 'Submit' button is clicked, the information is stored in the database for further usage in future pages.

On Page Load

- The EmployeeID is generated automatically when the page loads. Submit is enabled.

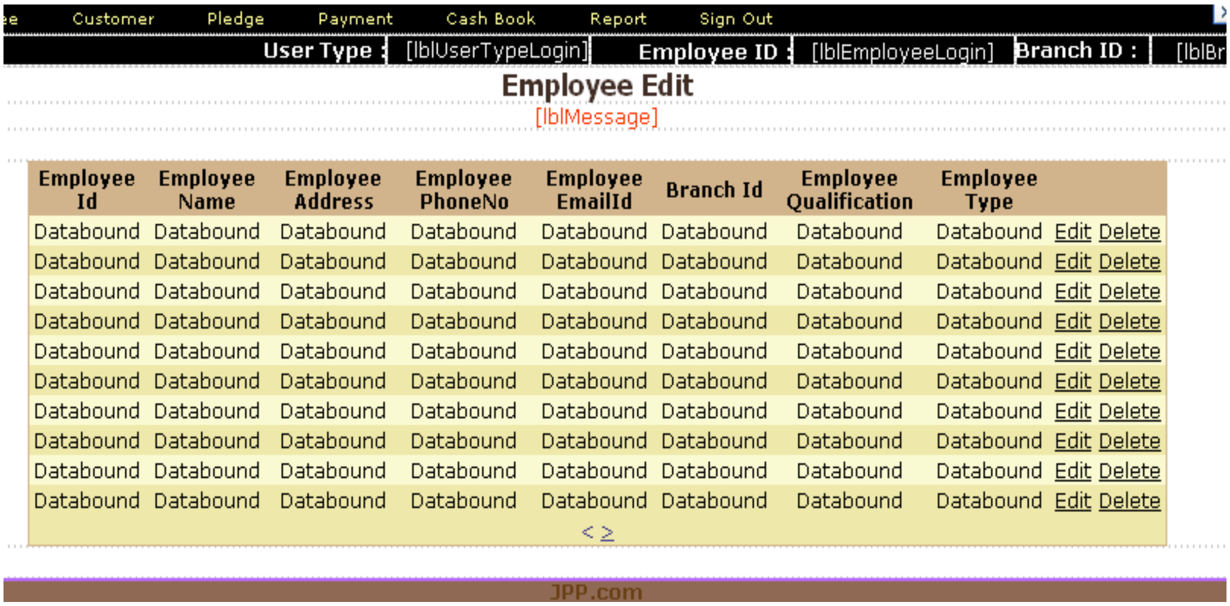
Submit:

- Enter the details of Employee and Click on **'Submit'** button. A new EmployeeID along with its details are created.
- On clicking **'Submit'** button the page will be redirected to **'EmployeeEdit'** page.

DropDownList:

- All the Employee IDs are populated in the Dropdownlist. Any ID can be selected by the Employee.
- Employee Type (Manager or Staff) is also populated in the Dropdownlist. If the Employee is a Manager his Employee ID will be included for Branch Manager ID in **'Branch Master'** page. Or if he is a staff, the Branch Manager ID field in **'Branch Master'** page will be 'Null'.

5.2.11 Employee Edit



Employee Id	Employee Name	Employee Address	Employee PhoneNo	Employee EmailId	Branch Id	Employee Qualification	Employee Type		
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete
Databound	Databound	Databound	Databound	Databound	Databound	Databound	Databound	Edit	Delete

This screen is used to modify the contents of Employee. Only the Employee who has logged in, have the rights to modify the Employee information.

On Page Load

- Employee datagrid is populated with the entire existing Employee information.

