

bScore Product Features

BBSS (I) Pvt. Ltd.
122.1st main, 1st block,
B.T.M. 4th stage,
Bangalore.



Table of Contents

1. Introduction.....	4
1.1. Need of Credit Score Generator (CSG)	4
1.2. What is CSG?.....	4
1.3. Scope and boundaries of the project	4
2. General Description	5
2.1. System Perspective	5
2.2. System Functioning.....	5
2.2.1. Extraction/Creation module	6
2.2.2. User Characteristics module.....	6
2.2.3. Master Module	6
2.2.4. General Module	7
2.2.5. Scrutinizing Module.....	8
2.3. Assumptions, Dependencies and Risks.....	9
3. Common Considerations.....	10
3.1. External Interface Specifications	10
Software interface	10
Hardware interface.....	10
3.2. Software Requirements.....	10
3.3. Hardware Requirements	10
3.4. User Interface.....	10
4.Functional requirements.....	11
Requirement 1: Data Extraction Tool Kit.....	11
Requirement 2: User Characteristics	11
Requirement 3: Managing Services	11
Requirement 4: Managing Questionnaire	11
Requirement 5: Submit of Application.....	12
Requirement 6: The Reporting Tool.....	12
Requirement 7: Uploading of Data	12
5. Work Flow Diagrams	13
5.1. General Work Flow Diagram	13
5.2. Admin Work Flow	14
5.3. Inputer Work Flow	15
5.4. Verifier Work Flow	16
5.5. Approver Work Flow.....	17
Annexure	18
Annexure 1: General Parameter	18
Annexure 2: Score Parameter.....	19
Annexure 3: Sample Form Layout	21

1. Introduction

1.1. Need of Credit Score Generator (CSG)

Generally in most of the banks, when an applicant applies for a loan or credit following process are followed

- Customer has to fill the details like age, salary details, family background etc.
- Submit the application
- Banker reviews it and validation process will be done for the application. Each bank follows its own method of validation.
- Then depending on each stage of validation result will be obtained

This is a highly time consuming process and probability for error is high.

A credit score is a three-digit number that is generated by CSG based on the credit history of prospective customers from which the banker can arrive at quick decision on the applicant. This number helps the lender identify the level of risk they may be taking if they lend to customer. Time consumed for calculating the score is very less and accurate.

1.2. What is CSG?

CSG is a user-friendly web application designed to generate a credit score for applicant by comparing his/her credit report and data available with the bank. The application generates a three digit score, based on the mathematical formula provided by the bank. This score provides the bank with a quantifiable risk factor for a given applicant.

Benefits of the proposed software

- 1) Improved Customer Service
- 2) Improved Management Information System (MIS)
- 3) Empowers faster decision and accurate score generating capabilities

The objectives and goals of the software system

- 1) Retrieve/print the required data in the predefined format.
- 2) Easy accessing
- 3) Different user level securities for accessing the software.
- 4) Reduce operating costs

1.3. Scope and boundaries of the project

Most of the parameters that are used to generate the credit score are user-definable. Maintenance of the software package is much easy.

Scorecard can be improvised in such that the CSG's database can be interfaced with banking database for uploading/downloading the desired data between CSG database and banking database, in future.

2. General Description

This section describes the general functioning of CSG, various factors affecting the software and its requirements.

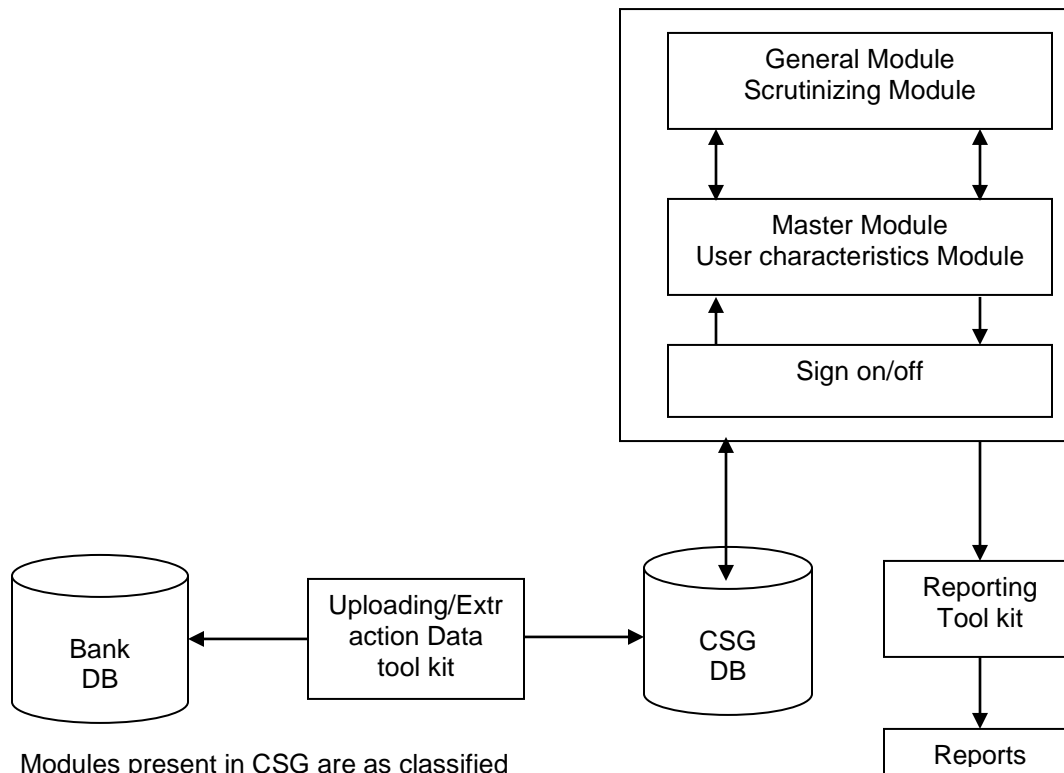
2.1. System Perspective

This document covers all the requirements stated by the Client. The intended system will incorporate all the functional requirements stated.

The system development will follow the *waterfall model*. Here all the requirement will be gathered and finalized with the customer in analysis phase. Coding and testing phases will be followed by the design document finalization and implementation will be done at customer side in the final phase.

2.2. System Functioning

Following diagram explains the general working procedure of CSG



Modules present in CSG are as classified

- Extraction Module
- User characteristics Module
- Master Module
- General Module
- Scrutinize Module
- Report Module

Each module is explained as below. Various functionalities present in each module are explained in functional requirements.

If any modification is done in any of the module (excluding Report Module) that needs updating in CSG database, needs authentication i.e. one user will be modifying and another user will be authenticating the modification made by other user.

2.2.1. Extraction/Creation module

This module is used to create the CSG database. Manipulation of data that are present in this database depends upon the privileges assigned to the user.

This is the first module to be executed after the installation of CSG at the customer place.

2.2.2. User Characteristics module

The system has many users. All of them will have different logins to interact with system. Depending upon the login different security levels will be granted to the users. The user characteristics module will enable the admin (user having all privileges in default) or users having equal privilege as admin, to add, modify or delete the user profiles and their access rights.

Here the different security levels for the user are given depending upon the role assigned to the user. Here the proposed system will maintain different

- Administrator has authority to generate entire functionality in the predefined report formats. User and Role maintenance are unique provisions assigned to the administrator. Administrator can create any user roles and assign any user any role.
- Only one role can be assigned to the user at a time.
- One role can be assigned to many users.
- Proxy usage of user id is restricted i.e. if the user enters his/her password incorrect for three times simultaneously, the user will be locked automatically.

Internally system will capture the login attempts of each user

Some of the functionalities that are present in this module are

2.1 Role maintenance

2.2 User profile maintenance

Only Admin/admin privilege users can access role maintenance and user profile maintenance.

2.2.3. Master Module

Only admin or admin privilege users can access this module. This is the core module of CSG application, which controls the entire functionality of CSG. Various functionalities are explained below

a. Service Definition

Service definition module will have facility to capture all the relevant definition information about the product. The user also has a facility to add 'n' no of entities under the product.

For e.g.: If credit card is defined as a product, user can define ‘n’ entities under credit score card can be defined like Gold type, Silver, Diamond etc as shown in [Annexure 3.5](#)

b. General Parameter Definition

Parameter that does not affect the score generation is defined here. For e.g.: Name, Address etc are defined here. Please refer [annexure 1](#) for various general parameters present in CSG

c. Score Parameter definition

Key Parameters required to generate the score for a particular service (entity) are defined here. User can add/modify/delete the parameters according to his/her desire. Classification of parameter is also possible.

