**Anonymous Builder Client/Job Data Application**

**User Documentation**

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**1. Introduction**

This application was designed to be a secure and easy-to-use tool for authorized client employees to safely store client and job information in the online cloud. It has been built and tested for access through Firefox and Chrome browsers, whether running on Windows PCs or Android mobile devices. The intended purpose of the application is to allow the client’s field estimators to visit potential job sites and collect client and job information, which will be entered directly into the application and immediately saved to the cloud database. Clerical office staff might also create these records from information they gather via phone calls, emails, etc. from prospective clients. Once saved to the database, field estimators and clerical staff have immediately access to that information for future contact and planning purposes. This data may also be edited, updated, or deleted at any time. As a result, the client may eliminate redundant data entry, transcription from physical notes, as well as provide secure, off-site storage for these records.

Please note, this document was written primarily for the purpose of educating the target end users of the application: namely, the field estimators and clerical staff who will be using it on a daily basis. However, these instructions do include a brief overview intended for the client’s eventual application Administrator.

**2. Login Page**

Upon navigating in the browser to the application’s home URL (currently: <http://anonymous-builders-app-v2.s3-website-us-east-1.amazonaws.com/>), the user is presented with the Login Form Page.

**2.1 Explanation of User Roles**

First, we must note that all authorized users of the application will be assigned one of two roles: Estimator or Clerical(Office). While most application privileges are shared between the two groups, there is one important distinction: only Clerical users will be able to delete Client and Job records. Assignment of user roles is handled by the Administrator.

**2.2 Login Feature**

Clerical users must check the small box labeled “Office Staff.”

With the information provided in the invitation email sent to the user by the Administrator, please provide input to the “Username” and “Password” fields. As the on-screen note specifies, users logging in for the first time must also provide a new password of their own choosing in the “New Password” and “Confirm New Password” fields (field entries must match).

New password requirements are as follows:

A minimum of eight characters

At least one number

At least one special character (!@#$%^&\*)

At least one uppercase letter

At least one lowercase letter

This new password will be used upon all subsequent logins without the need for creating another new one. Should the user forget their password or otherwise require a new one, they must contact the Administrator for assistance.

Clicking the “Login” button completes the login attempt.

**2.3 Explanation of Authorization Flow**

If a valid username and password have been entered, the user will be redirected to the Dashboard page of the application. At this point, the user’s browser will store login data necessary to maintain a “logged in” state, allowing the user to freely navigate through the application’s various pages and execute functions for which the user is authorized. This will persist even if the browser is closed, allowing quick re-entry of the application. To actually logout from a session of using the application, the user must activate the Logout feature outlined in Section **3.3**.

**3 Dashboard Page**

The Dashboard Page serves as the “launching point” of the application’s various features.

**3.1 Information Display**

The main frame of the page displays brief information regarding the features of the application. Users should review this page frequently as it may be utilized as a convenient space to post news and updates by the employing company.

**3.2 Menu**

On a larger screen, such as some tablets or a PC workstation, the left side of the screen will feature a Menu that allows navigation between the application’s various pages. On a smaller screen, such as a smartphone, this same Menu is accessed via a “hamburger” icon in the upper right region of the screen. Menu access is directly available from all pages except the Login Page.

**3.3 Logout Feature**

If the user clicks the “Logout” button, the current user session will be ended, and the browser will be redirected to the Login Page. The user must repeat the login process in order to use the application again. It is encouraged that users use this feature when they are finished accessing the application in order to provide a layer of defense against unauthorized application access in the event the user’s device is used by an unauthorized party.

**4 Create New Client Page**

This page allows the user to create a new Client record.

**4.1 Create New Client Page**

The user may enter Client data including name, contact, and address information. These are all entered via keyboard or touchscreen keypad, with the exception of the “State” field, which is selected via a drop-down box (defaults to Indiana). Once desired data has been entered, the user can click the “Save Client” button, which will submit the entered data to become a new Client record in the database. After submission, a confirmation message will be displayed, and the entry fields will be cleared.

**4.2 Requirements**

Submission of a new Client record requires the entry of a name in the “Last” field; all others fields are optional and may or may not be added at a later time. If this field is left blank, the submission is prevented and a warning box is displayed. The submission will also be prevented if the contents of the “Phone” and “Email” fields do not meet the following format requirements:

Phone should be 10 digits with no spaces or separating characters (such “-“ or “.”). Ex: 8005558765

Email should consist of characters followed by “@” then characters representing a domain followed by a “.” and characters representing a top-level domain. Ex: [johndoe@gmail.com](mailto:johndoe@gmail.com)

Alternatively, Phone and Email fields may be left blank.

**5 Create New Jobs & Update Records Page**

The user may search for Client records and display the details of those records. They may then update that Client record, view Job records associated with the selected Client, create a new Job record for that client, update an existing Job record, or else delete an individual Job record or a Client record.

**5.1 Find Client Feature**

The user may enter a Client’s Last Name in the corresponding field then click the “Find Client” button. This will submit a query to the database and attempt to retrieve any Clients found with a matching last name. For each Client found, a rectangular button will appear below the search field that is labeled with that Client’s first and last name (if available).