Edit/Delete:

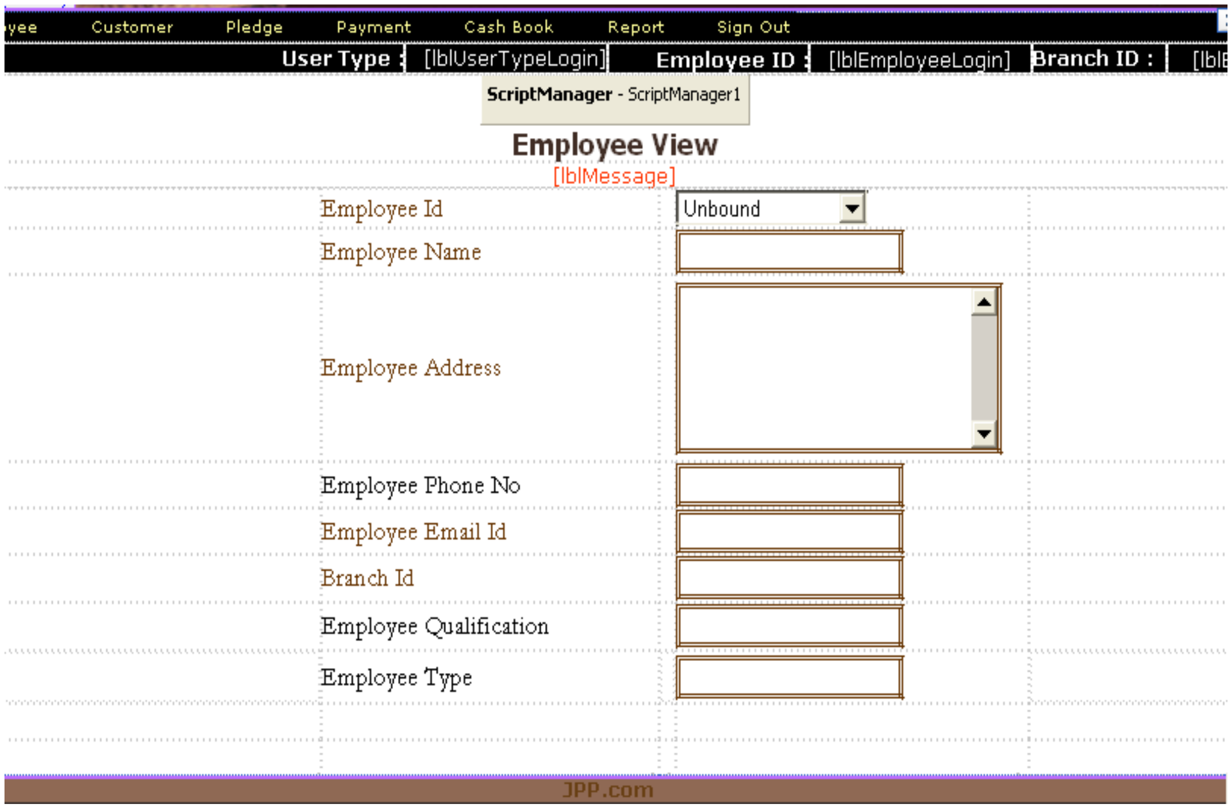
- On click of Edit link button, the Update and Cancel link buttons will appear.
- On clicking Update link button, it will update the Employee details.
- On clicking Cancel button, it will go back to Edit.
- On click of Delete button all Employee details gets deleted. But if there are no records present for the selected Employee then message is displayed to the user.
- The record for selected Employee gets updated. Record is updated in the datagrid.

Data Grid:

- All the information can be seen in Data Grid.
- If any information is updated or deleted, it will affect the Data Grid.

5.2.12 View Employee Information

Using this interface we can view Employee information.



On Page Load

- This will take the user to the screen where he/she can view the Employee details for the selected EmployeeID.