For e.g.: If age is set as a parameter under this module, this can be further sub-classified as below

Age range	Score
-----	-----
20-30	15
30-45	10
45 above	05

Please refer [annexure 2](#) for various Score parameters that are considered by CSG for generating the score annexure 3.4 for form layout.

d. Exception Handler

The exception handler will provide facility to define exceptions as warning/exception/error based on the user level/role/group. User can modify the type of exception i.e. for example if Condition A is set as warning, it can be modified to error whenever the user desires.

For e.g.: If admin has initially set if age is less than 25, applicant is not eligible for applying. After some days the admin can modify it to warning. .

2.2.4. General Module

All users can access this module if accessing permission is assigned to the user by admin. Functionalities that are present under this module are

a. Sign on Module

The sign on module will ensure that only authorized users are allowed to log on to the application. The sign on module will validate the user before allowing user to log into the application.

Please refer [annexure 3.1](#) for screen layout

b. Application Id Generation Module

This generates the application id for the applicant based on the inputs entered. Validation of inputs is done by system automatically. The user also has a facility to modify the contents of an application id when it is incorrect.

Once the application id is authenticated and score is generated for the respective id the contents of the id cannot be modified.

c. Score Generation Module

This generates the score for the applicant based on the inputs entered. This is a mathematical process, which cannot be viewed through front end users.

This process validates the inputs entered by the user and then generates a score by applying a mathematical formula (which is defined by admin if required).

2.2.5. Scrutinizing Module

This module can be used (by admin) for auditing, track the accessing of database etc.

a. Audit trail and Control

The audit trail and control module will have facility to maintain records of entered user date and verified user details. Whenever a modification is done to any of the data facility to store the old values along with the new values will be provide. The module will have facility to inquire on the modified data and the new values. The module also will have facility to trigger mail to appropriate authority whenever any critical data get modified.

b. Rejected interface

Customer ID/Application ID and the reject reasons will be maintained in this module. Users will be able to inquire on the details whenever required. The customer master module will be interfaced with this module so that whenever the application or customer information is submitted for saving, based on a set of parameters the application will display warning message that a rejected application is found in the database.

c. Black Listed customer

International practice is to publish black listed customers among banks in a country. In most of the cases national identity number is used to identify such customers. Facility to capture fields like date of birth, passport number, mothers name etc will be provided so that in places where national identity number is not used these fields will identify a black listed customer. The customer master module will display warning message while submitting the form if such entries are present in black listed customer database.

User can view desired report for the above-mentioned modules in predefined formats.

2.3. Assumptions, Dependencies and Risks

This sub-section lists all the assumptions and dependencies taken into account while preparing the SRS and identifies associated risks.

The system has following assumptions...

- 1) Bank will provide the formulas for calculations if any.
- 2) The references specified above holds the final approval.

The system has following dependencies...

- 1) System works according to parameters set in the Master module.
- 2) Accuracy of data filled in by the applicant

Following are the risks involved...

- 1) The application will not be responsible to the end user's misuse of the application.
- 2) The Bank fully depends on the score generated by the CSG. Consistency, integrity and validity of the data provided by the applicant are taken for granted.

3. Common Considerations

This section specifies considerations or expectations that are common across all functional requirements stated in the SRS.

3.1. External Interface Specifications

Software interface

CSG can be accessed from any client browser like Internet explorer 5.0 or above

Hardware interface

Printer - At the time of printing of reports system will interact with printer as an external interface.

3.2. Software Requirements

Oracle 9i, Internet Information Services 5.0 or above, SMTP, Microsoft Internet Explorer 5.0 or above

3.3. Hardware Requirements

- PC with Windows minimum Windows 98 SE/2k/XP/server
- Minimum of 5GB Hard disk and Minimum of 128MB RAM

3.4. User Interface

All information required to implement the user interface in an efficient and effective manner is specified in this sub-section. The User Interface will be the high quality and easy to use.

Following are the some of the important menus available in the system.

- 1) Security Manager – To manage users and their access rights
- 2) There will be different menu options for generating predefined reports
- 3) Master menu- To initialize the basic parameters for functioning of CSG

4.Functional requirements

Requirement 1: Data Extraction Tool Kit

Operating Specification

This is the one time activity wherein the implementation team will help bank to extract the predefined data from the banking database to CSG database. Here the data extraction process should be atomic.

Here the proposed system will extract the predefined and required data automatically by connecting to old database and store it in current database without any user intervention.

Requirement 2: User Characteristics

Requirement 2.1: Role Maintenance

Operating Specification

Here different roles are created depending upon the functional rights assigned to them. Roles can be created, modified or even deleted (if no user has been assigned that role). User can create roles according to his/her desire.

Refer [annexure 3.1](#) for screen layout

Requirement 2.2: The User Updation

Operating Specification

New user can be created and existing role can be assign to him/her. Depending upon the role assigned the user will have access to the modules and functionalities. User id that is assigned to this user will be unique.

Refer [annexure 3.3](#) for screen layout

Requirement 3: Managing Services

Operating Specification

New service (e.g. Home Loan) can be created, modified or even deleted. User can create 'n' number of services. User can also create unlimited entities under each service.

Requirement 4: Managing Questionnaire

Add/modify/delete are the functionalities present under this. Two users will participate for each process i.e. if a user modifies, another user has to authenticate his/her modifications done. These parameters are defined globally, among which score parameters can be manipulated by the user during parameter settings for the entity but non score parameter remains globally i.e. common to all services.

Requirement 4.1: General (non score) Questionnaire

Operating Specification

New questionnaire can be created for the existing service and the same can be modified, enable or disabled or even deleted very easily. These questionnaires will not have any effect on the generated score.

Requirement 4.2: Score Questionnaire**Operating Specification**

A new questionnaire that affects the 'cutoff score' of service can be created/modified/deleted here. System will not allow the user to modify when some validation is on process. This can be done only when "Score generation" functionality is not in use.

Parameters can be grouped together and kept under a common heading.

This will be useful to the user when he/she needs some parameter to be present for a specific period only. For e.g.: During New Year season some parameters can be included and after the end of season it may be removed.

Requirement 5: Submit of Application**Operating Specification**

Applications can be submitted here by filling the required questionnaire. Necessary validation is taken care by the system before generating the score for the application.

Requirement 6: The Reporting Tool**Operating Specification**

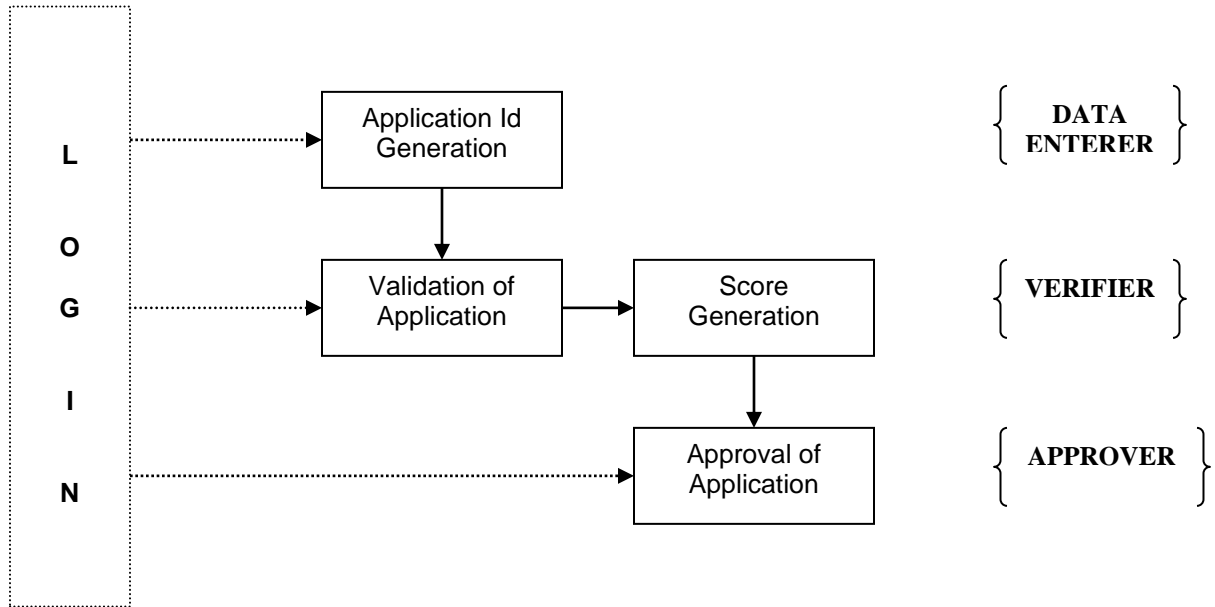
The reporting tool provides the different predefined reports to be viewed or printed by the system users.

