Design Specifications for: Credit Communicator - Phase 1

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Revision History

Date	User	Changes	Version
4-19-2014	David Tran	Initial Draft	1.0
5-18-2014	David Tran	Included automated report emailing	1.1
5-25-2014	David Tran	Minor revisions. Indicated the font to be used.	1.2

1 Introduction

This document covers the specifications for ABC Financial's in-house credit repair software. This software does not do any actual repairing of a client's credit, rather, it assists employees with the task of keeping track of clients and automating some portions of the repair process, such as generating letter templates and client status reports for emailing. This is Phase 1 of a two-phase project. Phase 2 is intended to offer client's and sales reps access to a web portal where 1) Clients can see their current credit repair status and 2) Sales reps can view all clients they've signed on and those clients' corresponding credit repair statuses. Phase 1 is designed with Phase 2 in mind, so there will be some portions of the specifications that serve no purpose other than acting as placeholders for use in Phase 2. These portions are minor and the extra work required to code these into the application is negligible.

Please be sure to read the Requirements and the Notes sections before getting started.

2 Requirements

1) Create a web-based application that will allow users to build and control a database of clients. Must be fully compatible with Internet Explorer 10.
2) The application will require a username and password for access. Passwords must be encrypted when stored to the database.
3) The application will allow users to create document templates, which will allow for insertion of variable data fields (i.e. <<FirstName>>).
4) The application should include a document processing plugin, which will allow the user a way to select font size, paragraph formatting, and so forth on the templates.
5) The application will include an audit log, documenting every change.
6) The application will include a roles and permissions area, allowing Administrators to select which areas of the application users will have access to or be restricted from. Depending on a user's permissions, relevant pages of the application will display/hide elements.
7) The application will perform error-checking of data fields to ensure that they are either not left blank or that they contain valid data (i.e. email address is in correct format), among other types of error-checking, specified throughout this document.
8) The application will generate PDF reports of the client's profile and:
   a. Open email compose windows and attach them with the click of a button within the application.
   b. Automatically email these to clients directly on a nightly basis.

3 Design

3.1 Login Screen

See a screenshot below of the login screen. This should appear when the user types in the web address of the application. Initially, we will only allow intranet access to the application.

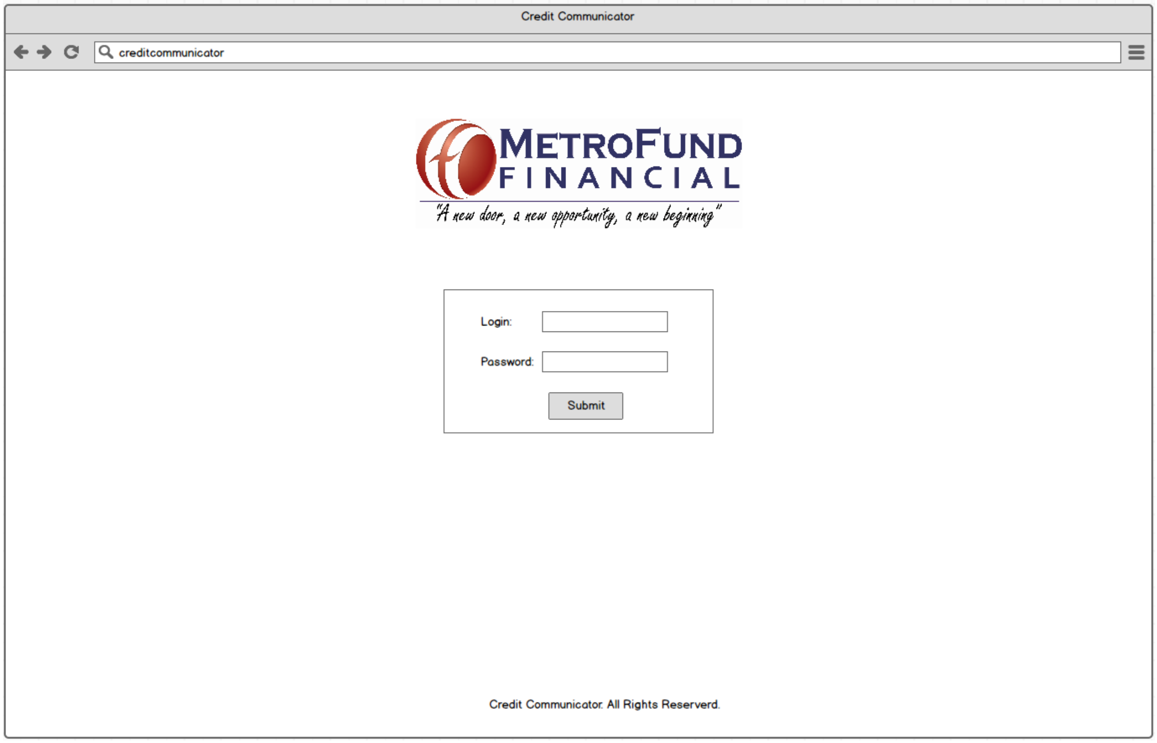


Figure 1: Credit Communicator Login Screen

After a successful login, the user should be taken to the Home screen, covered in the proceeding section. See the next image and table for a list of possible error messages.

Figure 2: Login Error

Displayed Message	Meaning / Logic
Login and password	Either the user name does not exist or the password

combination not found.	provided for a valid username is not correct.
Account is locked: <Reason>	User's account has been locked: <Reason>

Table 1: Login Errors

Note: If user accumulates 3 failed logins in a row, automatically lock their account and populate (or replace existing text with) the following into their "Reason" comment box: "3 FAILED ATTEMPTS. <Timestamp>". The timestamp refers to when their account was locked by the system in format: MM-DD-YYYY HH:MM:SS <AM|PM>

If the user is inactive for over 3 hours, please automatically log them out of the system.

3.2 Home Screen

When the user successfully logs into the system, display the following Home screen.

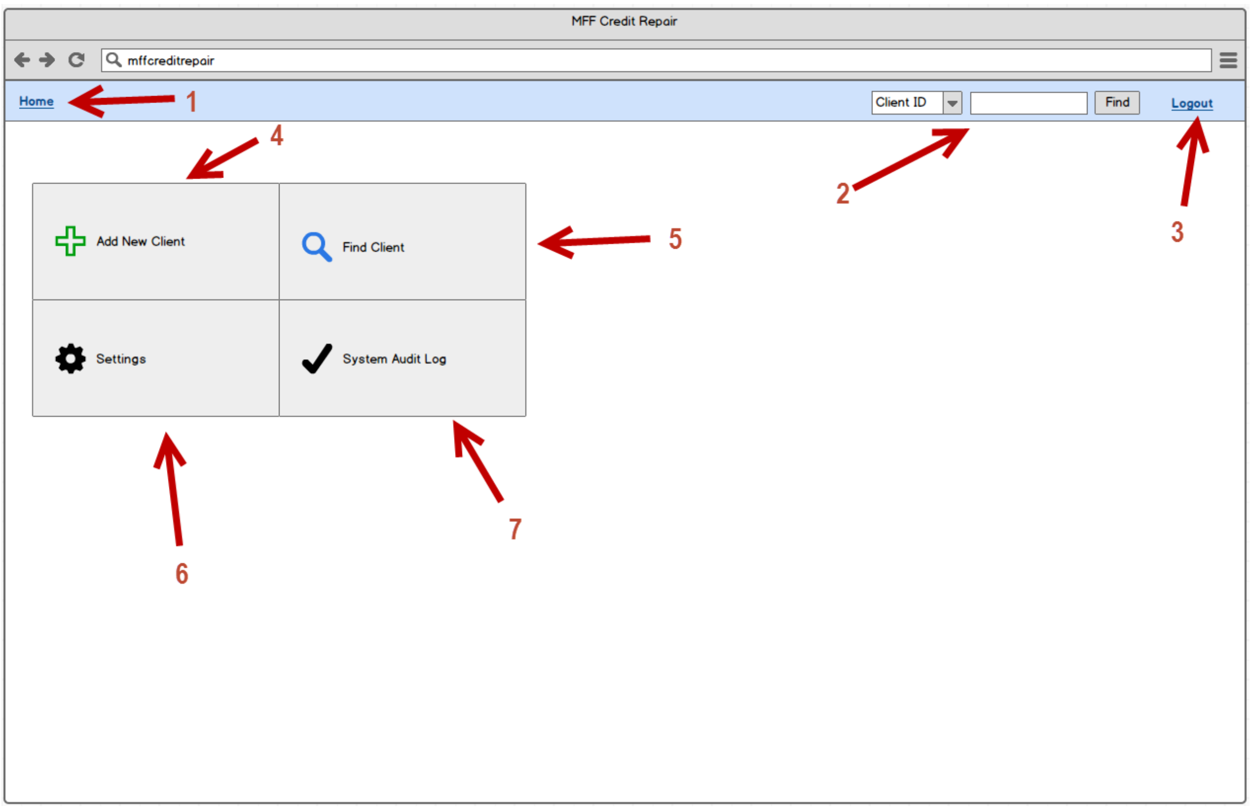


Figure 3: Home Screen

The list below describes the various numbered areas:

1. Home - Clicking this link will take the user back to the home screen. This top bar in light blue we see will appear in most screens of the website. Think of it as a top frame for quick navigation.
2. Fast Search - The "Fast Search" consists of three items: The dropdown list, the text input field, and the "Find" button.
    a. Dropdown list - This list will contain the following items in the order listed: Client ID, File ID, SSN, First Name, Last Name.

The default value that is selected will be the last one that was used when the "Find" button was clicked. That is, if a user selects "File ID" from the list and types in a search field and clicks "Find", the system will save "File ID" as the default selection for future use. The "default" value is saved when the "Find" button is clicked.

b. Text input field - This is a simple text box that the user will input search data into.
c. "Find" button - This will initiate the search. When the cursor focus is inside the "text input field", this hitting <Enter> on the keyboard will click this button. Clicking this button will have one of two outcomes:
    i. If only one search result is found, take the user directly to that client's "Client Info" screen. The "Client Info" screen is described later in this document.
    ii. If no search results are found or multiple search results are found, take the user to the "Find Client" page with the matching search results diplayed.

3. Logout - Clicking this link will log the user out of the system and take them to the "Login" screen.
4. Add New Client button - Clicking this button will take the user to the "Client Info" screen. Specifically, the "add new client info" screen where a new client can be entered. There is a difference in the way the Client Info screen looks on new clients and existing clients. This screen is described later in the document.
5. Find Client button - Clicking this will take the user to the Find Client search screen. This screen is described later in the document.
6. Settings button - Clicking this will take the user to the "Settings" screen, described later in the document.
7. System Audit Log button - Clicking this will take the user to the "System Audit Log" screen, described later in the document.

3.3 Client File Screens

This section will go over the various screens relating to client files.

3.3.1 New Client Info Tab

Below is a screenshot of the Client Info tab. When clicking the "Add New Client" button from the home screen, this is the screen that will appear. Note that this is the "blank" version of the Client Info screen. Viewing this screen on an existing file will look slightly different. More details on this later in the document.

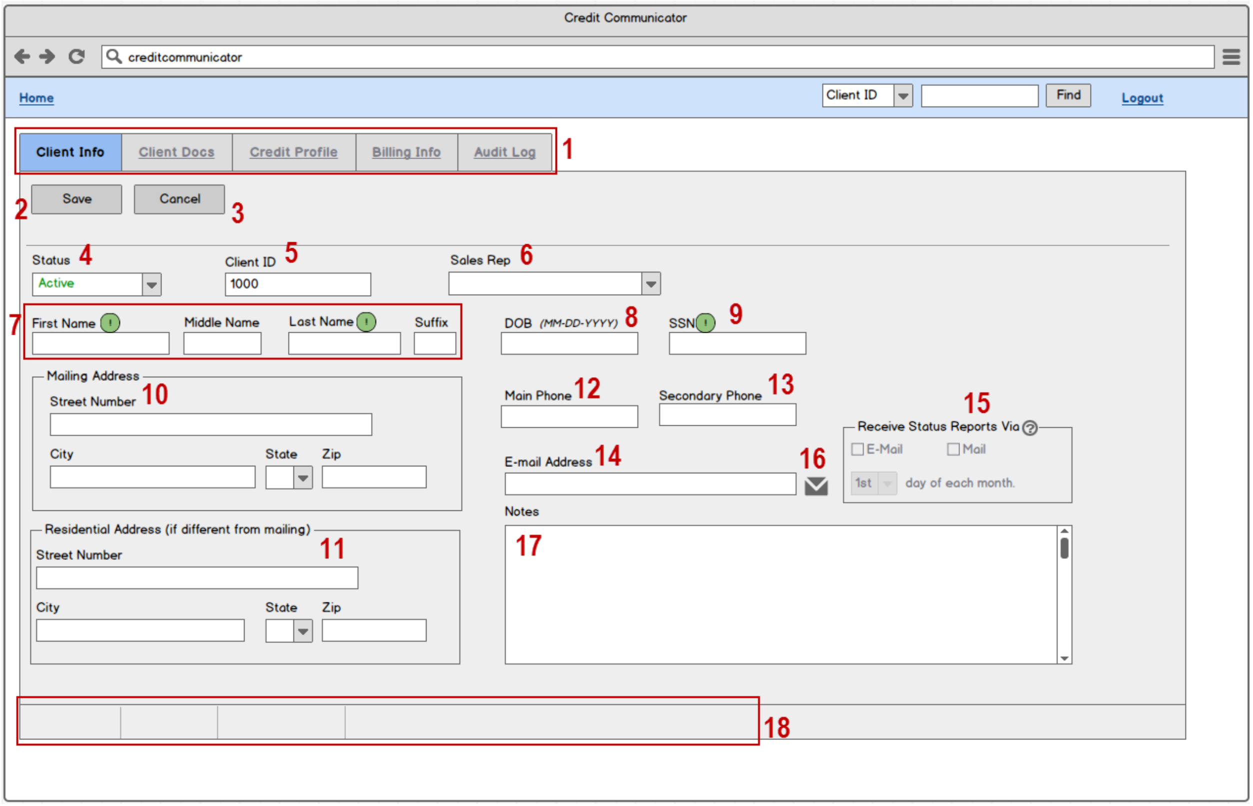


Figure 4: New Client Info Tab

Below, each of the fields of the Client Info tab is described.