DropDownList:

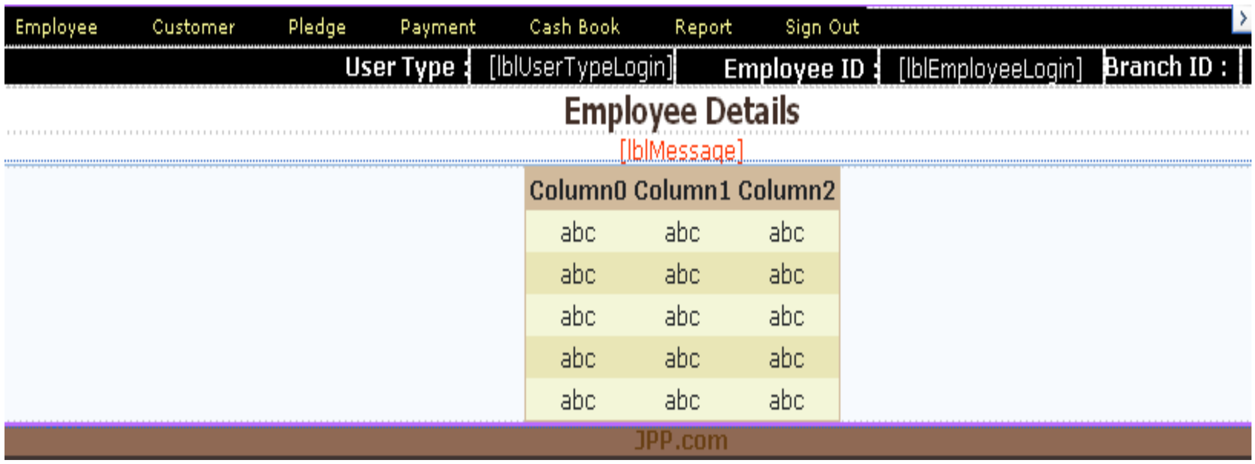
- All the Employee IDs are populated in the dropdownlist automatically.
- When any Employee ID from dropdownlist is selected, all the other details of that particular Employee ID is displayed.

Script Manager:

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.

5.2.13 Employee Details

This screen is used to view all the Employee Details that has been entered.



This screen is used to view all the Employee Details that has been entered.

On Page Load

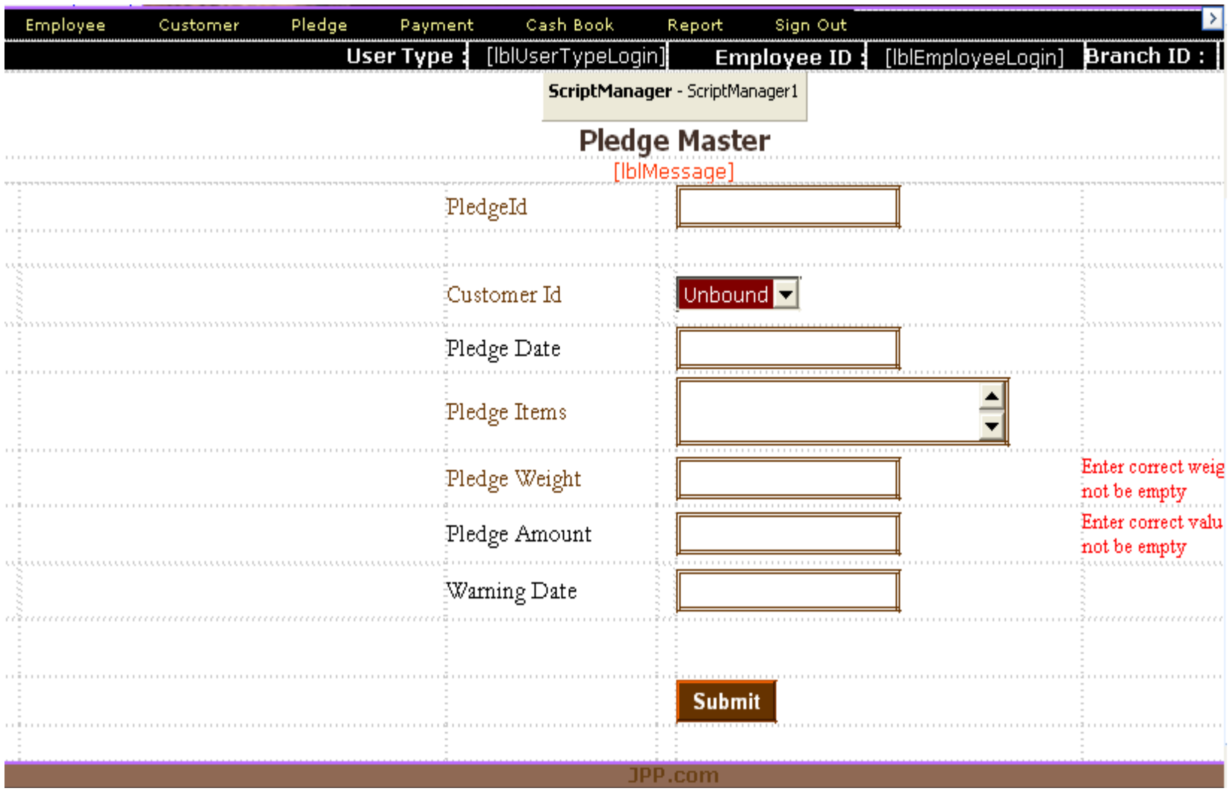
- The Employee Details are populated in the Grid View when the page is loaded.