Requirement 7: Uploading of Data**Operating Specification**

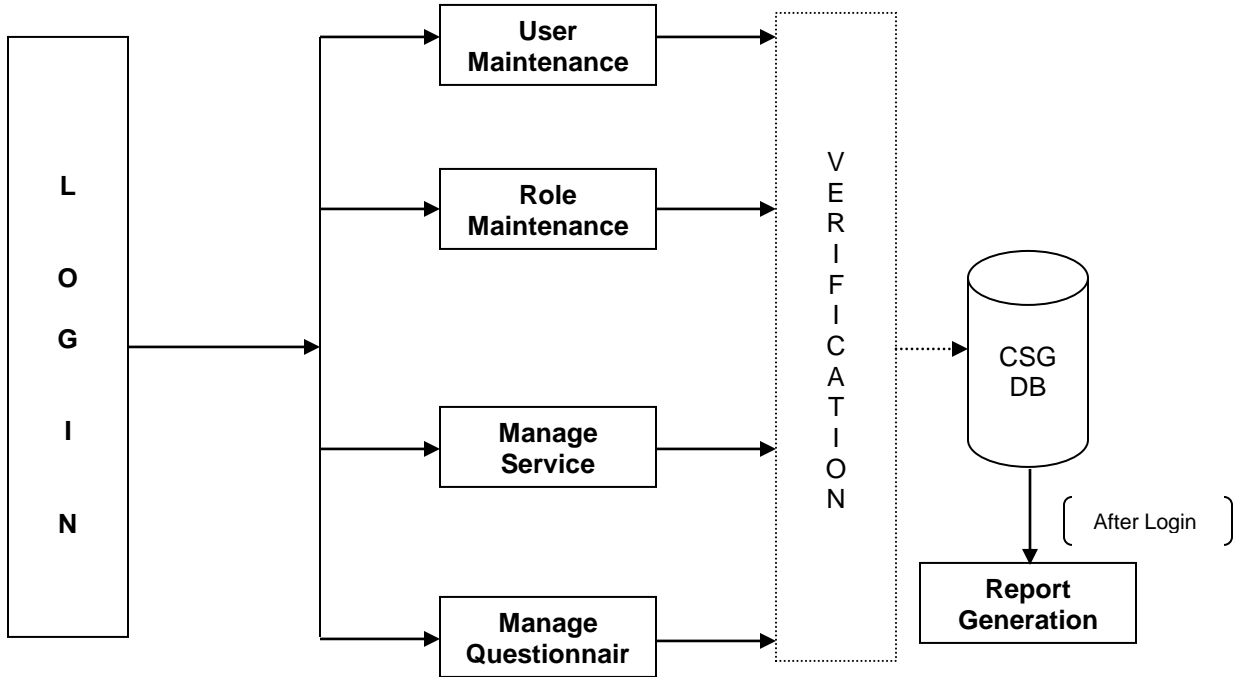
Data from CSG database can be exported to banking database if needed. This can be done according to user's desire. User has to enter the user id and respective password of banking database for connectivity.

5. Work Flow Diagrams

5.1. General Work Flow Diagram



5.2. Admin Work Flow



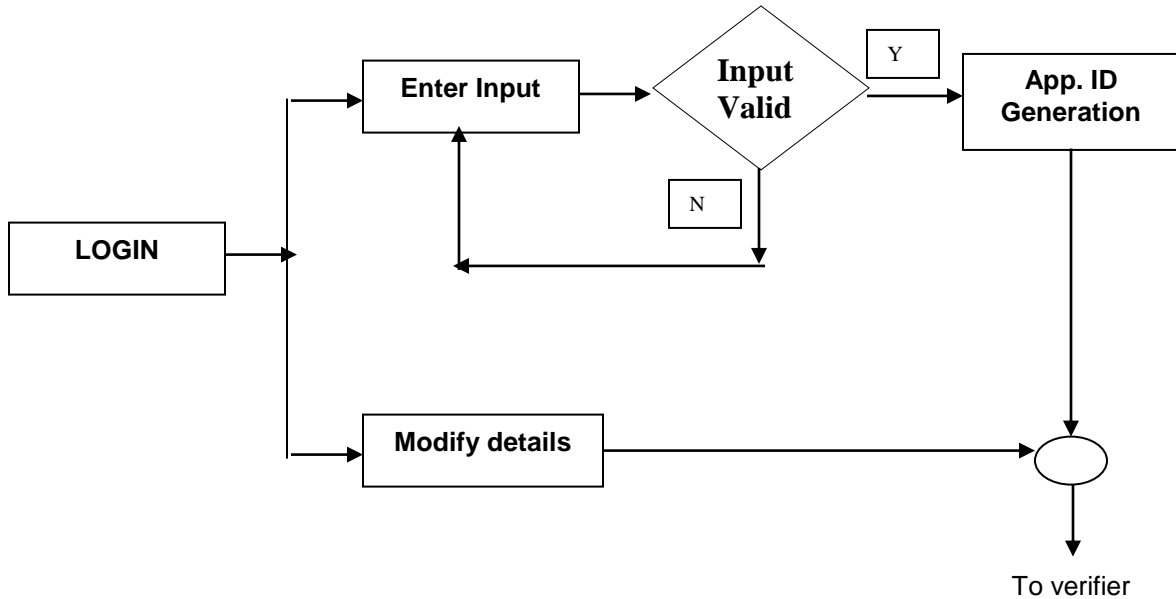
Description

Admin/admin role assigned users have privilege to access the menu options as listed below

Menu	Description	Sample screen no.
Sign on	Menu from which the user logs into CSG application	3.1
Role Maintenance	Role details can be manipulated	3.2
User Maintenance	User details can be manipulated	3.3
Score Parameter Definition	Parameters that affect the score will be declared	3.4
Manage Services	Service Details Maintenance	3.5

Note: If any process is done in the above mentioned menus will be updated in CSG database only when verification is done.

5.3. Inputer Work Flow



Note:

In above Work Flow Input validation is done by the system i.e. if the inputer has entered the data as 31/13/1998 system pops up a message “INVALID DATE”

Description

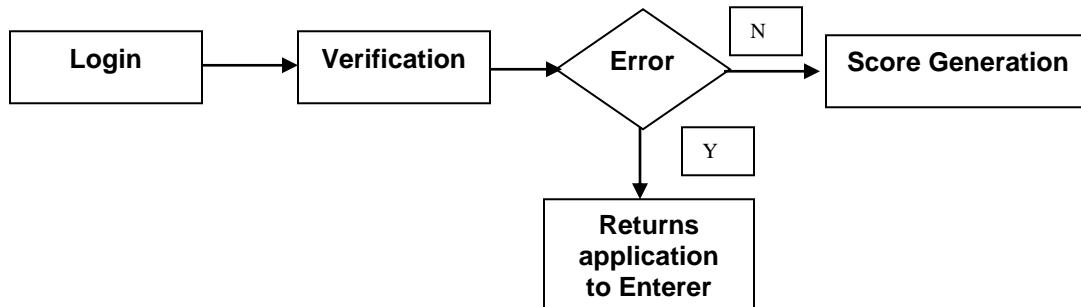
Users for whom inputer role is assigned can only access the following process

- Enter the values in the respective fields of the menu ([refer annexure 3.6](#) for sample screen) as present in the application screen
- Modify the details for already generated application id. This is possible only when the verifier has not verified the application id and bounced back to the inputer.

Menu	Description	Sample screen no.
Sign on	Menu from which the user logs into CSG application	3.1
Inputer Menu	Web page where the applicant details are captured	3.6

Note: It is assumed that the admin has enabled only the above-mentioned menu

5.4. Verifier Work Flow



Description

Verifier receives the application id from the inputer and he/she has the following options

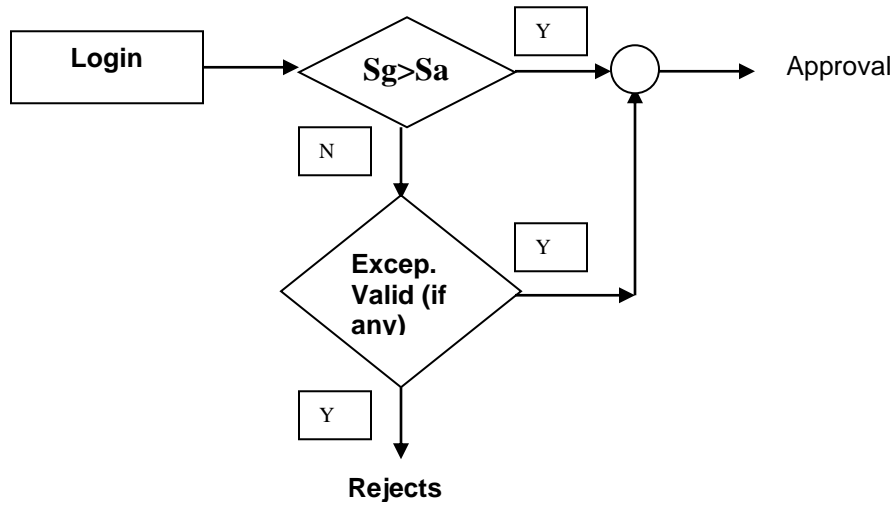
- Generate the score for the application id
- Bounce back to inputer if any incorrect values are entered by inputer

Verifier can only view the details of the application but he cannot modify the contents in the fields.