1) Client File tabs - There are a total of 5 different tabs. Notice in the above image that the Client Docs, Credit Profile, Billing Info, and Audit Log tabs are grayed-out/disabled. This is because this is a blank client file. Data must be entered before the file is created, thus enabling the usage of the other four tabs. Use bold font here.
2) "Save" button - Clicking this button will save input data and create the client file in the database. More info on this in the next section. Prior to saving, error-checking must be done (covered in the next section).
3) "Cancel" button - Clicking this will cancel the process and take the user back to the Home screen.
4) "Status" dropdown - This dropdown will populate status values that are defined in the application's setup area in ascending alphabetical order. This dropdown's purpose is to identify the current state of the client file (i.e. it's in progress, it's a completed file, etc). This is covered later in the document. Use bold font here.
5) Client ID - The Client ID. This is a value the company uses to identify the client. No two client files can contain the same Client ID. This restriction will be included in the error-checking process, outlined in the next section.

6) "Sales Rep" dropdown - This dropdown is used to indicate which sales rep, if any, the client signed up under. The list of sales reps is modified in the application's setup area, covered later in the document. This list will be sorted in ascending alphabetical order.
7) First Name, Middle Name, Last Name, Suffix - These are fields where the client's name are entered. Notice the green (!) icon next to the First Name and Last Name. This means these two values are required.
8) DOB - This is the client's date of birth. The following formats can be used by the client for this field:
   MMDDYYYY
   MMDDYY
   MMDD (if this format is detected, then YYYY = current year)
   MM-DD-YYYY
   MM-DD-YY
   MM/DD/YY
   MM/DD/YYYY
   If the client enters any other format or an incomplete/invalid date value, display a red (!) icon, indicating an error that needs to be addressed (Figure 5) once the text box loses cursor focus. If the user inputs a valid value, convert it to the MM-DD-YYYY format. The data validation and format conversion will occur as soon as the user moves the cursor focus off the DOB text field (i.e. they click somewhere else on the screen).

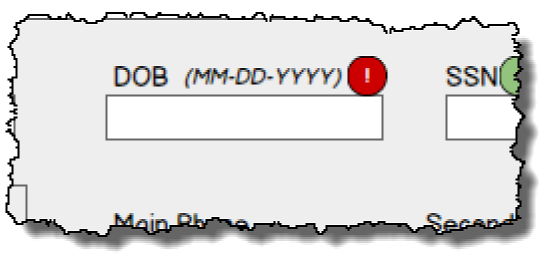


Figure 5: DOB Error-Check Fail

   If developer already has code that can be used for date error-checking and is at least as extensive as the one indicated here, that can be used.

9) SSN - This is the client's Social Security Number and is a required field. Similar to the DOB field, error-checking and conversion will be done as soon as the cursor focus is moved off this text field. For error-checking, ensure that there are exactly 9 digits in the text field, ignoring extra letters or special characters. If this check fails, change the green (!) icon to a red (!) icon. If there are exactly 9 digits in the field, convert the value to the following format: 123-45-6789.
10) Mailing Address fields:
    a. Street Number - This is a simple string value. No error checking.
    b. City - Again, a string value. No error checking.

c. State - This list will contain all the 2-letter abbreviations for all states in alphabetical order. The default value will be a null/blank.
d. Zip - This is the 5 digit zip code for the client. Error-checking will be done to ensure that this either contains exactly 5 digits or is left blank. If it contains anything else, display the red (!) icon to the right of the word "Zip".

11) Residential Address fields: All the same as Mailing Address fields. This extra address area is created because the client's mailing address may not be the same as where they currently reside.
12) Main Phone - The client's primary phone number. When the cursor focus is moved off this field, run the following validation:
    a. Remove all non-numeric characters (i.e. symbols and letters).
    b. Confirm that there are exactly 10 digits in this field. If there are 11, then the first digit must be a "1". If either of these checks fail, display a red (!) icon immediately to the right of the "Main Phone" text.
    c. Convert the contents of the field to format "123-456-7890" if the check in #b passes.
13) Secondary Phone - Another optional phone number field. Error-checking and data formatting follows the same logic as the Main Phone.
14) E-mail Address - This is the client's email address. Error-checking on this field will be done when the cursor focus is moved off the text box, ensuring the following (unless developer already has existing error-checking code they can use here):
    a. That there is exactly one "@" symbol somewhere in the email address.
    b. That the first character of the email is not a period or a @ symbol.
    c. That there is at least exactly one period somewhere after the @ symbol.
    d. That the character following the @ symbol isn't a period.
15) Receive Status Reports Via - This indicates the primary method with which the client would like to receive monthly status updates and the day of the month. The "number" dropdown will indicate the day of the month they are to receive the update and will default to the day of the month their file is created (i.e. today). It will range from 1st to 31st. On the client creation screen, all items within this container will initially be disabled. Once the "Save" button is clicked, if an email address is populated, mark the "E-Mail" box. If one is not provided, mark the "Mail" box.
    Clicking the help icon "?" will display the following dialogue:

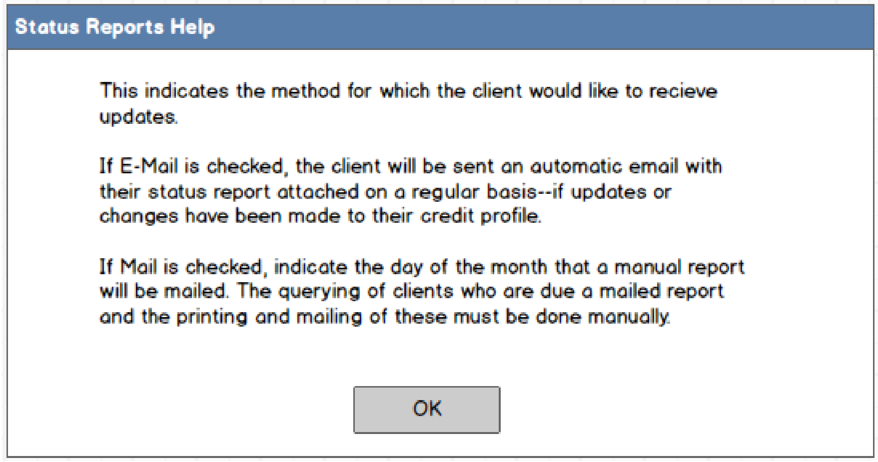


Figure 6: Status Reports Help

16) E-Mail icon - Clicking this will compose a new email message in the computer's default email software with the client's email in the "to" field. If no client email is provided, the composed email will have a blank "to" field.
17) Notes - This is just field that allows users to enter notes about the client. Hard cap the character limit to 1000 so that when 1000 characters is reached, the user cannot type anymore.
18) Footer information bar. No data can be seen here on a blank file, but when data is saved, some client information will be populated down here for quick referencing by the user.

3.3.1.1 Error-Checking

Error checking needs to be done when the "Save" button is clicked. When the "Save" button is clicked on the Client Info page, the following error-checking needs to be carried out:

1) Ensure that no fields that have immediate error-checking (i.e. the DOB field) have a red (!) icon next to them. If this check fails, display the following:

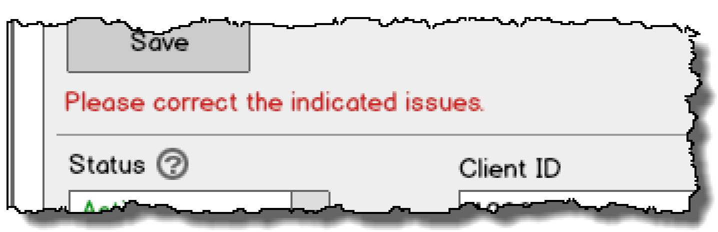


Figure 7: Error Checking

2) Ensure that all required data fields, indicated by the green (!) icon contain data. If this check fails, display the following:

Figure 8: Missing Required Fields

3) The "Client ID" field must contain a unique value. That is, the same Client ID cannot be used on more than one active (as opposed to a deleted file, more on this later) client file. If the provided Client ID matches that of another file, display the following:

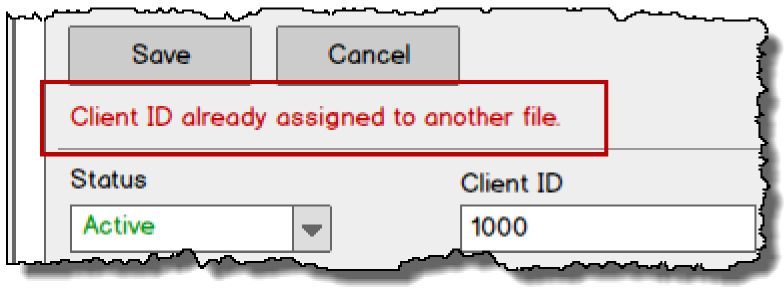


Figure 9: Duplicate Client ID

4) Like the "Client ID", the "SSN" field must contain a unique value. No two active client files can contain the same SSN, except for the case where the SSN is all zeroes (000-00-000). Otherwise, if non-zeroed duplicate SSNs are detected, display the following:

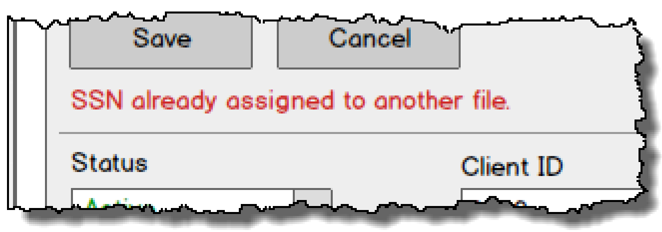


Figure 10: Duplicate SSN

3.3.2 Existing Client Info Tab

The below screenshot displays how the Client Info tab looks when the "Save" button is clicked on a blank client file, resulting in the creation of a new client file, or when viewing an existing client file and then saving.

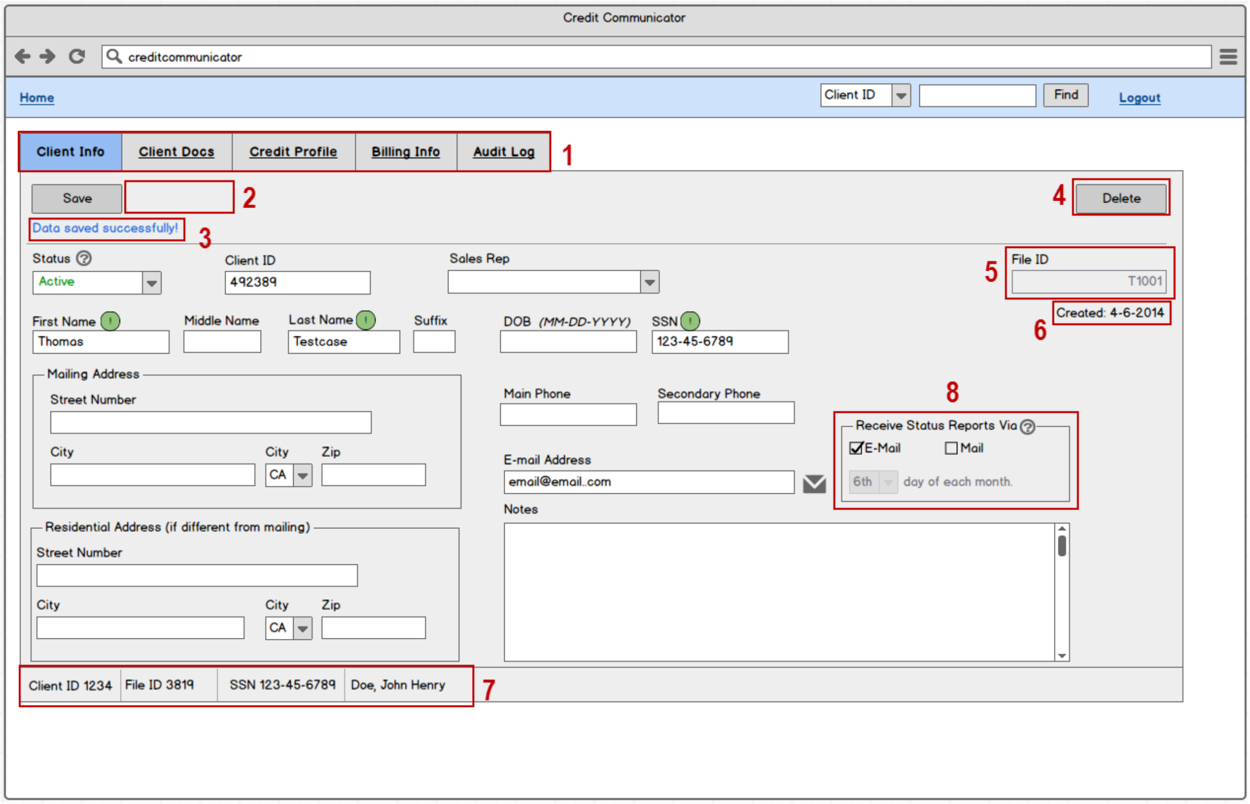


Figure 11: Existing Client Info Tab

This screen is a lot like the new client file creation screen, seen in Figure 4. See below for a description of the various differences, shown in the red numbered areas.