Grid View:

- The Employee Details are populated in the Grid View and the user can view the details.

5.2.14 Add Pledge Information

Using this Interface user can add Pledge information.



The Pledge Master screen allows the user to enter information of Pledge. Once the user fills in the information and 'Submit' button is clicked, the information is stored in the database for further usage in future pages.

On Page Load

- The PledgeID is generated automatically when the page loads. Submit is enabled.

Submit:

- Enter the details of Pledge and Click on **'Submit'** button. A new PledgeID along with its details are created.

DropDownList:

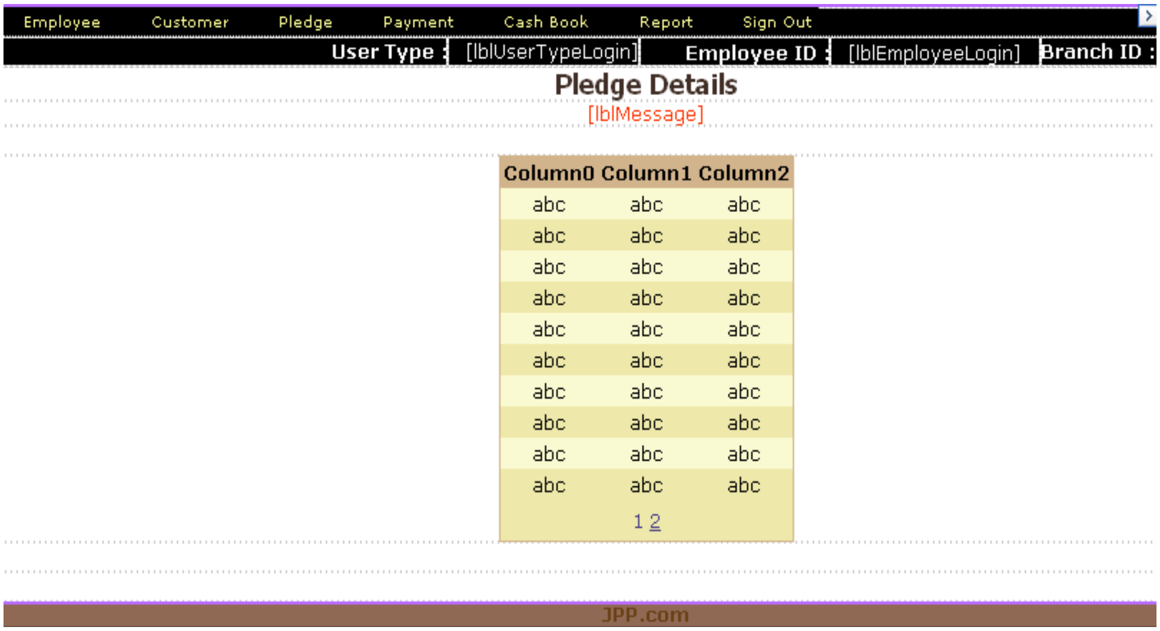
- All the Customer IDs are populated in the Dropdownlist. User can select Customer ID for that particular Pledge ID using DropDownList.