Menu	Description	Sample screen no.
Sign on	Menu from which the user logs into CSG application	3.1
Verifier form	Form where the verifier verifies the details and generates the score	3.7 , 3.7.1

Note: It is assumed that the admin has enabled only the above-mentioned menu

5.5. Approver Work Flow



Note:

- Sg- Score generated by CSG
- Sa- Score assigned to the service/entity

Exceptions will be popped up by system

Description

- Approve can approve the application (or)
- Reject the application

Menu	Description	Sample screen no.
Sign on	Menu from which the user logs into CSG application	3.1
Approver Menu	Here the approval of service is done	3.8

Note: It is assumed that the admin has enabled only the above-mentioned menu

Annexure

Annexure 1: General Parameter

Parameter's that are mentioned below will be present in CSG application. Parameters can also be included as per customer's suggestion.

1. Name
2. Contact address
3. Telephone number
4. City name
5. State name
6. E- mail id

Annexure 2: Score Parameter

Parameter's that are mentioned below will be present in CSG application. Parameters can also be included as per customer's suggestion.

Also the sub-classification can be increased/reduced for each entity & Service according to users desire.

Score Parameter	Sub- Classification (if any)
Gender	M
	F
Has Co-Applicant	Y
	N
Has Asset	Y
	N
Has Liability	Y
	N
No of Dependents	0
	1
	2
	3
	>4
Qualification	Till SSC
	Till HSC
	Diploma
	Graduate
	Post Graduate
	Professional
Property Cost (in lakhs)	Unknown
	<5
	5 – 8
	8 – 12
	12 - 20
Income	20 – 50
	Not filled in
	5K – 10K
	10K – 15K
	15K – 25K
	25K – 35K
Co-applicant's relation to applicant	35K – 75K
	Husband – Wife
	Wife – Husband
Martial Status	Other
	Married
	Single
Age	Other
	Blank
	21 – 29
	30 – 39
	40 – 49
	50 – 60
Profession	>60
	Service
	Business
	Self employed



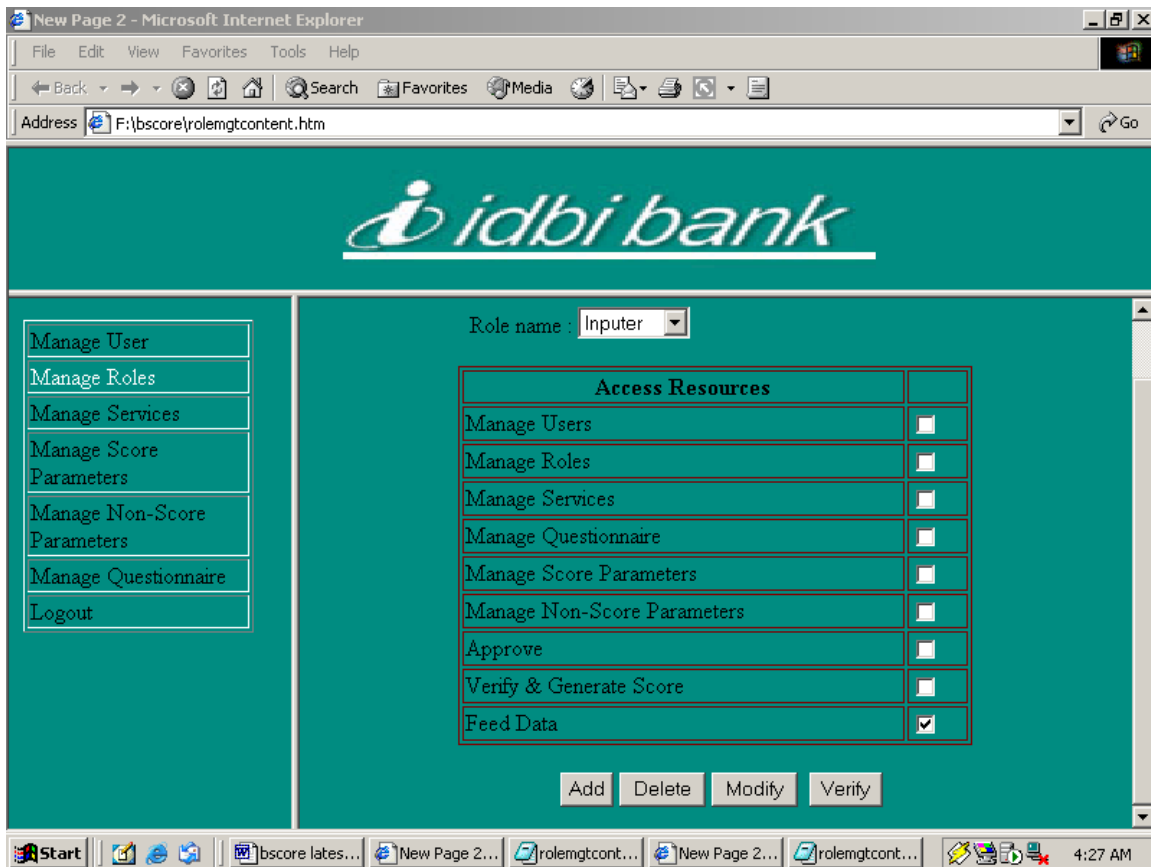
Annexure 3: Sample Form Layout

Forms that are given below are sample only. Appearance and position of each field may vary with CSG application.

1. Sign on Screen



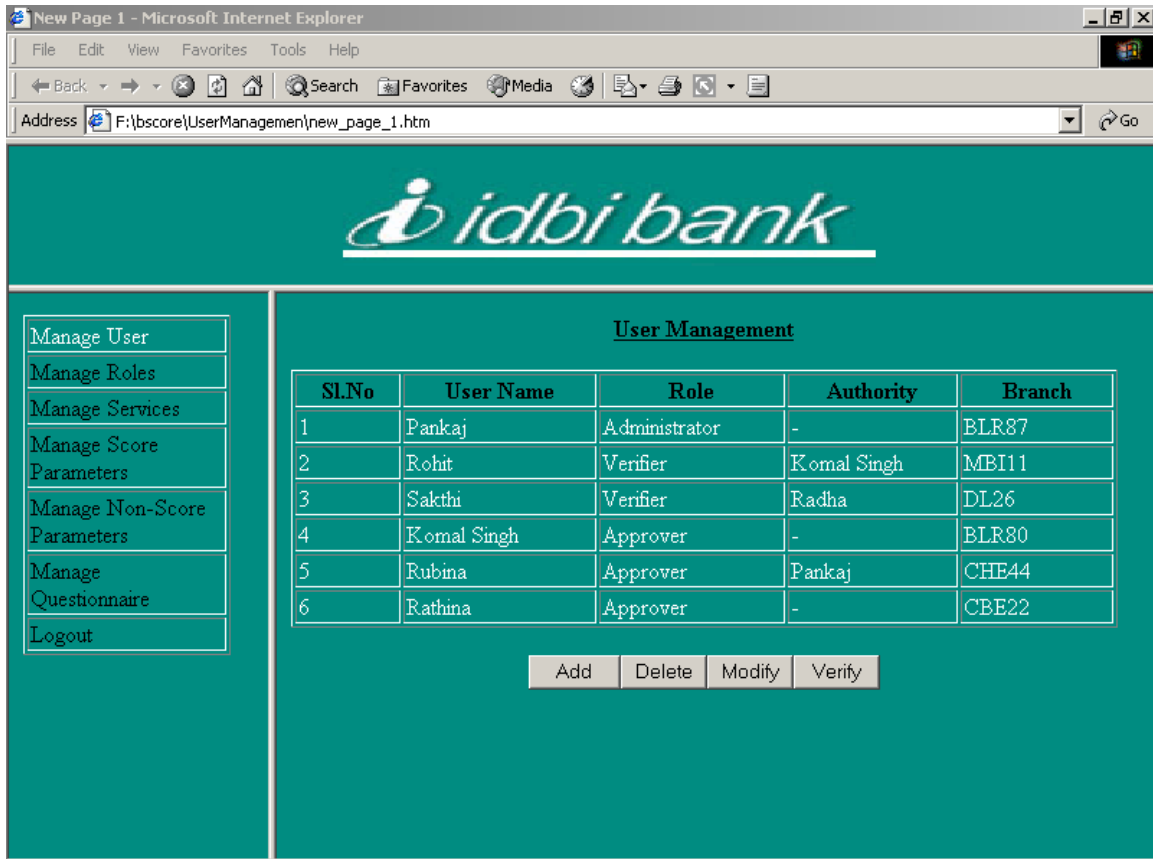
2. Role Maintenance Screen:



In Above form, if user clicks Add button then

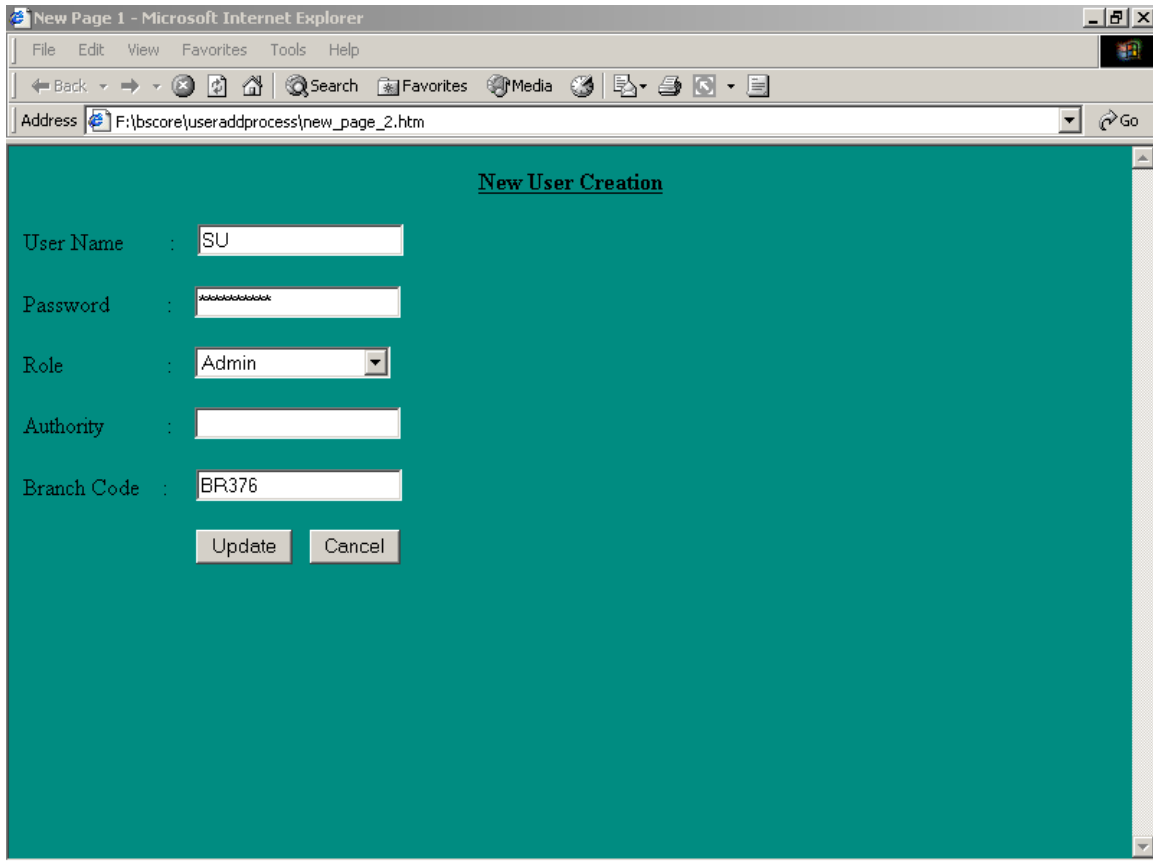
- The Drop down option will automatically modify into Text box.
- All the menu options will be displayed with default as ticked

3. User Maintenance



SLNo	User Name	Role	Authority	Branch
1	Pankaj	Administrator	-	BLR87
2	Rohit	Verifier	Komal Singh	MBI11
3	Sakthi	Verifier	Radha	DL26
4	Komal Singh	Approver	-	BLR80
5	Rubina	Approver	Pankaj	CHE44
6	Rathina	Approver	-	CBE22

When user clicks “ADD” button the following menu option will be displayed



New Page 1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address F:\bscore\useraddprocess\new_page_2.htm

New User Creation

User Name :

Password :

Role :

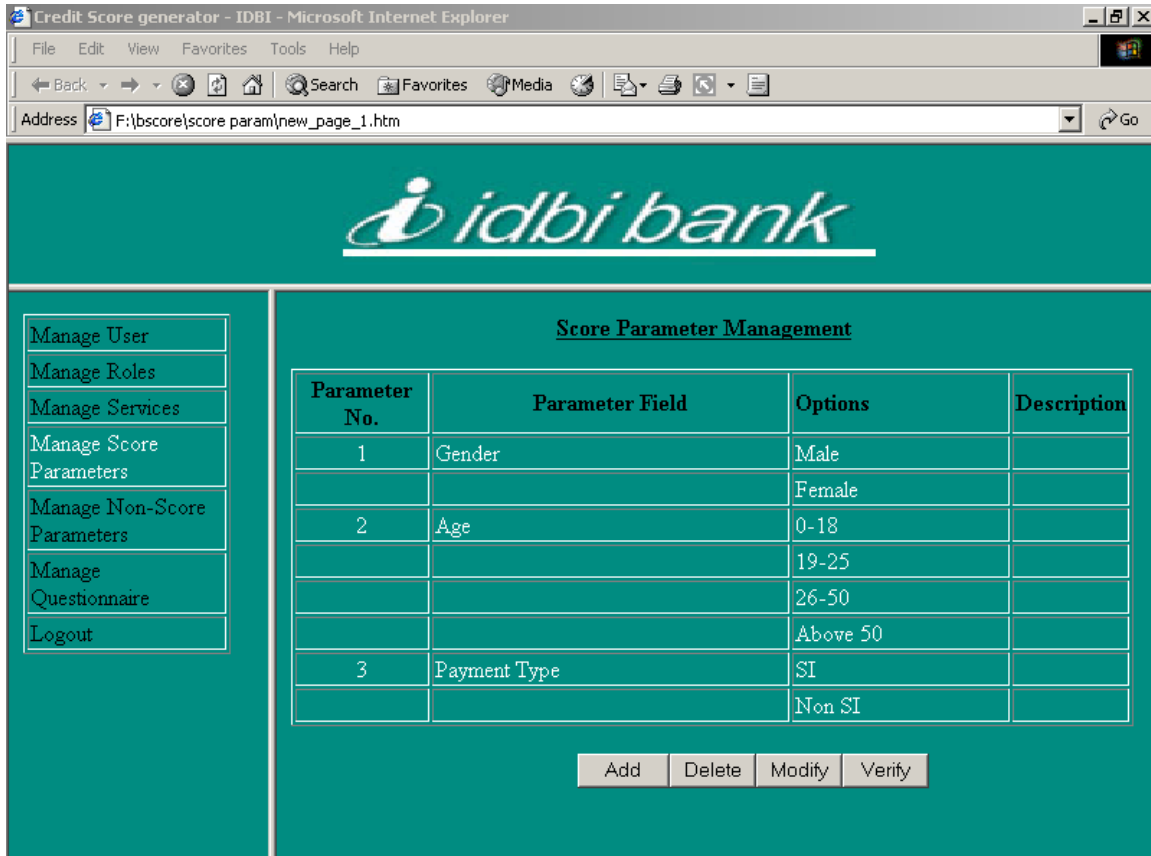
Authority :

Branch Code :

Note:

- 1) When the user logs in first time system asks user to modify his/her password.
- 2) Authority user will not be enabled when the role selected is either ADMIN or Approver.