1) The various client file tabs are now enabled and can be clicked.
2) The "Cancel" button no longer appears.
3) This "Data save successfully!" text only appears when the page is refreshed after the "Save" button is clicked. Normally, this text would not be displayed when viewing an existing client file. There would only be two scenarios when this text appears:
   a) Immediately after clicking "Save" to create a new client file.
   b) Immediately after clicking "Save" to update an existing client file.
4) "Delete" button - This will "delete" the client's file. By "delete", we mean this file will be hidden, so that it will essentially be non-existent for users of the system. This also means this file will not be included when checking for duplicate client ID or SSNs on other files. When this button is clicked, a confirmation screen will first appear:

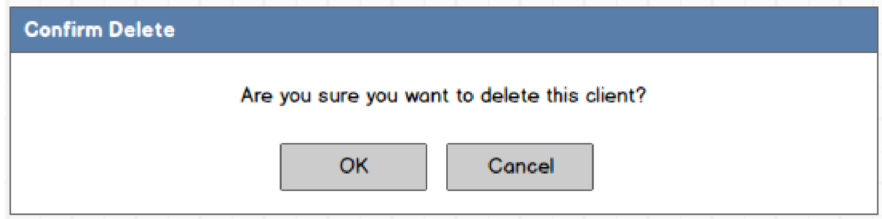


Figure 12: Delete Client Confirmation

Selecting "OK" will "delete" the client file and take the user back to the Home page.

5) File ID - This is the unique database key assigned to this specific client file. It is to be auto-generated and cannot be modified by the user. The value will ideally begin at 1 and increase by a value of one each time a new client file is created; however, this will ultimately be decided by the software developer. The File ID is only assigned once a successful "Save" is processed and the client file created.
6) Created Date - This shows the date the file was created. Use MM-DD-YYYY format.
7) This is the footer bar we referenced in the previous section. Note that it now displays the Client ID, File ID, SSN, and names of the client. The Client ID field is optional, so if the file does not contain a Client ID, hide the "Client ID" text altogether. The names area should displays the client's name in the following format: <Last Name> <Suffix>, <First Name> <Middle Name>.
8) Notice how the "Receive Status Reports Via" area is enabled for editing, now that the client file has been created. Note: To avoid user confusion, the "day of month" dropdown and corresponding text label should be disabled if the "Mail" check box is not marked. However, the "day of month" dropdown value should still keep with the value it was initially provided upon file creation.
   If at any time the client's info is saved and an existing e-mail was removed during that save, uncheck the "E-Mail" check box and mark the "Mail" check box if it isn't already.

   When the "Save" button is clicked on an existing client file, the same error-checking covered in Section 3.3.1.1 will need to be done.

3.3.3 Deleted Client Info Tab

Deleted clients can be queried and accessed via the "Find Client" search screen by marking the "Include Deleted Files" check box. See below for a screenshot of the Client Info tab of a deleted client.

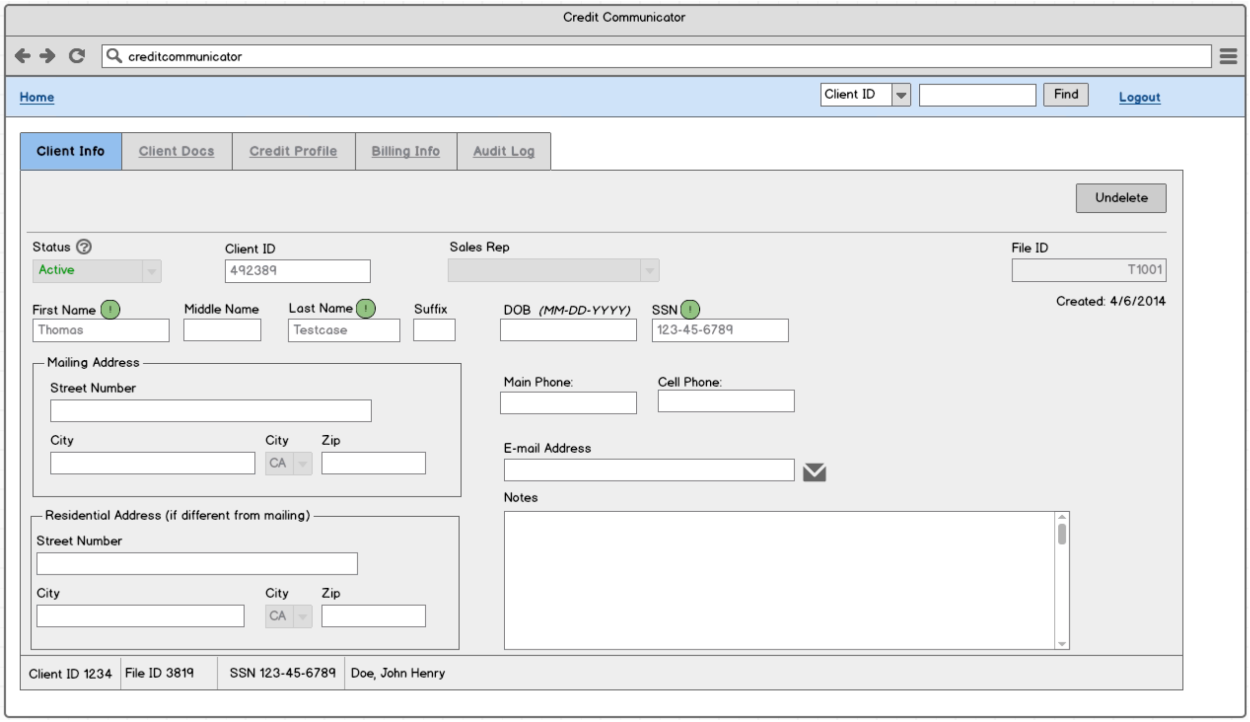


Figure 13: Deleted Client

Notice that all items on this page are disabled, except for the "Undelete" button. The hyperlinked tabs cannot be clicked and the various text and dropdowns cannot be modified. Only the "Undeleted" button, which has replaced the "Deleted" button, can be clicked. Clicking "Undelete" will display one of the two following confirmation screens:

1) If the Client ID and/or SSN on this file is already being used by another file that is active (i.e. not deleted), then display the following:

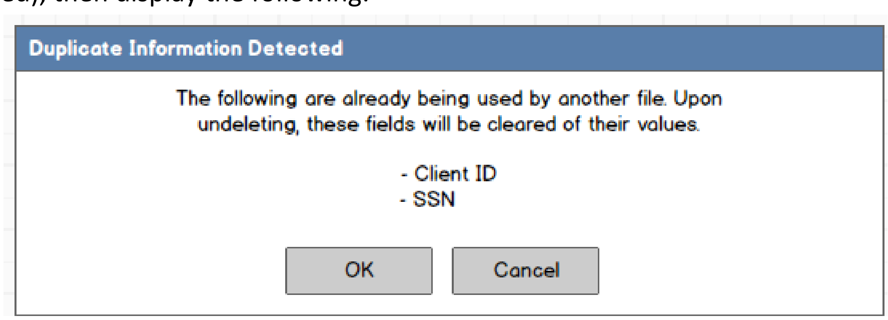


Figure 14: Duplicate Data Upon Undelete

Display the "- Client ID" text only if the value is a duplicate, otherwise, suppress the text. Likewise, if the SSN is a duplicate, display this, otherwise, suppress. SSNs of 000-00-0000 will be exempt from duplicate checking.

Clicking "OK" will undelete this file and refresh the screen, restoring access to all tabs and fields. Clicking "Cancel" till close this dialogue window.

2) If the "Client ID" and the "SSN" on the file are not duplicates, display the following dialogue:

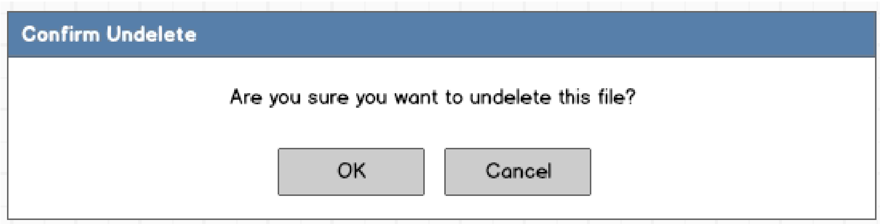


Figure 15: Confirm Undelete

Clicking "OK" will undelete this file and refresh the screen, restoring access to all tabs and fields. Clicking "Cancel" till close this dialogue window.

3.3.4 Client Docs Tab

This screen allows users to manage client-related documents. This includes contracts, forms of identity, and any other relevant documents.

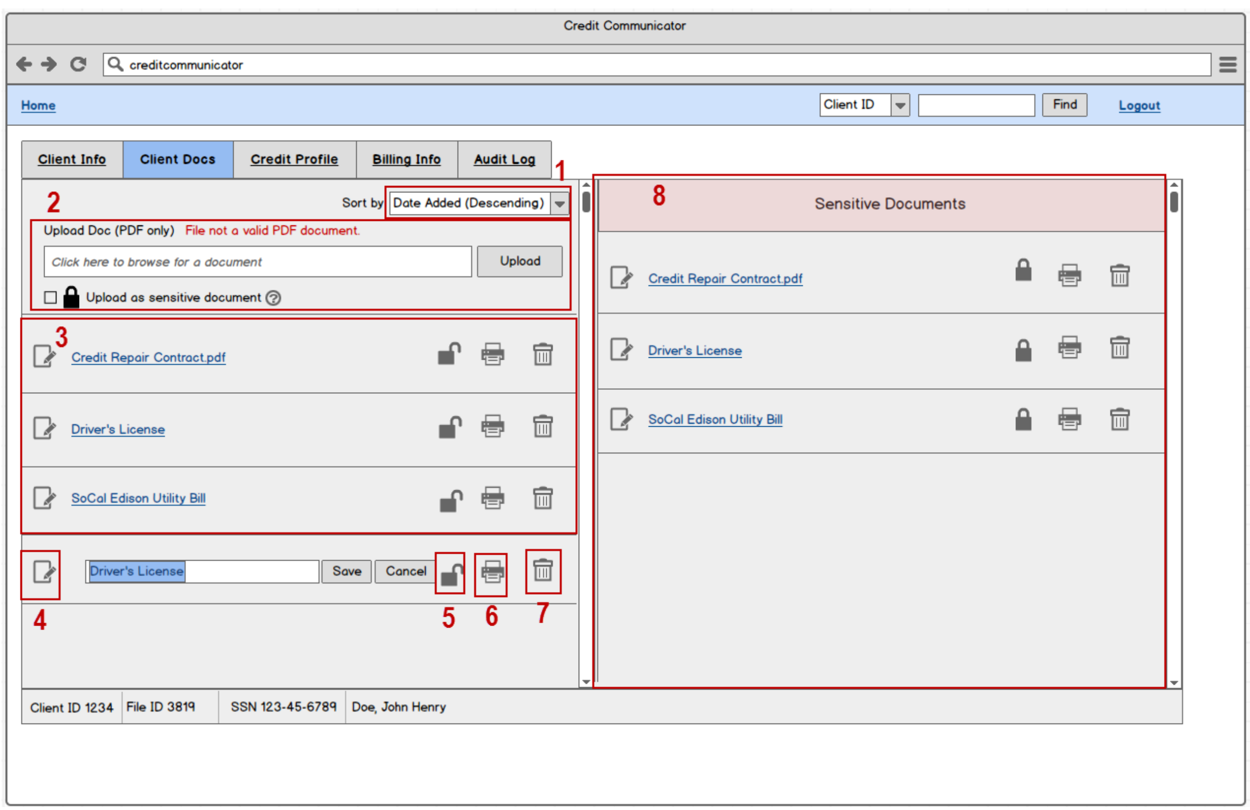


Figure 16: Client Docs Tab

See below for a description of each area.

1) "Sort by" dropdown - By default, the documents in both columns will be sorted by timestamp with the most recent at the top--"Date Added (Descending)". However, this can be changed and doing so will save the user's personal setting for future sessions. This setting isn't specific to the credit file where it was modified. This applies to all files the user views. The dropdown will contain the following sort options:

Item	Description
Sort By	Sort by timestamp with most recent at the top.
Date Added (Ascending)	Sort by timestamp with most recent at the bottom.
Date Added (Descending)	Sort by timestamp with most recent at the top.
Name (Ascending)	Sort by name from A - Z.
Name (Descending)	Sort by name from Z - A.

Table 2: Sort By Dropdown

2) Document Upload area - This area is used to upload documents.
   a) Clicking the "Click here to browse for document" text box will open a typical file browser screen where the user can browse for a file to upload, similar to the one seen below.

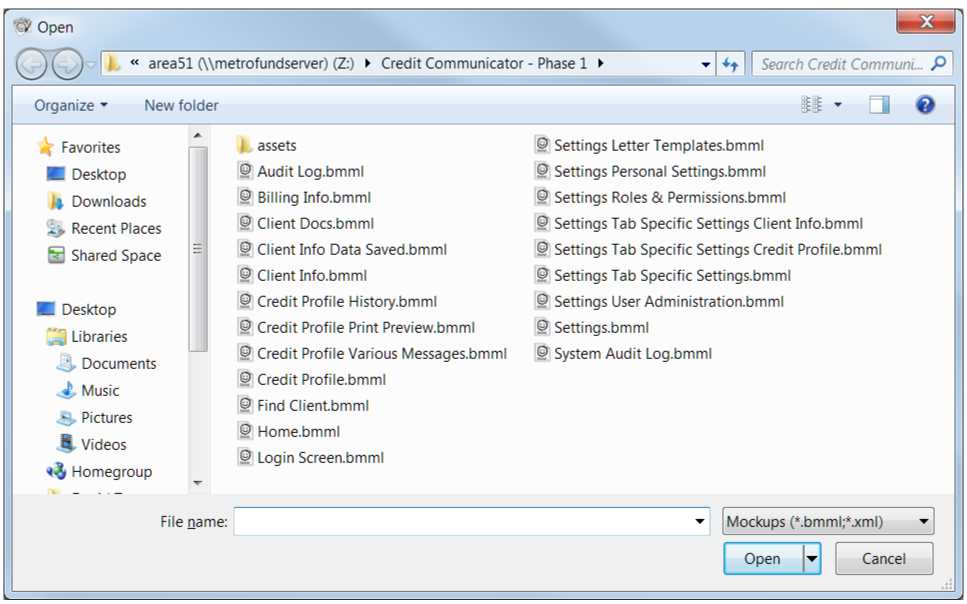


Figure 17: File Upload Browser

After a document has been selected, close the window and replace the "Click here..." text with the location of the document.