Script Manager:

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.

5.2.15 View Pledge Details

This screen is used to view all the Pledge Details that has been entered.



On Page Load

- The Pledge Details are populated in the Grid View when the page is loaded.

Grid View:

- The Pledge Details are populated in the Grid View and the user can view the details.

5.2.16 Add Payment Information

This screen allows the user to enter Pledge and Payment information. Once the 'Submit' button is clicked, the information is stored in the database and the Gridview.

On Page Load

- All the existing PledgeIds populate in the DropDownList when the page loads. 'Submit' is enabled.

Submit:

- Enter the details of Payment and Click on **'Submit'** button. The payment details are saved in the database and GridView.

GridView:

- All the Payment Details are calculated and populated in GridView when the 'Submit' button is clicked.

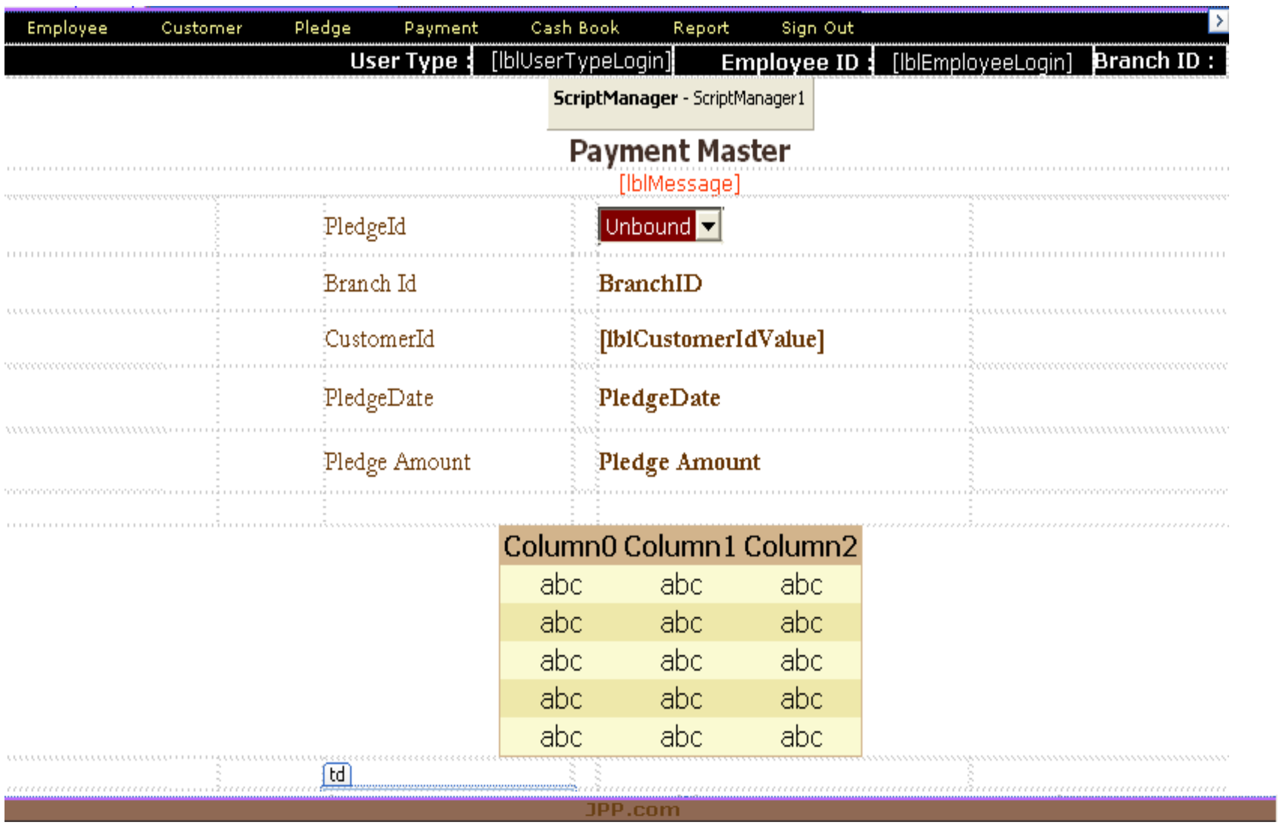
Label:

- The label enables to see all the payment details only. All the calculated Pledge Amount, NoofDays etc can be viewed but cannot be modified.

Script Manager:

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.

5.2.17 Payment Master



This Screen allows to view the Payment Details of a particular Pledge ID.

On Page Load

- All the existing PledgeIDs populate in the DropDownList when the page is loaded.

Label

- When any PledgeID is selected the other details are made to view through Labels which can only be read.

GridView

- All the calculated Payment and Pledge details are populated in the GridView.

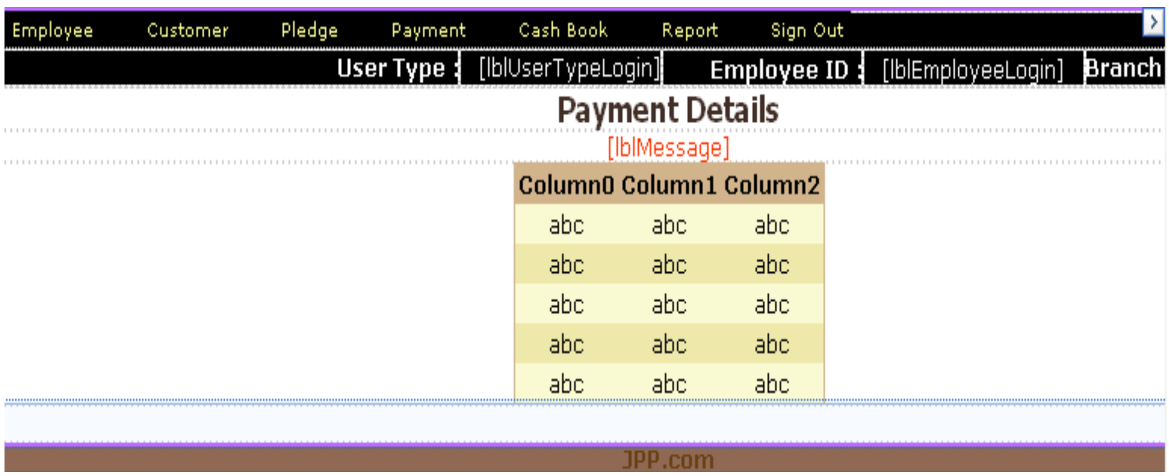
DropDownList

- All the existing PledgeIDs are populated in the DropdownList.

Script Manager

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.

