

Scope of work

We're seeking a simple web application that is written with Angular5/6 that consumes a REST service. The code shall contain inline documentation and Angular tests and reside in a private GitHub repository we create and maintain. Any code generated for this project will be owned by AbSci. Here are the screen designs for the app.

1. Login screen where users provide Windows credentials.

The login screen features a title "Login to the AbSci Target Database" at the top. Below the title are two input fields: "Login ID" and "Password". A "Log In" button is positioned at the bottom center of the form.

Unsuccessful authentication should show this:

The unsuccessful authentication screen displays the same title "Login to the AbSci Target Database". The "Login ID" field contains the placeholder text "user name" and the "Password" field contains "bad password". A red error message, "The username or password is incorrect", is shown below the input fields. A "Log In" button is located at the bottom center.

2. Upon successful authentication this page is shown, which display a menu in the left corner with one menu item:



3. When the user selects the menu item, this screen is shown:

The screenshot shows a web interface for adding a new target. The header bar is grey and contains a hamburger menu icon, the text 'Add A New Target', and a 'Log Out' button. The main content area is white and contains several form fields and buttons. On the left side, there are four required fields: 'Target Name *', 'Partner *', 'Protein Class *' (a dropdown menu), and 'Project Name *'. Below these is a 'Notes' section with a large text area. On the right side, there are two input fields: 'Subunit name' and 'Number copies of this subunit in the target*'. Below these are two buttons: 'Add subunit amino acid FASTA file *' and 'Add codon optimized DNA FASTA file *'. At the bottom right, there is a button labeled 'Add Another Sub Unit'. At the bottom left, there are 'Cancel' and 'Save' buttons. A legend at the bottom left indicates that '*' denotes a required field.

Clicking “Add Another Sub Unit” will reveal a new set of buttons and input text, as well as the option to delete it. At least one subunit, amino acid file, and codon optimized DNA file are required. The save button is only enabled once required information is provided.

Target Name *

Partner *

Protein Class *

Notes

Project Name *

Cancel

Save

* Required Field

Subunit name

Number copies of this subunit in the target*

Add subunit amino acid FASTA file *

Add codon optimized DNA FASTA file *

Subunit name

Number copies of this subunit in the target*

Add subunit amino acid FASTA file *

Add codon optimized DNA FASTA file *

Add Another Sub Unit



Upon submission, the data will be validated on the server and any submission errors will be returned to the client.

4. Once the user successfully saves the information, they are shown a screen for describing subunit interactions:

Add Sub Unit Interactions For Target

Log Out

Target
XYZ Target

Sub Unit Interactions

Add New Interaction

Sub Unit Name	Copy #	Interaction Type	Sub Unit Name	Copy #	
					×
					×

Post Translation Modifications

Add New PTM

Sub Unit Name	Residue number	Sub Unit Name	Residue number	Post Translational Modification	
					×
					×
					×
					×

Cancel
Save

The Target field is filled out with the target name submitted on the previous page and is not editable.

Two subunit interactions are provided by default, but the user can add more subunit interactions by clicking the “Add New Interaction” button. At least one row of this information is required if more than one subunit was specified on the previous page. This section describes interactions between subunits. So the front end can help with validation by preventing the user from creating a subunit interaction of the same copy # with itself. For example the following should be invalid:

Sub Unit Name	Copy #	Interaction Type	Sub Unit Name	Copy #	
HC	1	Covalent	HC	1	×

But this is allowed:

Sub Unit Name	Copy #	Interaction Type	Sub Unit Name	Copy #	
HC	1	Covalent	HC	2	×

The Post Translation Modifications can allow entries that contain the same subunit or different subunits. As above, new rows can be added by clicking the “Add New PTM” button. None of these rows are required as part of the submission. The residue number for each subunit in the row is a required number. The type of post translation modification must also be specified for each row. If the subunit name is the same, the residue numbers must differ. There is a logical way to restrict the residue numbers for each subunit. This would be based on the length of the subunits defined in the previous page and the REST service can provide the maximum value allowed for each subunit. Here’s a snapshot of an acceptable set of entries for the PTM section.

Post Translation Modifications

Add New PTM				
Sub Unit Name	Residue number	Sub Unit Name	Residue number	Post Translational Modification
HC	23	HC	67	Disulfide bond
HC	4	LC	5	Disulfide bond
LC	6	HC	9	Glycosylation

[illegible]