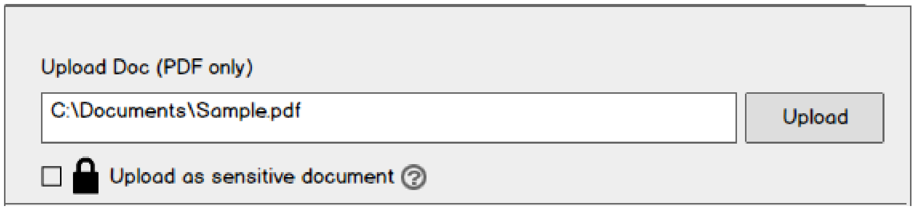


Figure 18: Document Selected

b) Clicking the "Upload" button will upload the document to the system and refresh the screen, showing the new document. Below is a list of some processes to run through for this action.
   i) Upon clicking "Upload", check that the selected file is a valid PDF. If the file is not a valid PDF file, display "File not a valid PDF document." message in red immediately to the right of the "Upload Doc (PDF only)" text.

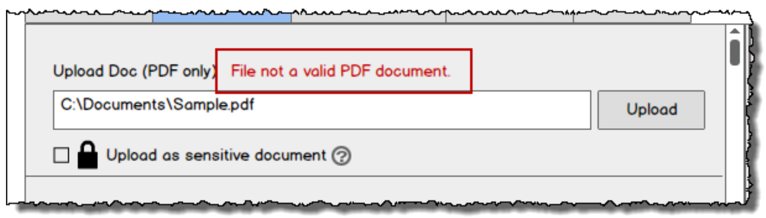


Figure 19: Invalid PDF

   ii) Similar to #i, if no document was specified, display a "Please select a document to upload." message.
   iii) If the file is over 5MB in size, display a "File is larger than 5MB in size. Please resize."

c) The "Upload as sensitive document" check box will determine whether the document is uploaded to the "regular" documents side (left side of page) or to the "Sensitive Documents" side (right side of page). Clicking the help (?) icon for this item will display a message box, as seen below:

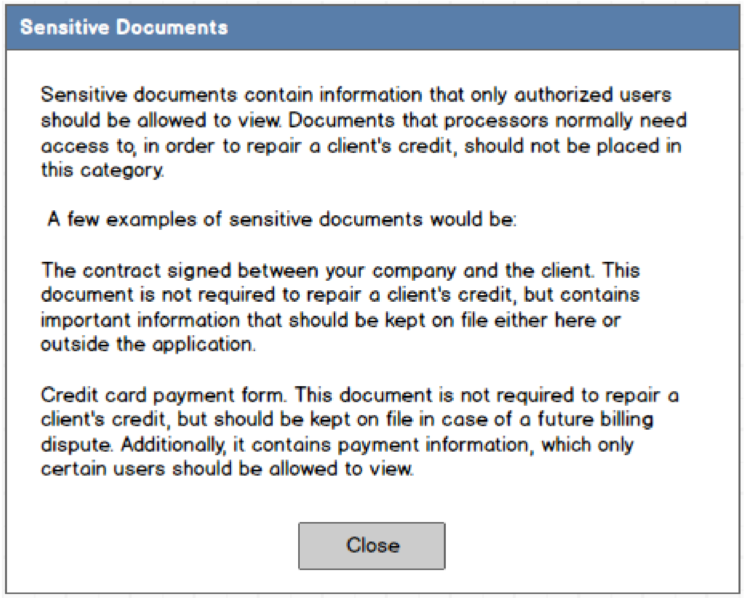


Figure 20: Sensitive Docs Tooltip

d) The displayed name of the document will be the same as the name of the document at the time it was uploaded (i.e. "documentname.pdf")

3) This is the area where "regular" documents are listed (i.e. non-sensitive documents). Notice that the document names are hyperlinked. Clicking this will open the document for viewing.
4) This is the "edit" icon. Clicking this icon will allow for editing of the document name. The document can be named anything and does not need to end in ".pdf". Upon clicking "edit", the document name will be changed to a text box and a "Save" and "Cancel" button will appear. All characters within the text box will automatically be selected so that the user can immediately begin typing in the new document name without having to first select the existing name and clearing it out. Clicking "Save will apply the name change. Likewise, hitting <Enter> on the keyboard while the cursor focus is inside that text box will initiate the "Save" button. If no text is entered into the box, clicking "Save" will do nothing.
5) This is the document sensitivity toggle icon. Clicking the icon will toggle the document's sensitivity and refresh the page to display the change. Note that the icon toggles between a "locked" and "unlocked" image.
6) This is the "Print" icon. Clicking this will open a typical print window where the user can print the document, as seen below.

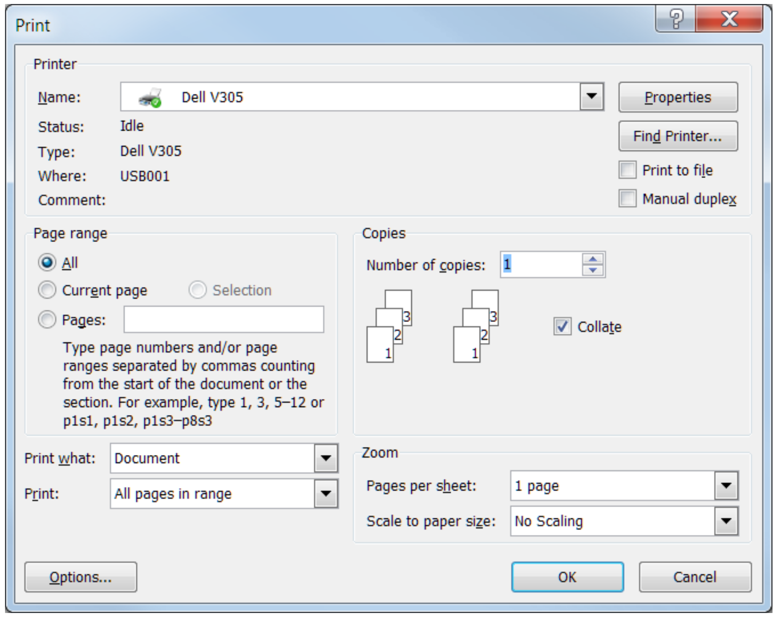


Figure 21: Print Window

7) This is the "Delete" icon. Clicking this will bring up a confirmation window.

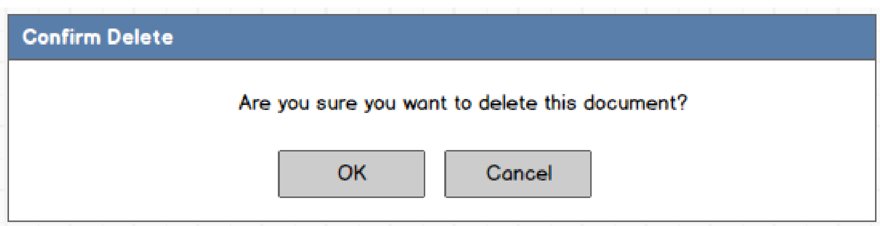


Figure 22: Delete Confirmation

8) This is the "Sensitive Documents" side of the page. There is a setting, which will be covered later in the document, which will restrict users from seeing this side of the page unless permission is given.

3.3.5 Credit Profile Tab

The Credit Profile tab is where the majority of work for the client will be done. Is it contains all credit accounts that the company will be working on.

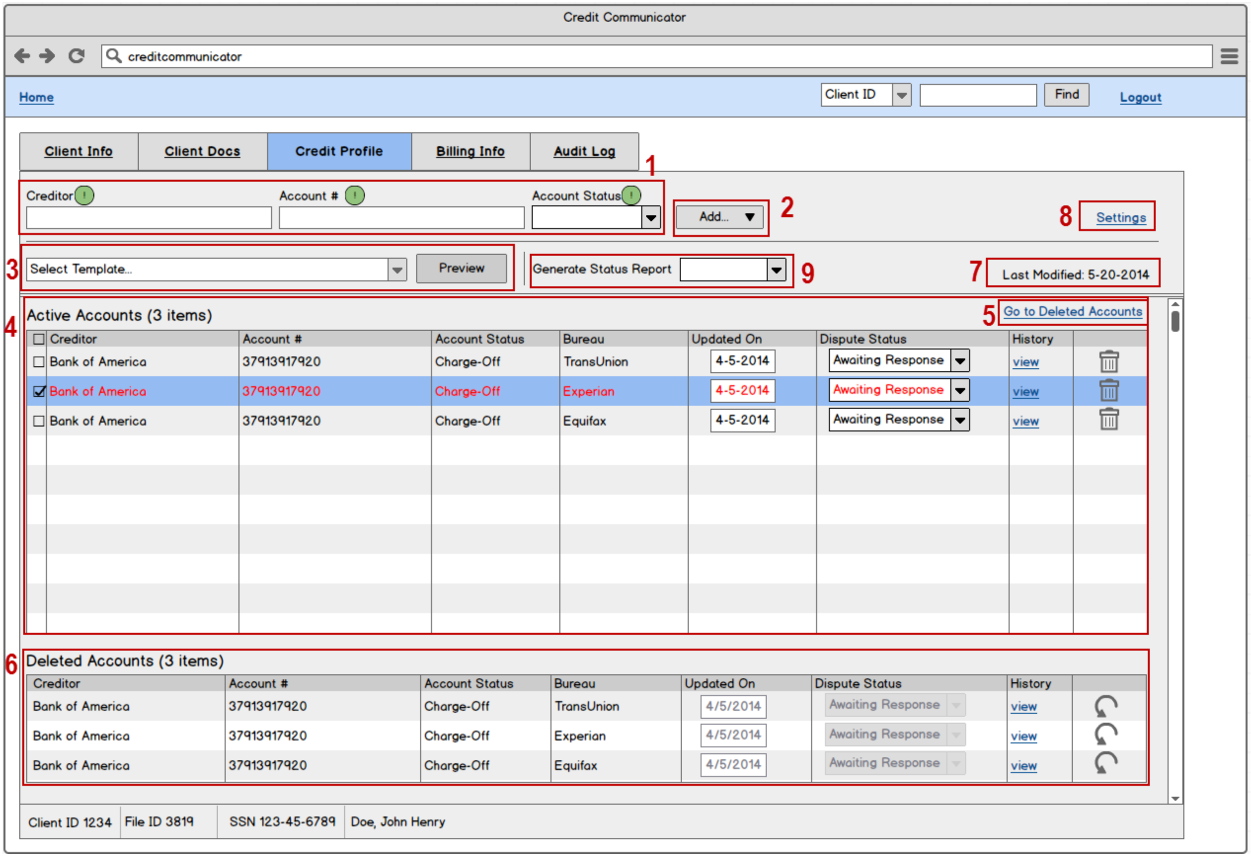


Figure 23: Credit Profile Tab

Below, the areas of this screen will be reviewed.

Area 1: New Account Creation Fields

This is where the creditor, account number, and account status are indicated for new account creation. All of these fields are required, as indicated by the green (!) icon.

This "Account Status" dropdown indicates the status of the account (i.e. collection, charge-off, etc). The items that appear in the Account Status list are configured in the application's setup area, covered later in this document, and will be sorted by name on this list.

Area 2: "Add" Button

This button will add the account to the accounts table (Area 4). Upon clicking this button, display the following table of 7 buttons:

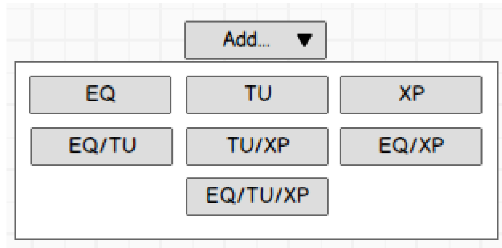


Figure 24: "Add" Button

This menu allows the user to add the account for one bureau or up to all three bureaus, depending on which button is selected.

EQ is for Equifax. TU is for TransUnion. XP is for Experian.

If the user clicks "EQ", then a single account is added to the accounts table, indicating Equifax as the bureau. If the user clicks "EQ/TU/XP", then three accounts are created, one for each bureau, and so on. If the user clicks anywhere outside this table while it is displaying, close it.

Note: Ensure that, when multiple accounts are added at the same time (i.e. clicking "EQ/TU" button or similar) that the timestamp on the multiple accounts are the same. That is, if the user chooses to add "EQ/TU", then the timestamp for when both accounts were created must match down to the millisecond. This will be important for customized sorting, which is covered later in the document. If the timestamp is off by even a millisecond, sorting will not function correctly.

Area 3: Letter Template Options

This area allows the user to select and generate letters. The "Select Template" dropdown will show all templates available, in alphabetical order of name. The templates are configured in the application's setup area, covered later in the document.