4. Score parameter definition



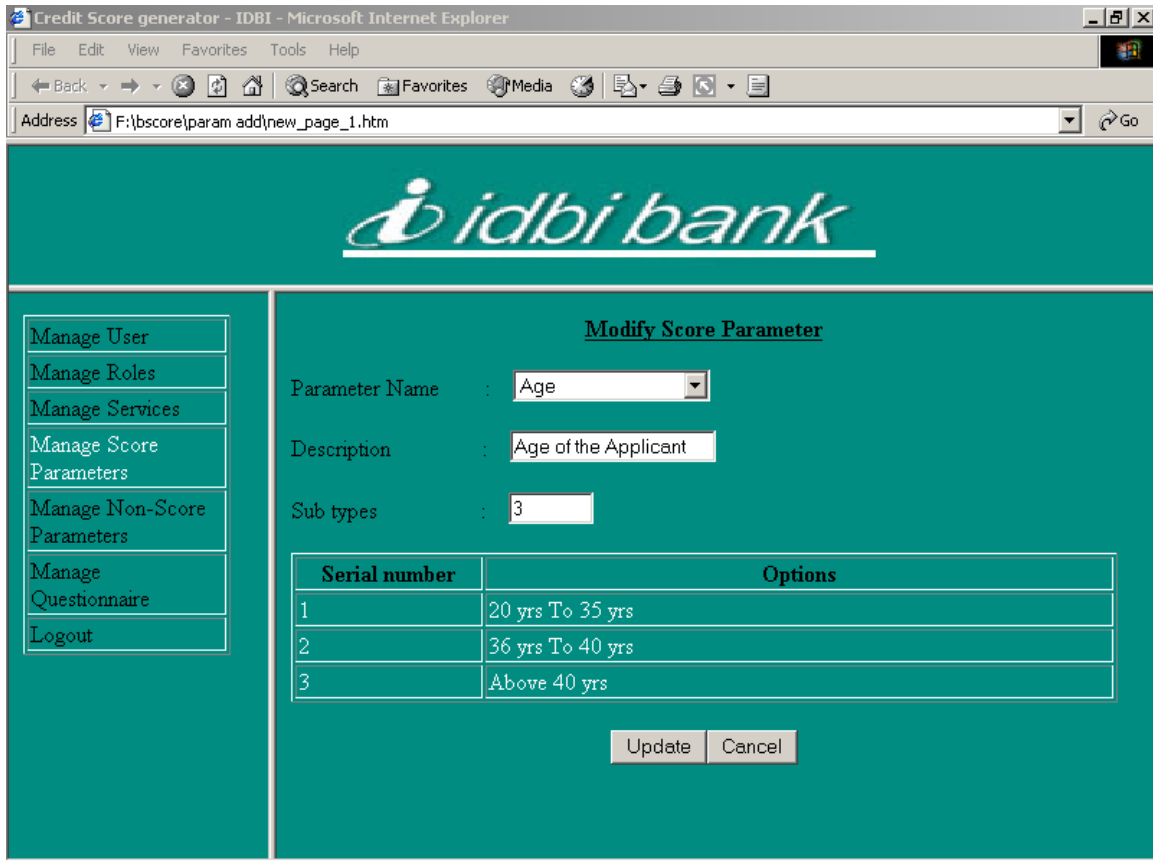
Above screen will display all the parameters present in the database.

If the user clicks "ADD" button, he/she can add parameter. Number of Options that has to be present in the parameter is parametrical. As shown in [Form 4.1](#)

If user clicks "modify" button user can

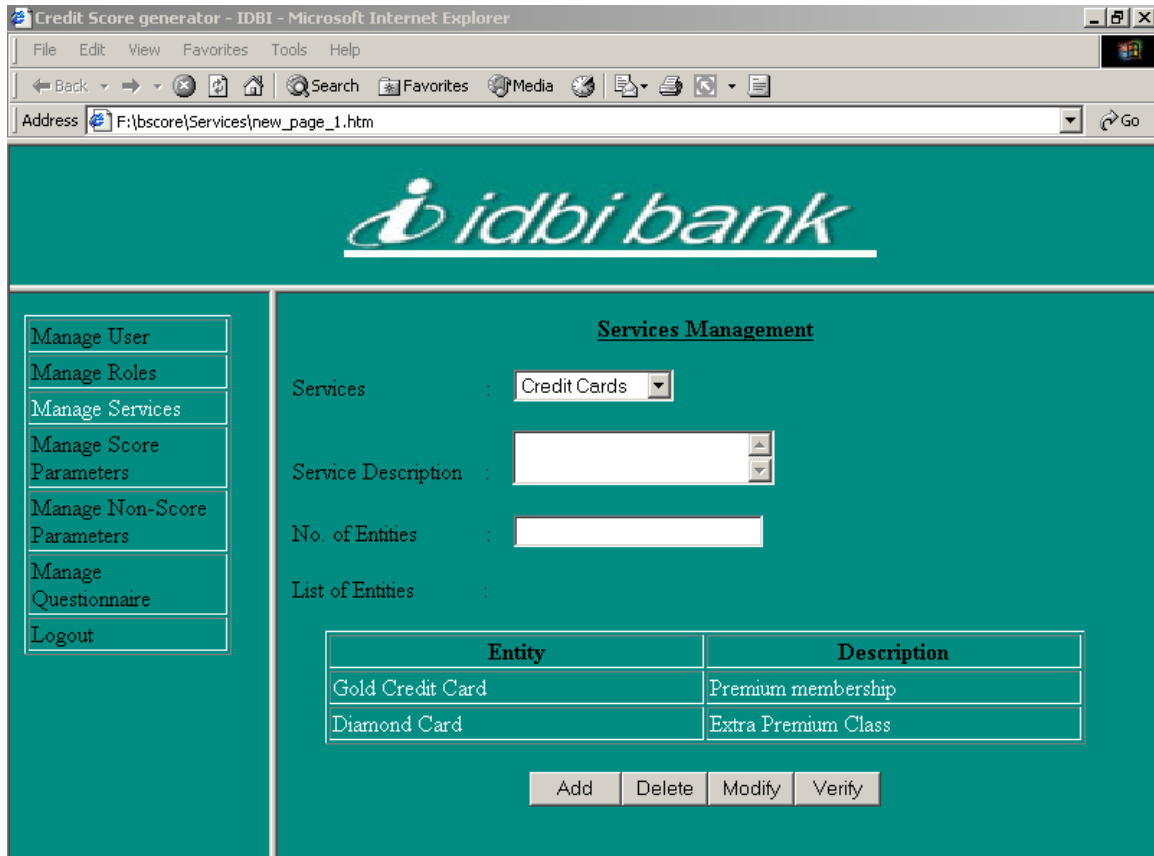
- Add/delete the options present in each parameter
- Modify name of the parameter

4.1 Score Parameter Addition



Total number of rows in the table will be decided by the sub-type value entered by the user.

5. Services



Services Management

Services : Credit Cards

Service Description :

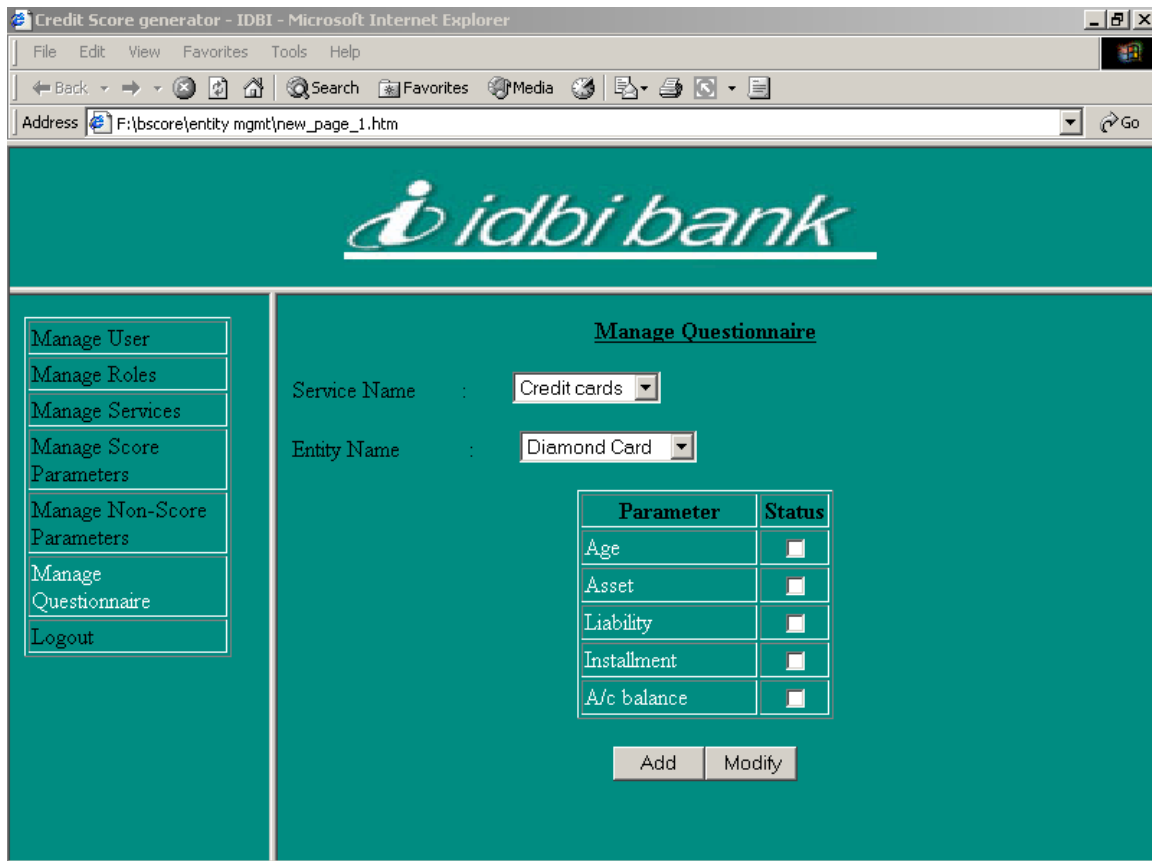
No. of Entities :