5.2.18 Payment Details



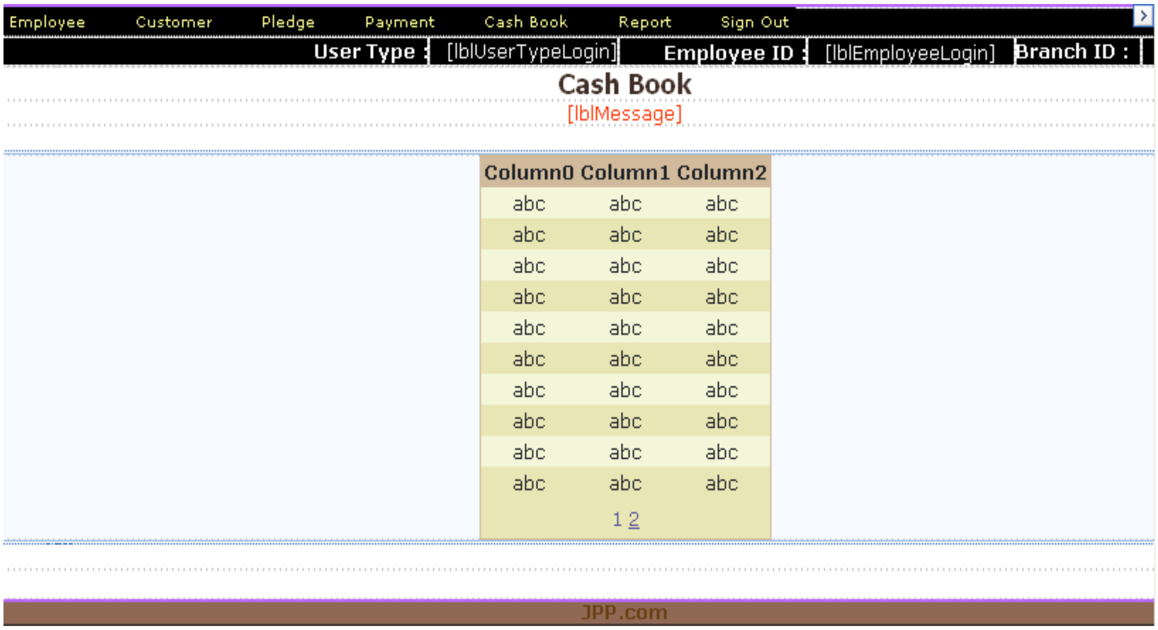
On Page Load

- The Payment Details are populated in the Grid View when the page is loaded.

Grid View:

- The Payment Details are populated in the Grid View and the user can view the details.

5.2.19 Cash Book



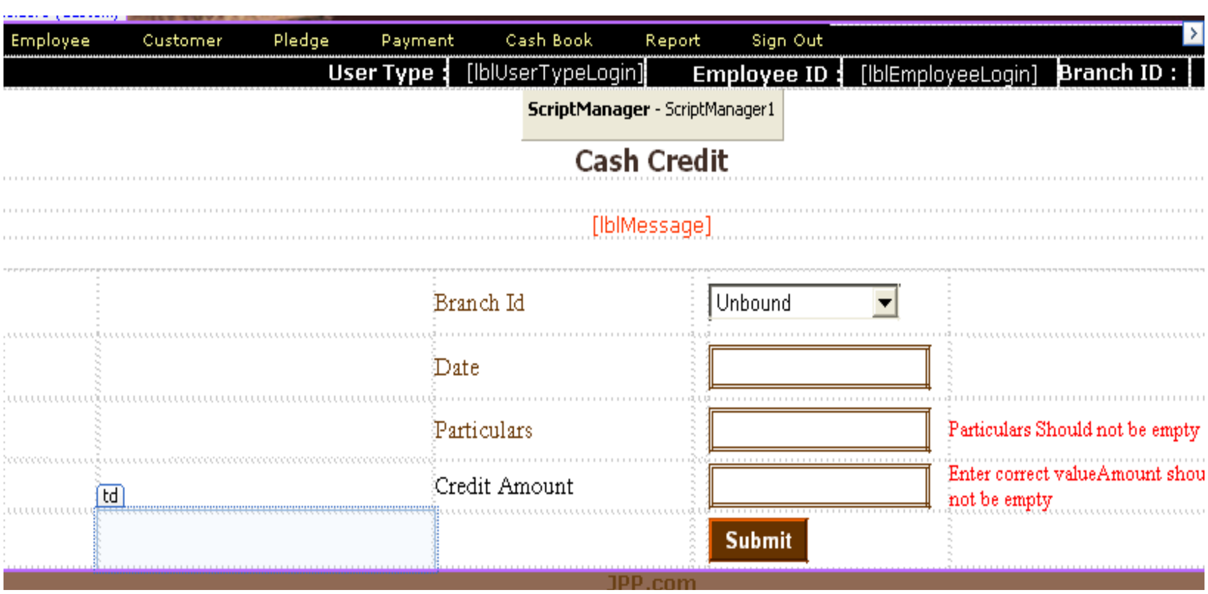
On Page Load

- The Cash Details are populated in the Grid View when the page is loaded.