Clicking the "Preview" button will generate a letter preview pop-up window, based on the accounts that are selected via the check boxes and the template that is selected from the dropdown. See the letter preview screen below:

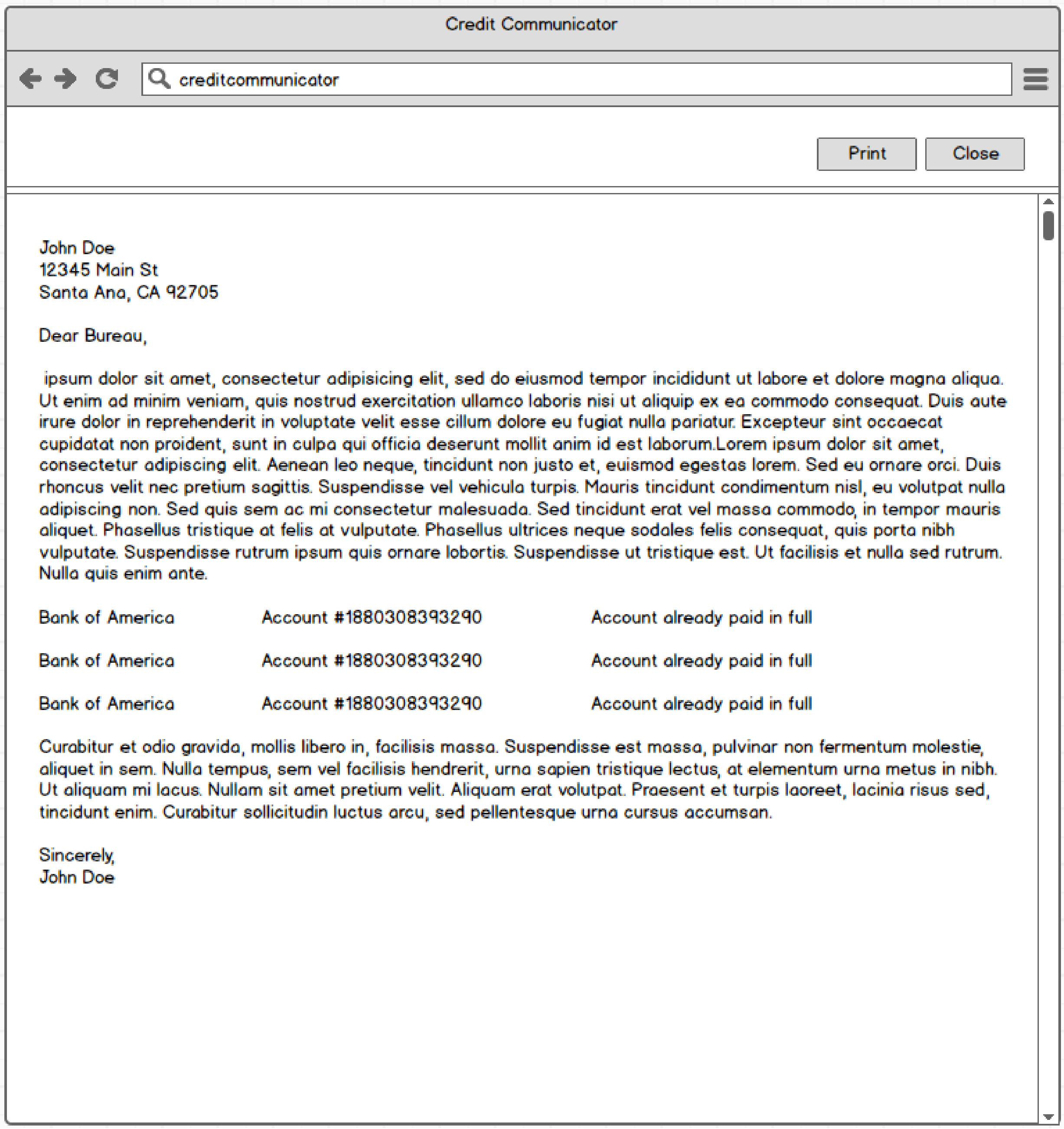


Figure 25: Template Preview Screen

Clicking "Print" will bring up a typical print dialogue window. Clicking "Close" will close the pop-up window.

Area 4: Active Accounts Table

This is the active accounts table. Note the label and the counter, which tracks how many rows are in the table. The various columns and their descriptions follow below. Also, the column headers should be clickable, allowing for quick re-sorting. This sorting will not change the user's (or the global) saved sorting settings, so the next time this page is refreshed, the sorting will reset to defaults. A good plugin can be found here: http://tablesorter.com/docs/

1) Check box column - This column allows the user to select which accounts they want included in a template. When a box is checked, highlight the entire row light blue, as shown in the Figure 23. Additionally, keep track of the order in which accounts are selected. This order will be utilized when generating letter templates.
2) Creditor column - This column displays the name of the creditor that was provided when the account was added.
3) Account # column - This column displays the account number that was provided when the account was added.
4) Account Status - This column displays the Account Status that was indicated when the account was added. As mentioned earlier, the Account Status dropdown is configured in the application's setup area.
5) Updated On - This indicates the last time the account was modified. When a new account is added to the table, the "Updated On" date will be set to the day it was added (i.e. today's date). This text box will not be directly editable by the user. Instead, when the user clicks the box, a calendar widget will appear, as seen below:

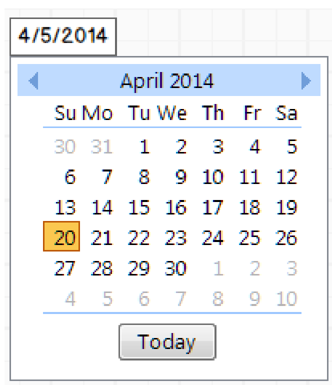


Figure 26: Calendar Widget

Because there is no "Save" button this screen, when the "Updated On" date is modified, immediately save the new value to the database.

6) Dispute Status column - This column indicates the account's current credit repair status (i.e. pending first letter, account successfully removed, etc). The top value in the dropdown will be a null. The rest of the values are configured in the application's setup area and sorted here by alphabetical order. Because there is no "Save" button on this screen, when the user modifies the "Dispute Status" dropdown for any account, immediately save it to the database.
7) History column - This column contains a "view" link, which will open a pop-up window with a table showing all activity done on the specific account. This feature is extensive, so it will be further explained in one of the proceeding sections.

8) Trashcan icon - Clicking this will delete the account. More specifically, it will move the account to the "Deleted Accounts" table. Prior to doing this, a confirmation window will appear:

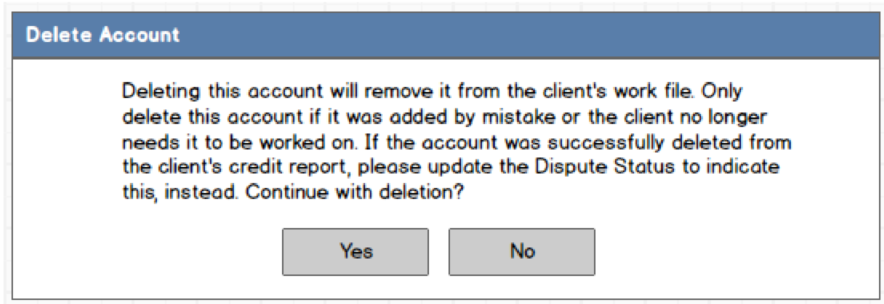


Figure 27: Account Deletion Confirmation

Area 5: "Go to Deleted Accounts" Hyperlink

This link will scroll the page down to the "Deleted Accounts" section. This link will only appear if the client file has at least one deleted account.

Area 6: Deleted Accounts Table

This table will appear only if the client file contains at least one deleted account. Like the accounts table above it, this has a label and a counter and should be sortable by clicking the headers. This table is identical to the accounts table, except for a few minor differences:

1) The check box column is gone.
2) The "Updated On" and "Dispute Status" columns are grayed out and cannot be modified.
3) The "trashcan" icon has been replaced with an "undo" icon. Clicking this icon will bring up a confirmation window, as seen below. If the user clicks "Yes", the account will be moved back into the Active Accounts table.

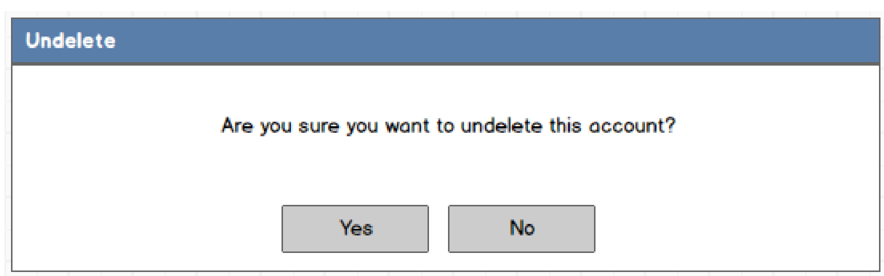


Figure 28: Undelete

Area 7: "Last Modified" Date

This shows the date the client's credit profile data was last modified. This date will only update when the following actions are done on the Credit Profile screen:

1) New account is added via the "Add..." button.

2) Any account's "Updated On" value is modified.
3) Any account's "Dispute Status" is modified.
4) An account is deleted or undeleted.

Area 8: "Settings" Hyperlink

Clicking this link will open the following pop-up window:

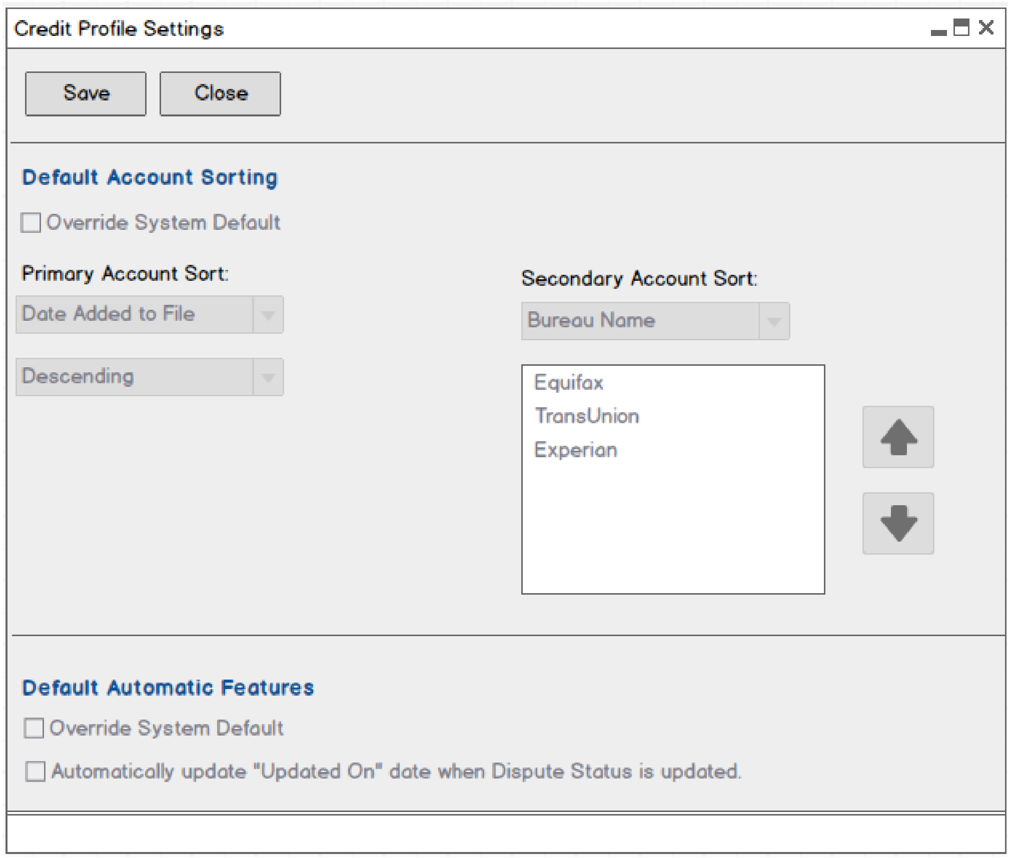


Figure 29: Credit Profile Settings

Below, we will go over the various features of this window:

1) "Save" button - Clicking this will save the settings configuration and display the following message:

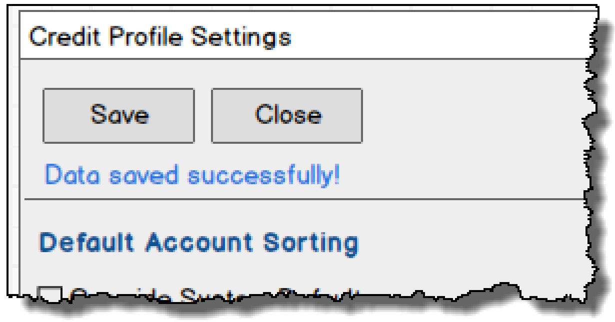


Figure 30: Data Saved Successfully

2) "Close" button - Clicking this will close the settings window and refresh the "Credit Profile" screen to reflect new settings.
3) "Default Account Sorting" area - This area allows the user to specify the order in which accounts are sorted.
    a) "Override System Default" - There is a system-level sorting that will be used by default (configured elsewhere in the application), unless the user wants to specify their own sorting. To specify their own sorting, they will need to enable this option, which will then enable the corresponding "Primary Account Sort" and "Secondary Account Sort" fields on the screen. Upon initial loading of this "Credit Profile Settings" window, if the "Override System Default" is unchecked, the "Primary Account Sort" and "Secondary Account Sort" areas should reflect that which is configured at the system level.
    b) "Primary Account Sort" - This specifies the first method of sorting the accounts.
    c) "Secondary Account Sort" - This specifies the second method of sorting the accounts. That is, if the first sorting method results in some items having the same value, further sort those items amongst themselves based on the "Secondary Account Sort" setting.
    An example would be if the Primary sorting is Creditor Name and the Secondary sorting is by Bureau. If there are multiple "Bank of America" accounts, then those accounts will be further sorted by bureau name.
    The next section will cover the various types of sorting available.
4) "Default Automatic Features" section - Like the "Default Account Sorting", this area allows the user to override system defaults for some automated features available.
    a) "Override System Default" check box - This box will allow the user to override system defaults. Upon checking this box, the two check boxes underneath it will be enabled. Upon initial loading of the "Credit Profile Settings" window, if the "Override System Default" is unchecked, the two corresponding items in this section are to reflect the current system setting.
    b) "Automatically update 'Updated On' date when Dispute Status is updated." - As indicated here, enabling this setting will set the "Updated On" date to today when the corresponding account's "Dispute Status" value is changed.

Area 9: Generate Status Report
This dropdown allows the user to generate a status report of the client's credit profile to be printed or email. The dropdown will contain the following options:
(null) - This is just the default blank selection. It does nothing.
"For Printing" - This will generate a PDF of the client status report and open it for viewing and printing.
"For E-Mail" - This will generate a PDF of the client status report and attach it to a new email message. This will be covered in Section 3.3.5.2. If the client does not have an email address on file, then simply do not populate an email address when the new email message is composed.