List of Entities :

Entity	Description
Gold Credit Card	Premium membership
Diamond Card	Extra Premium Class

Add Delete Modify Verify

5.1 Addition of parameters



The screenshot shows a web browser window titled "Credit Score generator - IDBI - Microsoft Internet Explorer". The address bar shows "F:\bscore\entity mgmt\new_page_1.htm". The page features the IDBI Bank logo at the top. On the left, there is a navigation menu with the following items: Manage User, Manage Roles, Manage Services, Manage Score Parameters, Manage Non-Score Parameters, Manage Questionnaire, and Logout. The main content area is titled "Manage Questionnaire" and contains the following form elements:

- Service Name : Credit cards (dropdown menu)
- Entity Name : Diamond Card (dropdown menu)
- A table with the following structure:

Parameter	Status
Age	<input type="checkbox"/>
Asset	<input type="checkbox"/>
Liability	<input type="checkbox"/>
Installment	<input type="checkbox"/>
A/c balance	<input type="checkbox"/>
- Buttons: Add, Modify

Parameters that are listed in [Form 4](#) will be listed in the tabular column as above. User can select the desired parameter.

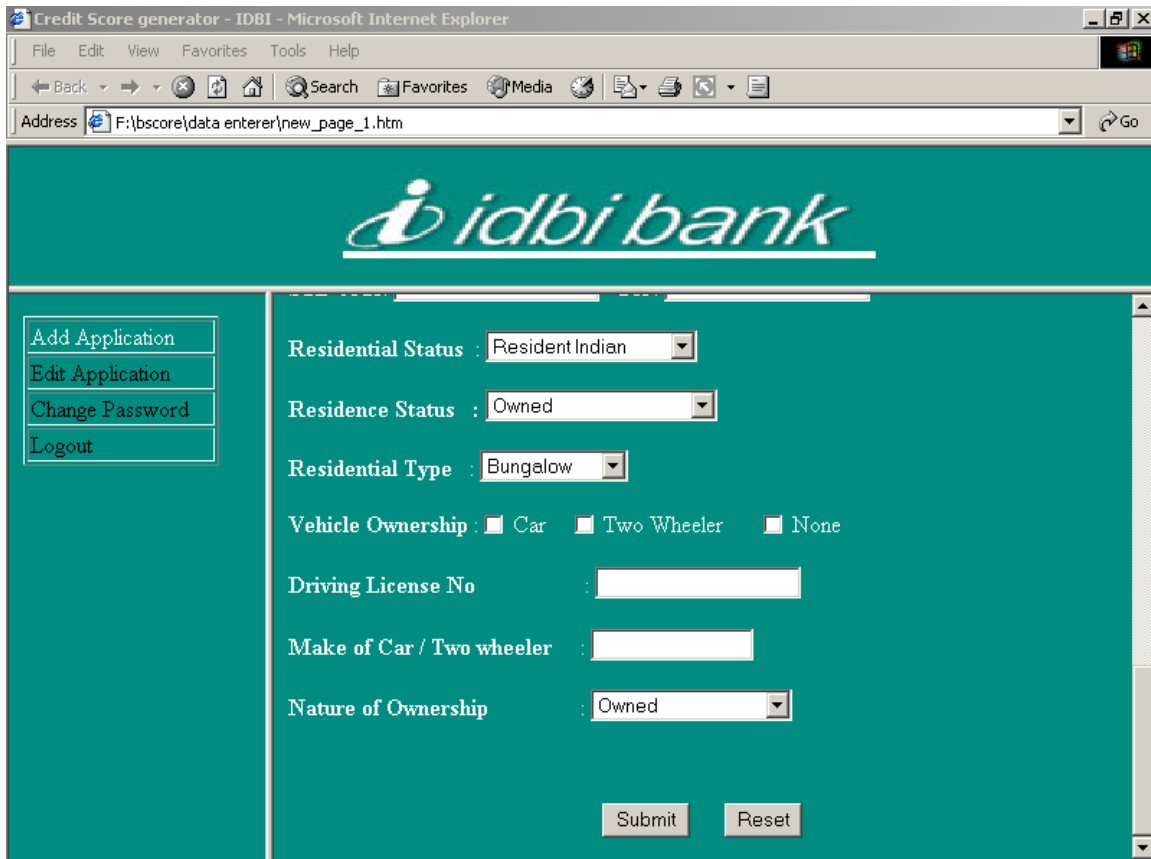
As soon as the user clicks add or modify button next form will be displayed where the user can do the following operation

- Arrangement order of the parameter in the Inputer form (here both score and Non-Score parameter will be displayed)
- Increase/decrease/modify the sub type option this is applicable only for score Parameters
- Score value for each Score parameter

As soon as the user completes the above operation(s),

Score will be generated (by mathematical formula) if initializing of parameter is done or any modification of score is done.

6. Inputer Screen



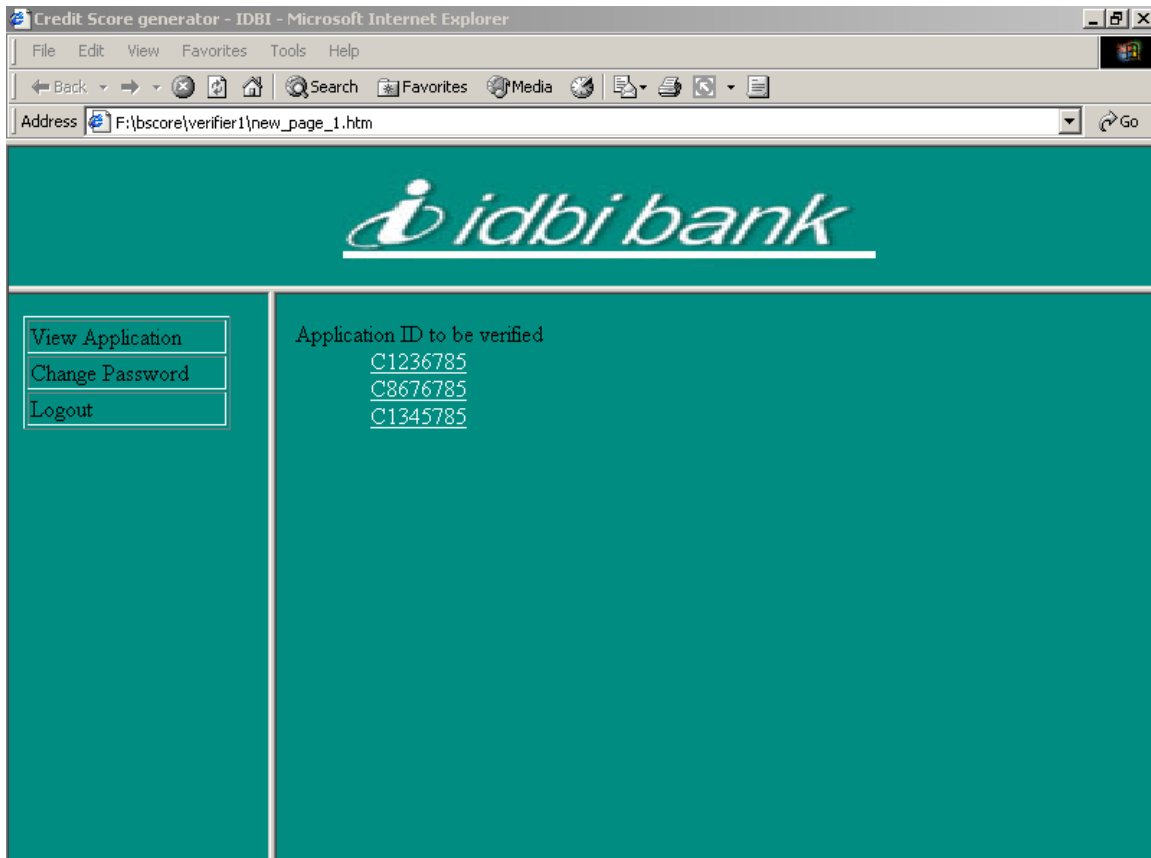
The screenshot shows a web browser window titled "Credit Score generator - IDBI - Microsoft Internet Explorer". The address bar shows the URL "F:\bscore\data enterer\new_page_1.htm". The page features the IDBI Bank logo at the top. On the left side, there is a navigation menu with the following options: "Add Application", "Edit Application", "Change Password", and "Logout". The main content area contains a form with the following fields and options:

- Residential Status : Resident Indian (dropdown)
- Residence Status : Owned (dropdown)
- Residential Type : Bungalow (dropdown)
- Vehicle Ownership : Car Two Wheeler None
- Driving License No :
- Make of Car / Two wheeler :
- Nature of Ownership : Owned (dropdown)

At the bottom of the form, there are two buttons: "Submit" and "Reset".