If the user clicks on one of these buttons, the retrieved Client record data for that Client will be displayed in the “Client Record” fields below.

**5.2 Update Client Record Feature**

The displayed Client record data in the “Client Record” fields may be freely edited. The user may then click the “Save Client Changes” button. The Client record with matching ID will be found in the database, and all changes will be applied to the relevant attributes in the Client record.

**5.3 Find Jobs Feature**

If the user clicks the “Find All Jobs for this Client” button while a Client Record is displayed, the database will be searched for any Job records that are associated with that Client. Each Job found will be displayed below in a table that displays their record’s data.

**5.4 Update Job Feature**

Beside each Job displayed as a result of Section **5.4**, is an “Edit” button. If clicked, the details of the Job will be displayed as record data in fields. This data may be edited freely. If the “Save Job Changes” button at the bottom of the form is clicked, these changes will be applied to the appropriate Job record in the database.

**5.5 Delete Job Feature**

Also at the bottom of the Job record display is a “Delete Job” button. If clicked, the displayed Job record will be located in the database and permanently deleted.

**5.6 Create New Job Feature**

If the user clicks the “Create New Job for this Client” button, a form will appear which has fields to accept data input about the desired Job’s address and work information. If the user clicks the “Copy Client Address” button, the address data fields of the displayed Client will have their contents copied to the corresponding address data fields in the Job form. When the user then clicks the “Save Job” button at the bottom of the form, this data will be sent to the database for the creation of a new Job record.

**5.7 Delete Client Feature**

If the user clicks the “Delete Client” button while a Client Record is being displayed, the database will first be searched for any Job records associated with that Client; these will then be permanently deleted. Then, the database will be searched for the Client record; this will be delete as well.

NOTE: It is not possible to delete a Client record without deleting all associated Job records. This is an intentional feature to prevent Jobs lingering in the database which are unassociated with any Clients.

**5.8 Requirements**

As mentioned previously, the ability to delete Client and Job records is only available to users in the Clerical role. All other operations are available to both Estimator and Clerical roles.

A last name must be entered to search for a Client(s).  
NOTE: These names are case-sensitive. For example, if the user searches for “smith,” any Clients with the last name “Smith” will not be found.

If a Client record is updated, it must still contain a Last Name, and its Phone and Email fields must contain data in the valid formats; otherwise, the update will not be submitted.

A Job record is required to have all address data provided. If any of these fields are left blank, the creation or update of the Job record will not be submitted.

**6 Administrator Information**

An exhaustive description of the administrative duties associated with this application is beyond the scope of this User Documentation. The client staff member(s) responsible for administrating the application should expect to familiarize themselves with the features, operation, and internal documentation of the Amazon Web Services cloud platform. This third-party platform provides both the web hosting and back-end services that allow this application to function. However, a brief summary will be provided to facilitate this process.

Upon client acceptance and handover of the final application product, the client’s appropriate staff will assume responsibility and sole control of the AWS account that hosts the product. Note that login access to this account and its associated users/roles is entirely distinct from the end-user accounts provided to client Estimator and Clerical employees. It is advised that only those staff intended to administer the application be provided with such access. Even then, alteration with files and configurations internal to AWS should be kept to a minimum and only handled by those with the appropriate training and knowledge; failure to do so could result in the application malfunctioning, being disabled, losing stored data, or being accessed by unauthorized agents.

In short, the application uses a variety of AWS provided services to execute its major functional tasks. The DynamoDB service is a non-relational database that stores both the Client and Job records. API Gateway service receives the HTTP requests sent from the application’s front-end UI in the browser, while Lambda service features our custom scripts that manipulate and pass data between the API Gateway and the DynamoDB database. The S3 storage bucket service hosts and serves up all the web files that make the application available to the Internet. Finally, Cognito service handles the assigning and authorization of application users.

Day-to-day administration of the AWS account will largely involve granting and revoking user access to the application. Cognito service will allow the administrator to create a new user in either Estimator or Clerical role, then assign them a username and temporary password (the latter will expire within 7 days if not used). These can be sent to the prospective user via text message or email. The Administrator may also disable or delete existing user accounts.

The Administrator may also take advantage of the AWS account features to monitor application usage, view database contents, copy data for backups, and handle billing for the account.

**7 Summary**

With minimal training, this application should provide the client with the means to significantly improve productivity and the access, safety, and reliability of their critical data. While developed with the principal of requiring minimal technical competency on the part of the end user, it is encouraged that all employees expected to utilize the application be provided with the chance to create, modify, and delete “dummy” Client and Job records.

Since Windows PCs and Android mobile devices are some of the most widely available computing platforms, many end users should already have access to a compatible device, and needed ones are easily procured. Similarly, the browsers tested for compatibility, Chrome and Firefox, are available at no cost, have no exotic hardware requirements, and are still fully supported by their maintaining organizations. Finally, the popularity and resources associated with the Amazon Web Services platform should provide the client with a high degree of confidence that it will remain secure and supported long into the future.

The end result is an application that should be more than adequate to meet all the client’s needs of compatibility, ease-of-use, and data/access security.