3.3.5.1 Account Sorting Options

The account sorting section, as seen below when enabled for configuration. The settings specified here affect how accounts under the "Active Accounts" and "Deleted Accounts" tables are sorted.

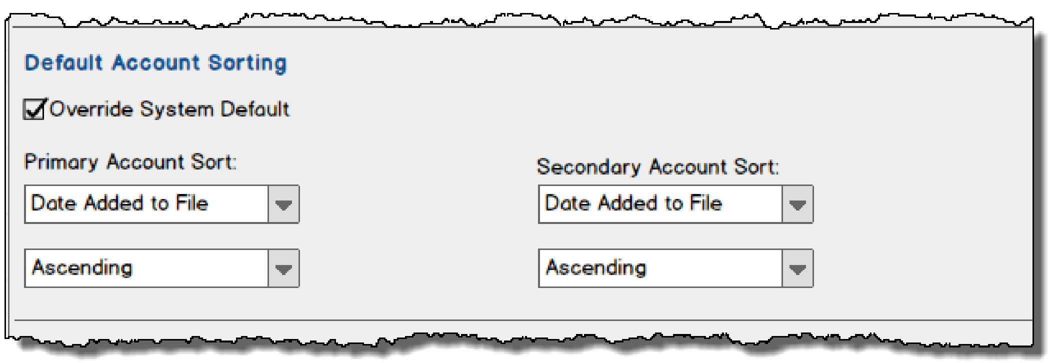


Table 3: Account Sorting

Although the user configures this from an existing client file's Credit Profile tab, the setting will apply to all files viewed. Also, the setting here only affects the specific user and is not global to all other users. The "Primary Account Sort" and the "Secondary Account Sort" will contain the same sorting options. Notice that each sorting has two dropdowns: the top one contains the value that is used in sorting; the second is the specific sorting method (ascending, descending, etc). While it is possible for the "Primary Account Sort" and the "Secondary Account Sort" to contain the same sort field selection and method, should this ever be the case, simply ignore the "Secondary Account Sort" and sort only by "Primary Account Sort". If it is easier to code to sort by both, even if they are the same criteria, that can also be done, as well. Regardless, the end result in either coding method should result in the "Secondary Account Sort" being essentially ignored.

The fields that can be used to sort are shown below (they are listed in alphabetical order):

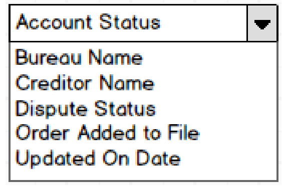


Table 4: Account Sorting Fields

Below is a description of how each selection will function and how it will look on the screen:

1) Account Status - This will allow sorting by "Account Status", which is configured in the application's settings area. See a screenshot of how the page will look when this option is selected:

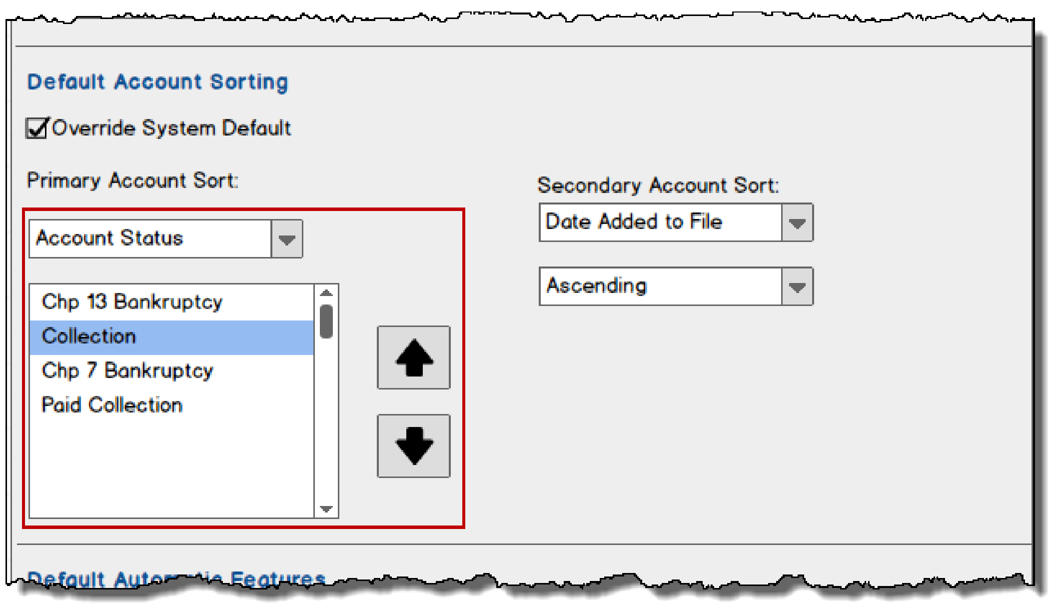


Table 5: Sort by Account Status

Notice that a list populates under the "Account Status" dropdown, listing all the various account statuses that have been set up in the system. The up and down buttons will allow the user to configure the order in which the account statuses are sorted. Based on the way the sort is in the picture, all accounts with status of "Chp 13 Bankruptcy" will be at the top of the accounts list, while all "Paid Collection" will be at the bottom. Note that upon initial launch of the application, there won't be any account statuses to specify for sorting, since none would not have been set up yet.

2) Bureau Name - This sorts by bureau name. When this is selected, the following will appear:

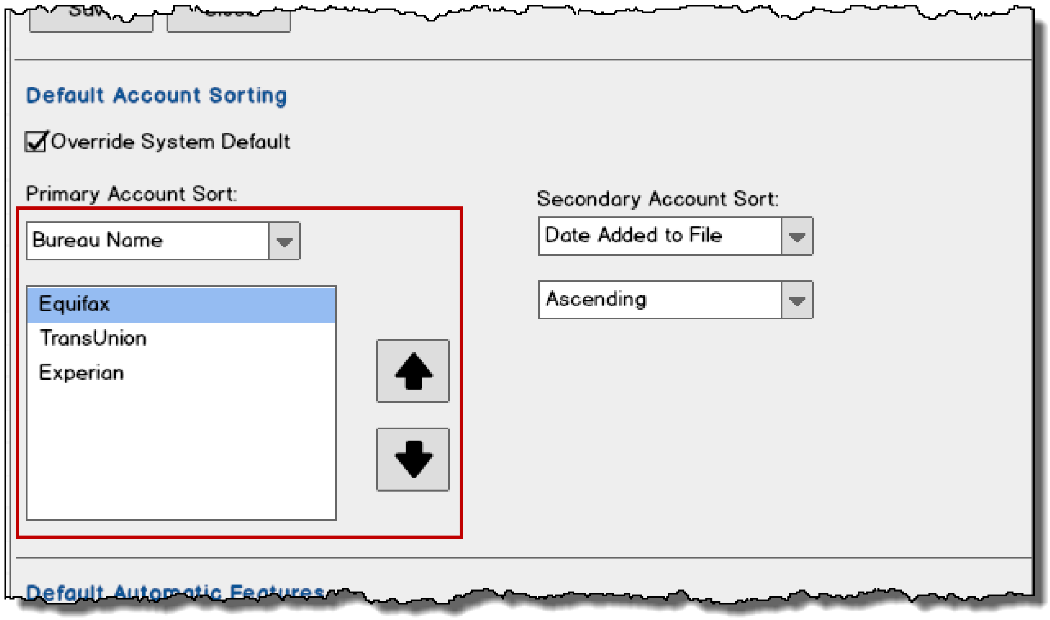


Table 6: Sorting by Bureau Name

Similar to sorting by Account Status described in #1, this will sort by the name of the bureau. By default, Bureau Name sorting will be in the order shown: Equifax, TransUnion, Experian.

3) Creditor Name - This will sort by the name of the creditor. Unlike "Account Status" and "Bureau", the sorting of "Creditor name" is either in ascending or descending order, so a dropdown is used instead of a list:

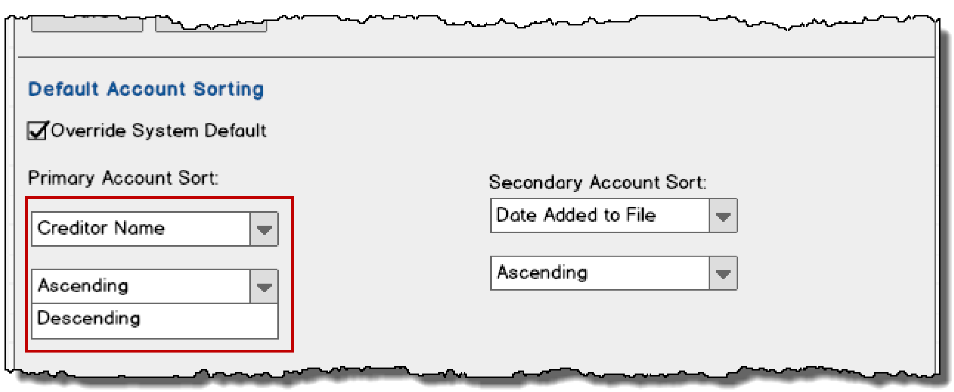


Table 7: Sort by Creditor Name

4) Dispute Status - This will sort by the "Dispute Status" field.

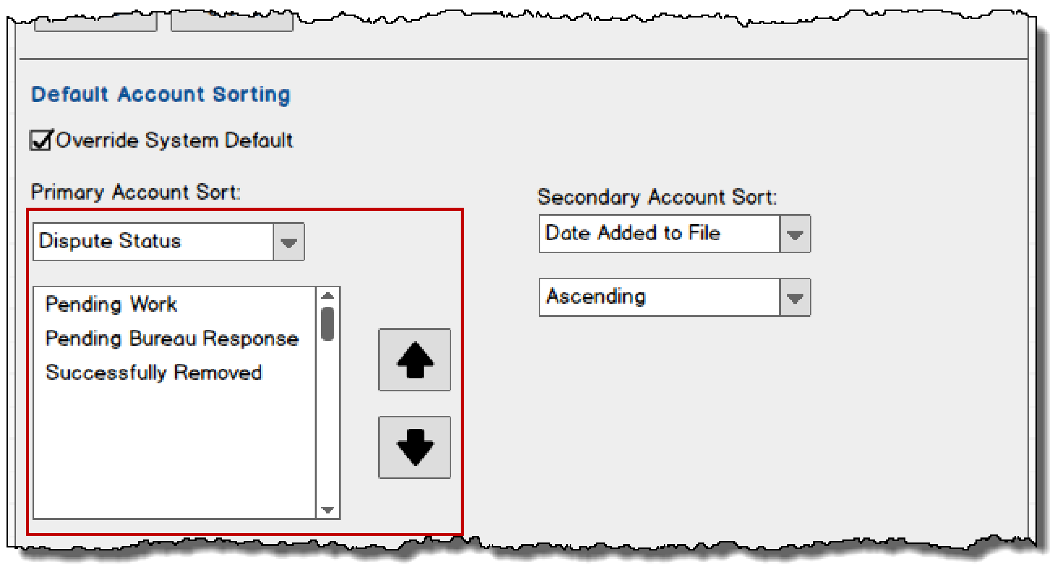


Table 8: Sort by Dispute Status

Similar to sorting by "Account Status", this list will likely be empty to start with, since nothing would have been configured yet.

5) Order Added to File - This will sort it by timestamp.

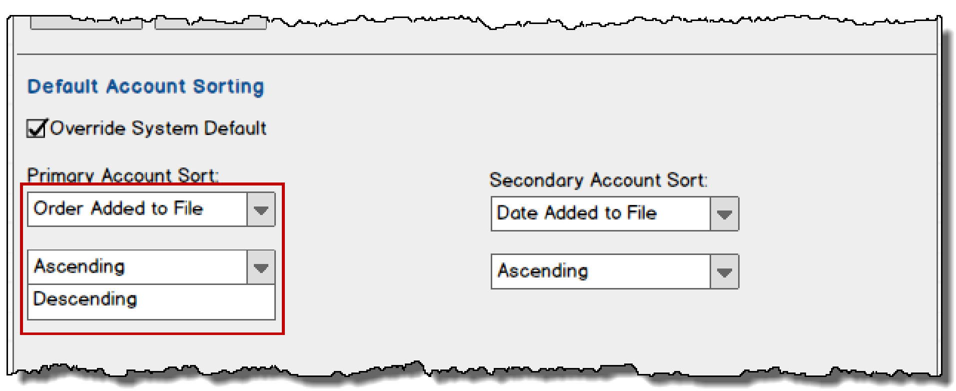


Table 9: Sort by Order Added

As mentioned earlier in Area 2 of Section 3.3.5, when multiple accounts are added at the same time (i.e. adding one account for all three bureaus via the EQ/TU/XP button), they should all have exactly the same timestamp down to the millisecond. This timestamp requirement is necessary for sorting by "order added" to be accurate and consistent.