Grid View:

- The Cash Details such as particulars, credit, debit are calculated and are populated in the Grid View and the user can view the details.

5.2.20 Cash Credit Details



This Screen allows to view the Cash Credited Details of a particular Branch ID.

On Page Load

- All the existing BranchIDs populate in the DropDownList when the page is loaded.

Submit:

- Enter the details of Cash and Click on **'Submit'** button. On clicking **'Submit'** the Cash details like Particulars, Credit, Debit etc will be inserted into the Cash Book in **'Cash Book'** page.

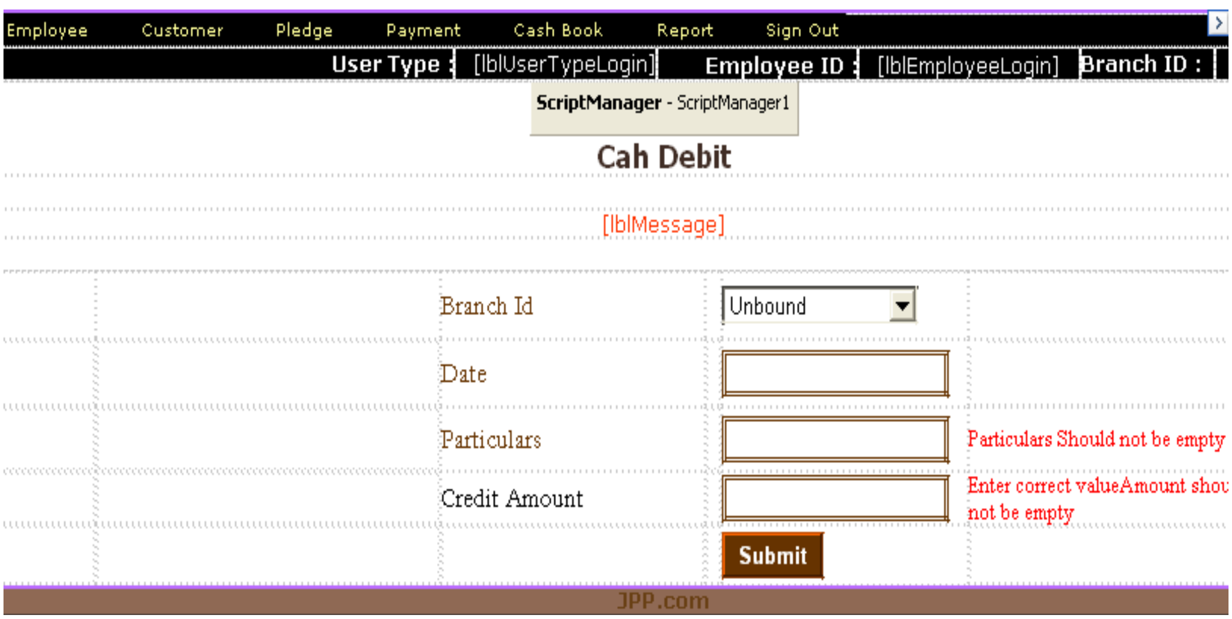
DropDownList:

- All the existing BranchIDs are populated in the DropdownList.

Script Manager:

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.

5.2.21 Cash Debit Details



This Screen allows to view the Cash Debited Details of a particular Branch ID.

On Page Load

- All the existing BranchIDs populate in the DropDownList when the page is loaded.

Submit:

- Enter the details of Cash and Click on **'Submit'** button. On clicking **'Submit'** the Cash details like Particulars, Credit, Debit etc will be inserted into the Cash Book in **'Cash Book'** page.

DropDownList:

- All the existing BranchIDs are populated in the DropdownList.

Script Manager:

- In this screen Script Manager is used which uses Ajax Library to avoid flickering of the page when the page gets reloaded during the updation.