- Application id is generated when the inputer clicks "SUBMIT" button and is forwarded to the higher authority (Verifier).
- Edit application is enabled only when the verifier bounce back any application to Inputer, where the Inputer can modify the necessary fields and again submit.
- All the fields get cleared when "RESET" button is clicked"

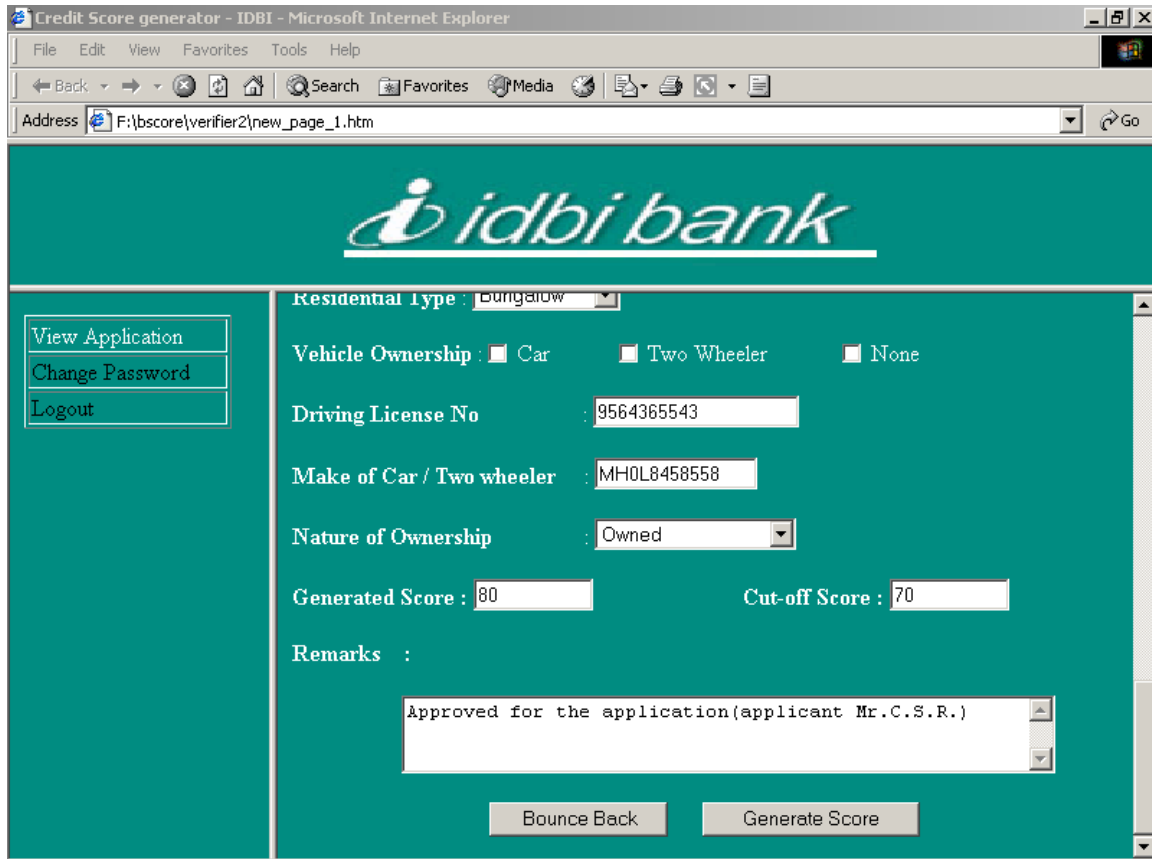
7.Verifier first screen



As soon as the verifier logs into CSG application, above screen will be displayed to verifier.

When user clicks the application id as shown above the following screen is displayed

7.1 Verifier Second screen



idbi bank

View Application
Change Password
Logout

Residential Type : Bungalow

Vehicle Ownership : Car Two Wheeler None

Driving License No : 9564365543

Make of Car / Two wheeler : MH0L8458558

Nature of Ownership : Owned

Generated Score : 80 Cut-off Score : 70

Remarks :

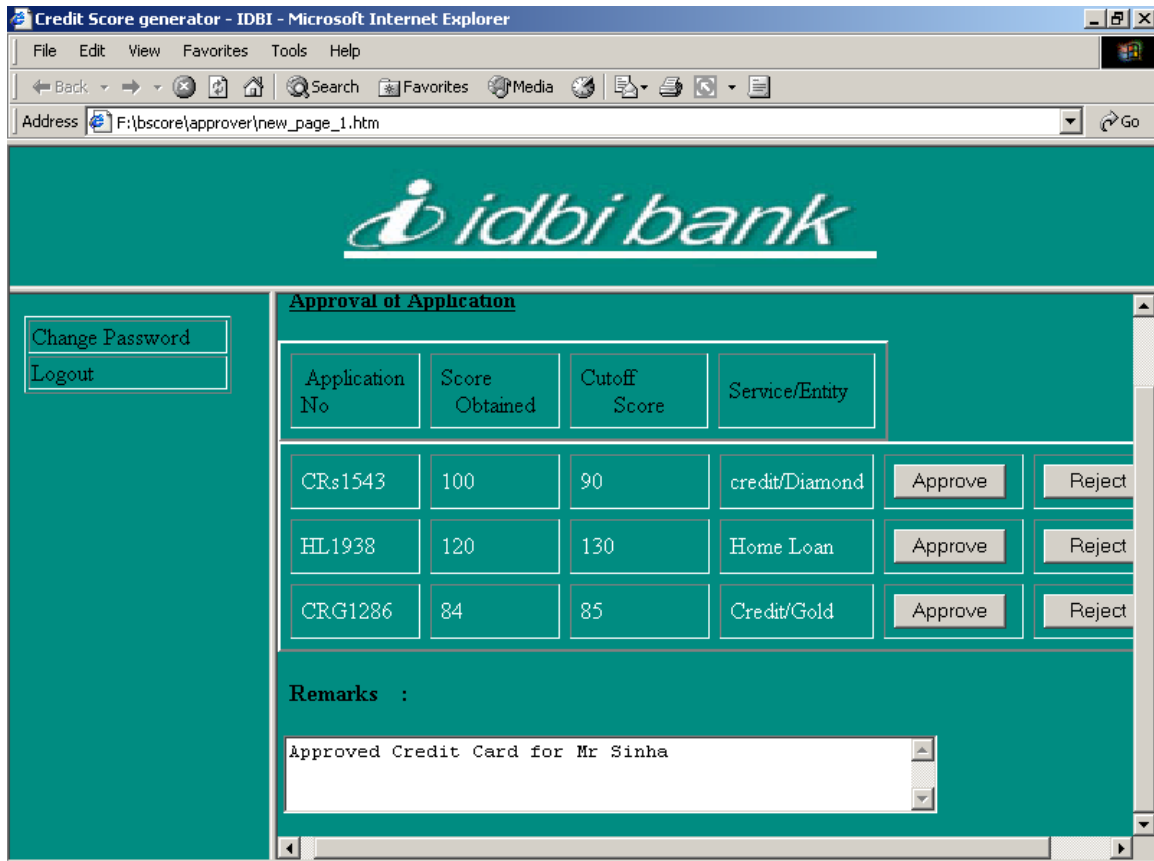
Approved for the application (applicant Mr.C.S.R.)

Bounce Back Generate Score

The details of the field can only be viewed

- When “Generate Score” button is clicked Score gets generated and is forwarded to approver
- When “bounce back” button is clicked application gets forwarded to Inputer for modification

8. Approver Screen



Approval of Application

Application No	Score Obtained	Cutoff Score	Service/Entity	Approve	Reject
CRs1543	100	90	credit/Diamond	Approve	Reject
HL1938	120	130	Home Loan	Approve	Reject
CRG1286	84	85	Credit/Gold	Approve	Reject

Remarks :

Approved Credit Card for Mr Sinha