6) Updated On Date - This will sort by the "Updated On" date. This is either ascending or descending:

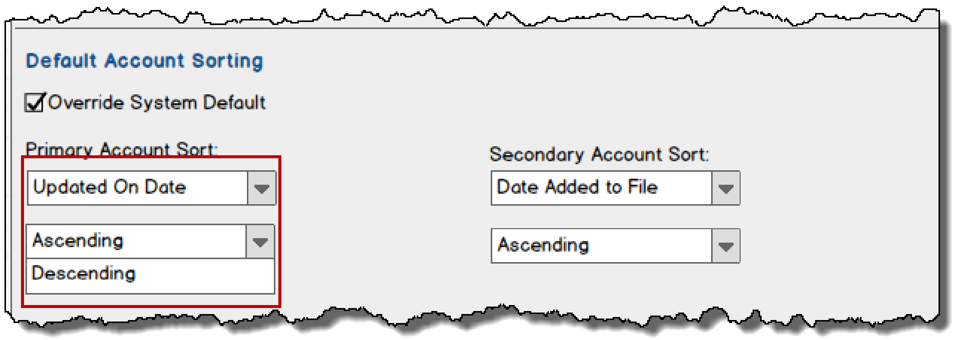


Table 10: Sort by "Updated On" Date

Though all the screenshots here only show the sort changes for "Primary Account Sort", the same would apply to the "Secondary Account Sort". As seen here, depending on the sort field being used, either a dropdown or a list will appear under the top dropdown, so the page will have to automatically resize to accommodate toggling between lists and dropdowns. Additionally, when a list is shown (such as would be used for "Account Status"), set the height of the list to 10 items. If there are more than 10 items on the list, implement a vertical scroll bar. This is to avoid having a list that is, say, 20 items long taking up the entire screen. See a sample of a long list with a vertical scroll bar below:

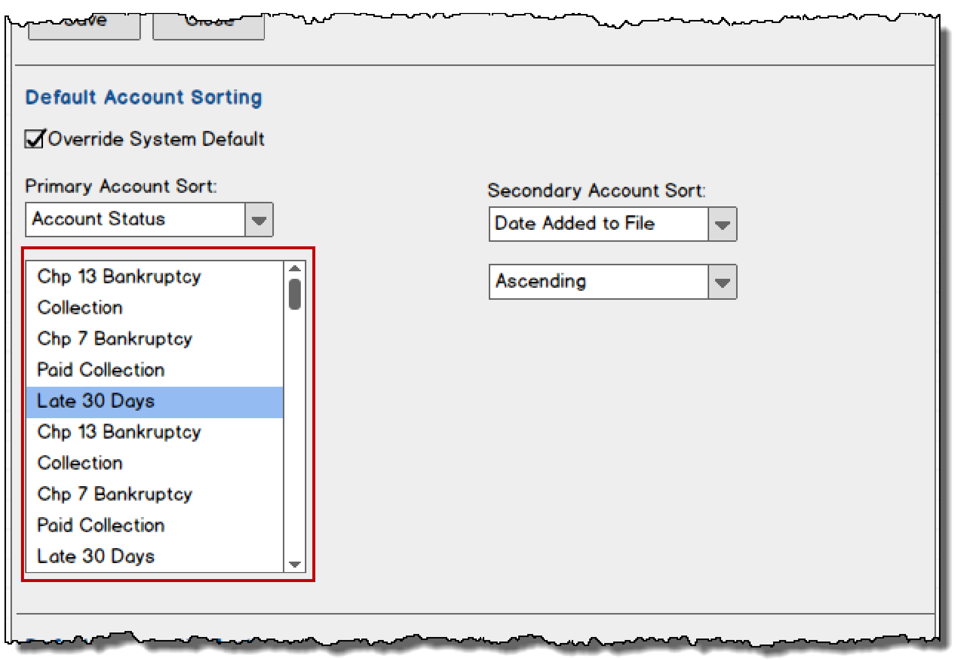


Figure 31: 10+ Item List

3.3.5.2 Client Status Reports

This section will cover the layout of client status reports, which are sent to the client so they can see the progress of their credit repair.

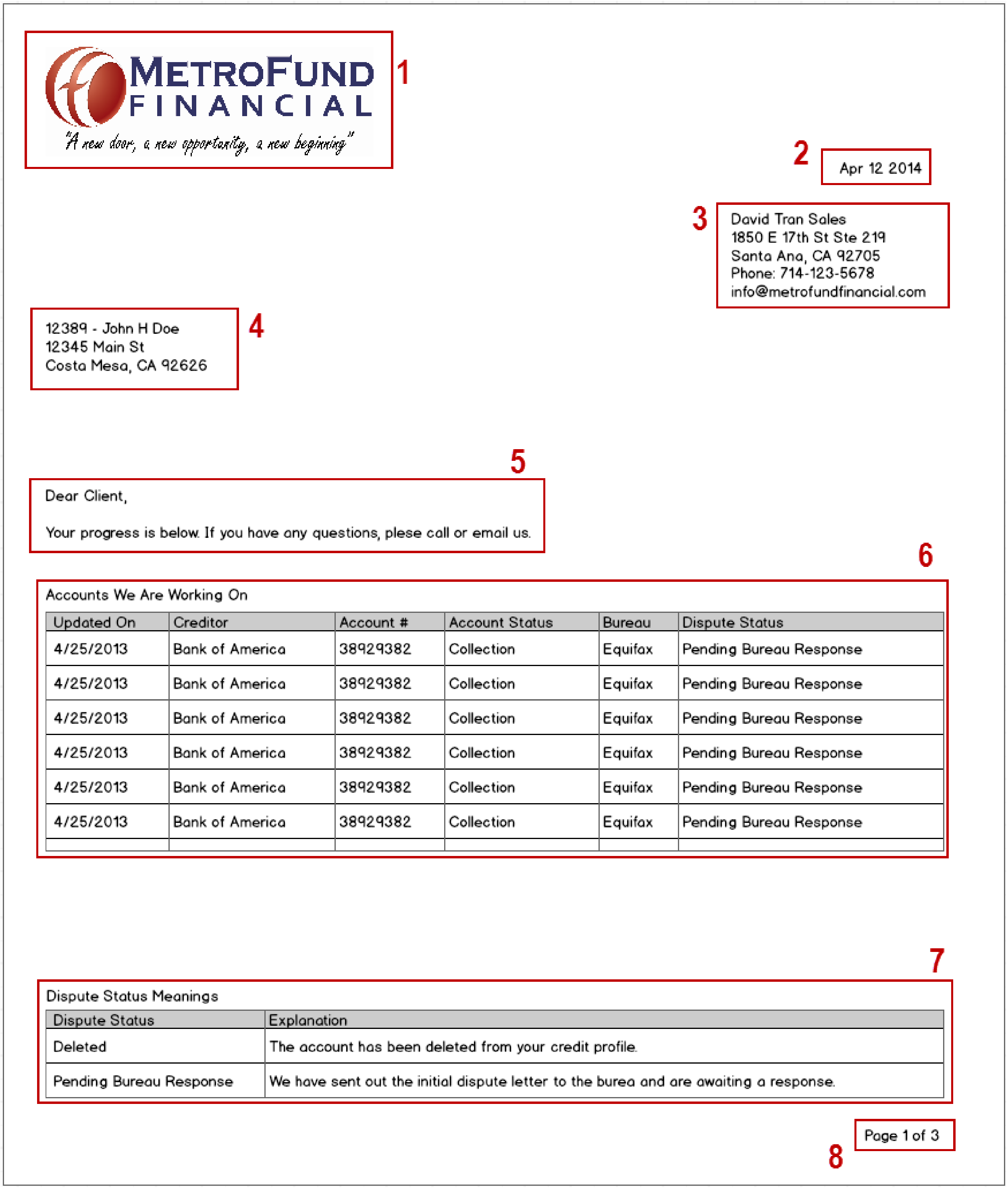
As noted in the previous section, selecting a "Generate Status Report" option will do one of two things:

"For Printing" option - Generate a client status report in PDF format and open. Use the following file name when generating: "<Client First Name> <Client Last Name> <MM-DD-YYYY> Status Report".

"For E-mail" option - Generate a client status report in PDF format and attach it to a new email compose window using the machine's default email client. Use the following format:

```
Subject: Credit Repair Status Update from ABC Financial

To: <Client's Email address|Leave Blank if client has no email
address specified>

Attachment: <Client First Name> <Client Last Name> <MM-DD-
YYYY> Status Report.pdf

Body:

Dear Client,

There was recent progress on your credit repair. Attached is
the current status of your file. Please contact us if you have
any questions.

Thank you.
```

Here is a sample of the credit status report:



Updated On	Creditor	Account #	Account Status	Bureau	Dispute Status
4/25/2013	Bank of America	38929382	Collection	Equifax	Pending Bureau Response
4/25/2013	Bank of America	38929382	Collection	Equifax	Pending Bureau Response
4/25/2013	Bank of America	38929382	Collection	Equifax	Pending Bureau Response
4/25/2013	Bank of America	38929382	Collection	Equifax	Pending Bureau Response
4/25/2013	Bank of America	38929382	Collection	Equifax	Pending Bureau Response
4/25/2013	Bank of America	38929382	Collection	Equifax	Pending Bureau Response

Dispute Status	Explanation
Deleted	The account has been deleted from your credit profile.
Pending Bureau Response	We have sent out the initial dispute letter to the burea and are awaiting a response.

Figure 32: Client Status Report

Below, we cover each part of the report.

Area 1: Company Logo

This is the logo that is uploaded in the [Settings > Tab-Specific Settings > Client Status

Reports] area of the application. The logo does not need to be resized. If the logo is too large or too small, the user will need to resize upload.

Note: The margins on this report should be 0.5" all around.

Area 2: Date
Insert the date the report is generated in the next line after the bottom of the logo, flushed with the right margin of the page. If this is too difficult to code, simply place it one inch from the top margin of the page (i.e. 1.5" down the top page edge), flushed with the right margin. Use format <MMM-DD-YYYY> as shown in the image.

Area 3: Company Information
This is the company information, as specified in [Settings > Tab-Specific Settings > Client Status Reports]. This is placed one line below the date stamp. The paragraph is to be left-aligned and the left-alignment is to be 4 inches from the right margin of the page. Ideally, the company information specified will not exceed 4 inches of space; if it does, just let it run into the margin and let the user or printer deal with it.

Area 4: Client Information
This is the client's information, along with any additional prefixes and vertical/horizontal adjustments, as specified in [Settings > Tab-Specific Settings > Client Status Reports].

Area 5: Greeting
As specified in the [Settings > Tab-Specific Settings > Client Status Reports].

Area 6: Accounts Being Worked On
This accounts table will show all active accounts the client has and their corresponding information, as shown in the image. If the Dispute Statuses are set to a specific color (Settings > Tab-Specific Settings > Credit Profile), apply that here to the "Dispute Status" text, as well. Additionally, if the Dispute Status setting indicates to "Apply this color to other text in the row", apply that here, too, to all information in the row. The sorting to be used here should be as is indicated in the [Settings > Tab-Specific Settings > Client Status Reports] setup area.

Area 7: Dispute Status Explanation Table
This is the explanation table, which covers what each status means. This list is to be sorted in alphabetical order by Dispute Status name. The "Explanation" column will populate from the corresponding Dispute Status' "Description" text box, as set in the Dispute Status Details screen via [Settings > Tab-Specific Settings > Credit Profile]. Only populate the statuses that appear on the client's report; this will avoid clutter if the company has a lot of different statuses available for use.

Area 8: "Page" Footer

This will display the page number and how many pages total there are. Use format: "Page" <Page#> of <# of total pages>.

3.3.5.3 Account History Log

Upon clicking the "view" link for an account's history log, the following pop-up window will appear:

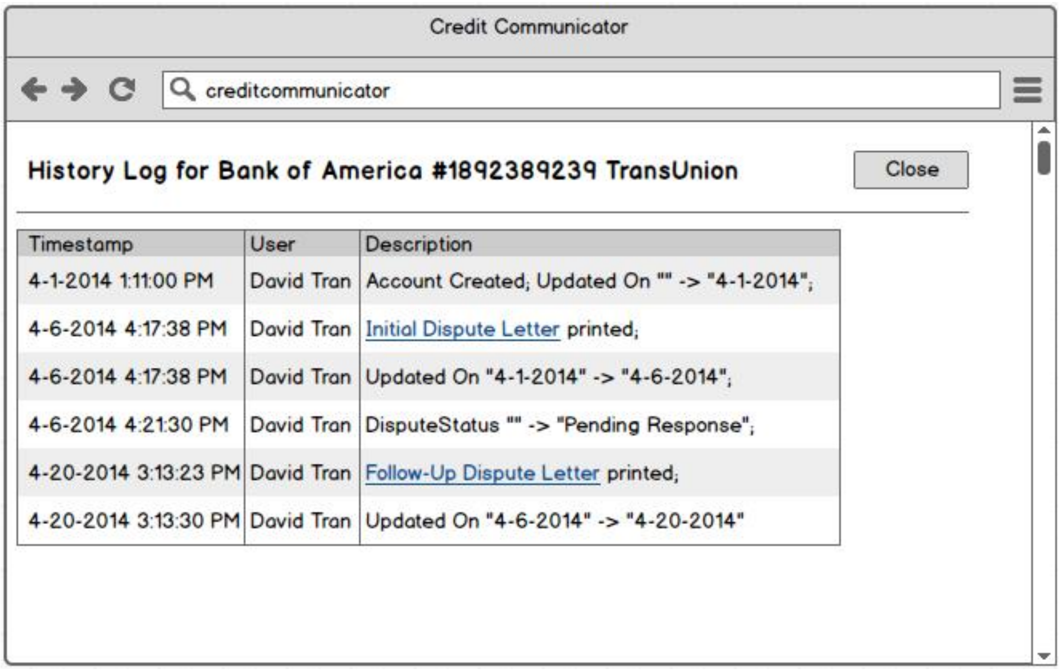


Figure 33: Account History Log

See below for a review of the various items and their descriptions.

1) Page title - The page title, as see at the top of the window, will use the following format: "History Log for <Creditor Name> #<Account Number> <Bureau>"
2) "Close" button - This will close the window.
3) The log table - This table is sorted in order of timestamp with the most recent entry at the top. Each time the account is modified, an entry will be created here to record it. All data here should be saved as string values (i.e. not referencing any data fields that, if changed later, will result in the audit log entry being changed). The various columns and their functions are as follow:
   a) Timestamp - This is the timestamp of the entry in "MM-DD-YYYY HH:MM:SS <AM|PM>" format.
   b) User - This is the name of the user who initiated the action that generated the log entry.
   c) Description - This column indicates the action that was done to the account. See the table below for all the actions that will be recorded:

Action Taken	Description Text	Notes
Account Created	Account Created;	
Account Status value set	Account Status "<Previous Value>" -> "<New Value>";	Since the account status is set only once and cannot be later changed, the "Previous Value" will always be a blank (i.e. ""). We're using the displayed description format for sake of consistency with how other log entries are formatted.
Letter Printed	"<Name of Template>" printed;	Notice the name of the template is hyperlinked. Clicking this will open the letter that was printed. Described in the next section. This entry is generated when the user click "Print" on the template preview screen.
"Updated On" modified	Updated On "<Previous Date>" -> "<New Date>";	
"Dispute Status" modified	Dispute Status "<Previous Value>" -> "<New Value>";	
Account Deleted	Account Deleted;	
Account Undeleted	Account Undeleted;	

Table 11: History Log Reference Table

A few things to note:

i) When the user applies an action that would create multiple log entries at the same time, include them in the same row. An example would be the creation of a new account. The description would look something like this:
Account Created; Account Status "" -> "Charge-Off"; Updated On "" -> "4-8-2014";

ii) When a log entry is generated, take note that it will always end in a semicolon and a space. This is done so that, if another entry is to be created in the same box, as seen in #i, no extra logic needs to be used to separate the entries.

3.3.5.3.1 Viewing Archived Letters in the History Log

The previous section indicates that letter templates that appear in the account's history log can be viewed. This section will detail this feature.

When a letter template's hyperlinked text is clicked--such as the Initial Dispute Letter hyperlink from Figure 33, the existing window will refresh with the following:

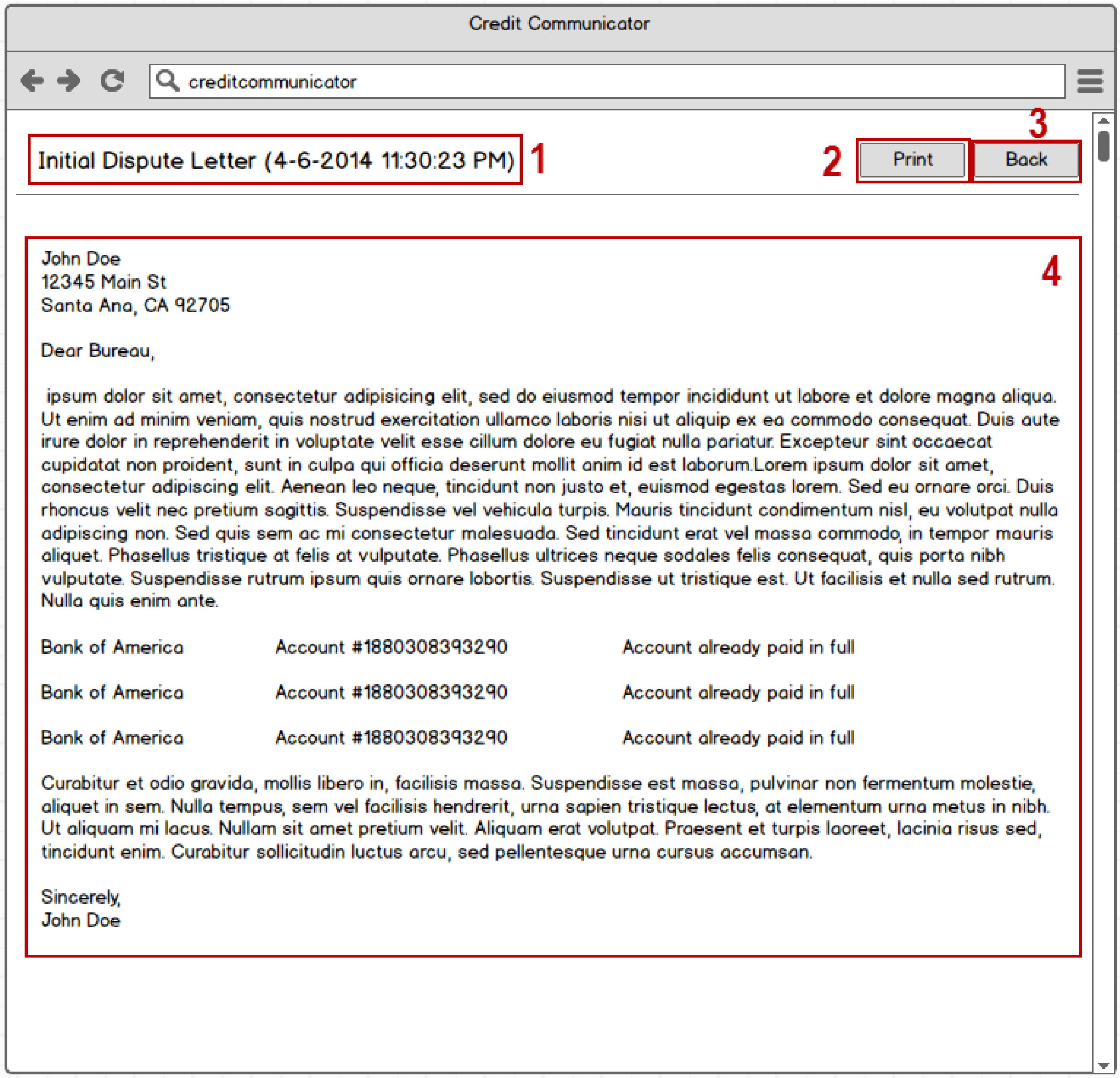


Figure 34: Archived Letter

See below for a description of the various areas.

1) The title - This will be in the following format:
   <Letter Template Name> (<Timestamp>)
2) "Print" button - Clicking this will bring up a typical print dialogue window.
3) "Back" button - Clicking this button will refresh the window with the history log screen.
4) Archived letter contents - This is the content of the letter that was archived.

3.3.5.4 Error-Checking the Credit Profile Screen

There are various error checks that need to be done on this screen.

1) If the "Creditor", "Account", and "Account Status" fields are not populated, then clicking one of the 7 buttons under the "Add" button will generate the following message:

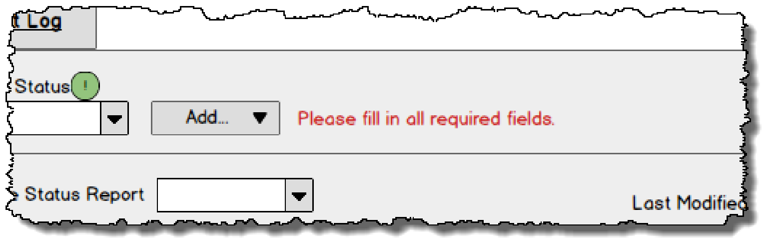


Figure 35: Required Fields Missing

2) Clicking the "Preview" button will check for two things:
   a) That at least one account is selected via the check box. If no accounts are selected, display the following message:

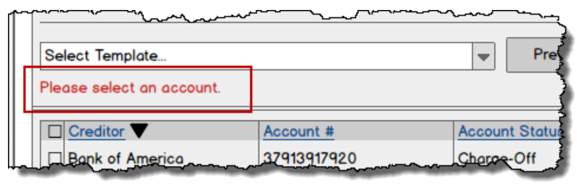


Figure 36: No Account Selected

   b) That a template has been selected. If no template is selected, display the following message in the same area as the message displayed for #a: "Please select a template."

   These errors are to be checked one at a time and their messages displayed one at a time. That is, do not check for requirement #2 if requirement #1 fails and definitely do not display 2 error messages at the same time.

3.3.6 Billing Info Tab

This tab's purpose is to store client payment information, specifically credit/debit cards.

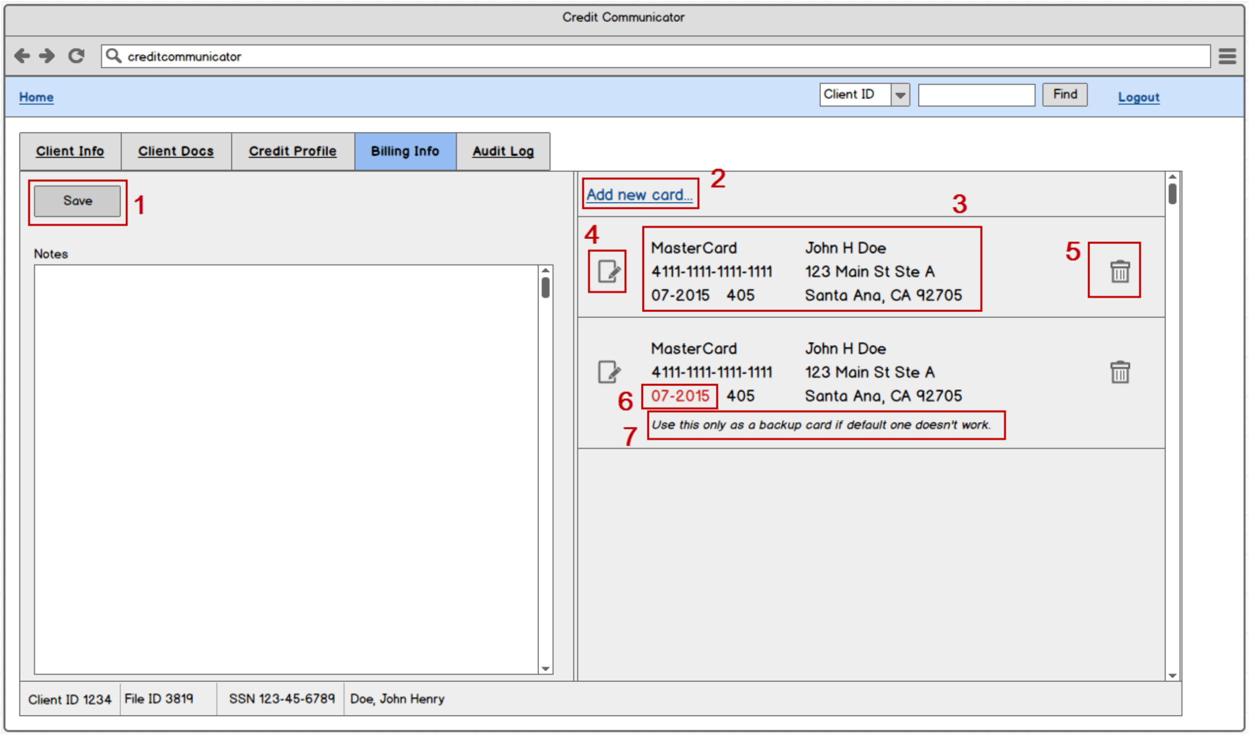


Figure 37: Billing Info Tab

See below for a description of the various indicated areas on the screen.

1) Save button - Clicking the "Save" button will save the contents of the "Notes" field, found immediately underneath the button. After the data is saved, display "Data saved successfully!" underneath the button.

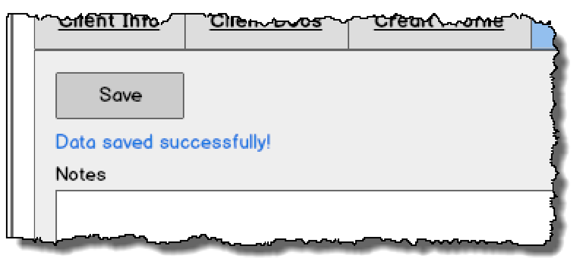


Figure 38: Save Successful

2) "Add new card" link - Clicking this link will open a window, allowing the user to add a new credit card, as shown below:

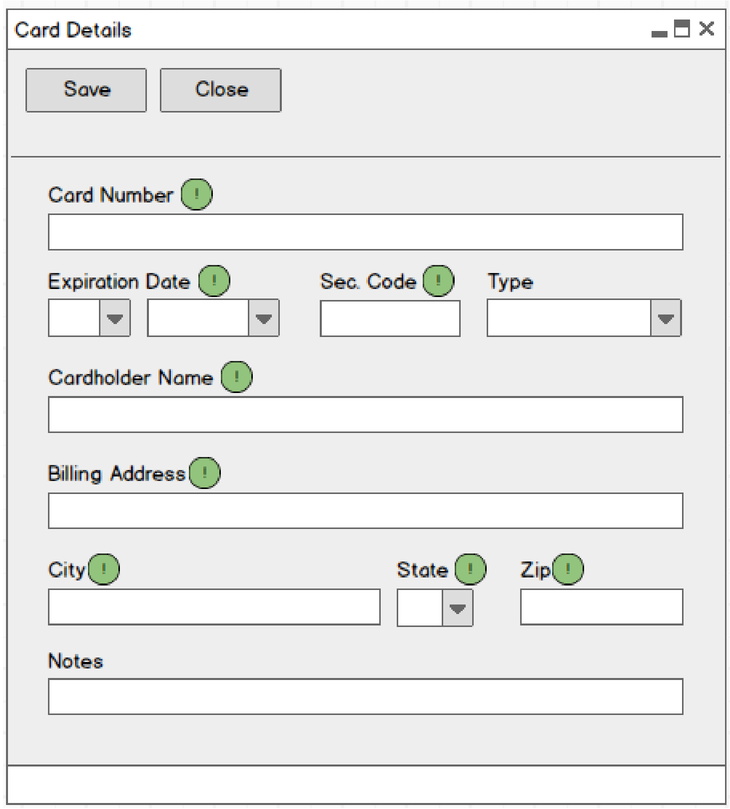


Figure 39: Credit Card Details Window

As indicated, the fields with the green (!) are required.

a) Encrypt the "Card Number" field when saving to the database.
b) All input fields that are not dropdown lists will store data as string types with no format validation.
c) The "Expiration Date" will have two dropdowns
   i) Month - The first value will be a null, followed by 1 through 12.
   ii) Year - This is a dynamic field with the first value being a null, followed by the current year and each year afterwards up to 10 years. That is, if the current year is 2014, the list will go from 2014 through 2023. If the current year is 2015, the list will go from 2015 through 2024.
d) The optional "Type" dropdown will contain the following items in the given order: (Null), AMEX, Discover, MasterCard, Visa, Other.
e) The State dropdown will list all state abbreviations in alphabetical order.
f) The Notes field will allow the user to type in a short note. Limit this to 200 characters.
g) "Save" button - Clicking this button will save the card to the table and display the following message