

## 7\_Design forms using Data Dictionary and Online Designer

System Setup			
REDCap Version	LTS 10.0.5	Application URL	https://www.mc.vanderbilt.edu/victr/dcc/redcap/demos/
Browser Version	Chrome 85.0	OS Version	Windows 10
Actual Execution Time	25 minutes		
Instructions	Reference User Guide for Community User		

Test Summary	
<b>Feature Category Description:</b> Project level management - Control center and user interface features that allow the ability to create project and field metadata. Ability to open a project and move the project between statuses.	
<b>Test Purpose Details:</b> The script tests form and field creation and core field metadata.	
<b>Functional Requirements:</b>	
Form Creation	<ul style="list-style-type: none"> <li>7.6 The system shall support the creation of new data collection instruments using the Data Dictionary.</li> <li>7.12 The system shall support the creation of new data collection instruments via the Online Designer.</li> <li>7.13 The system shall support the ability to rename data collection instruments.</li> <li>7.14 The system shall support the ability to copy data collection instruments and add a suffix to each variable name in the new instrument.</li> <li>7.16 The system shall support the ability to delete data collection instruments.</li> <li>7.17 The system shall support the ability to re-order data collection instruments.</li> </ul>
Field Creation	<ul style="list-style-type: none"> <li>7.21 The system shall support the creation of Text box (Short Text).</li> <li>7.24 The system shall support the creation of Notes Box (Paragraph Text).</li> <li>7.25 The system shall support creation and customization of algorithms for calculated fields.</li> <li>7.26 The system shall support the creation and manual coding for multiple choice dropdown list (single answer).</li> <li>7.28 The system shall support the creation and manual coding for multiple choice radio buttons (single answer).</li> <li>7.31 The system shall support the creation of Checkboxes (multiple answers).</li> <li>7.32 The system shall support the creation of Signature (draw signature with mouse or finger).</li> <li>7.33 The system shall support the creation of File upload (for users to upload file).</li> <li>7.34 The system shall support the creation of Descriptive Text (with optional Image/File Attachment).</li> <li>7.39 The system shall support the creation of Begin New Section (with optional text).</li> <li>7.40 The system shall support marking a data entry field as an identifier.</li> <li>7.41 The system shall support marking a data entry field as required.</li> <li>7.43 The system shall support the ability to add, edit, copy, move and delete data collection fields.</li> </ul>

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### Test Requirements

#### Test Users

ID	User Name	Password	Minimum User's Rights	DAGs and Other Settings
1.	admin1005	Pswd_1103	Administrator	Pre-existing administrator user
2.	user1005_1	1005_1Pswd	<ul style="list-style-type: none"> <li>Normal user can create projects</li> <li>User has project design and setup rights</li> <li>User Rights</li> </ul>	Pre-existing user

### Project Setup

ID	Description	Instructions
1.	Project: FirstProject_1005	Use the existing project from script 6 2 instruments and 1 record exist
2.	Project Setup:	<ul style="list-style-type: none"> <li>Disable surveys in Project Setup</li> <li>Longitudinal is enabled</li> <li>Project is in development status</li> </ul>
3.	Data Import File Name: n/a	
4.	Other Files: 7_image_v1005.jpg	Download this file. It is used in the step that adds a Descriptive field with a file attachment.



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Test Steps				
Step #	Action Step	Expected Result	Pass / Fail	Comments
Help	You must perform the actions listed in this column.	After performing the actions in the 'Action Step' column, you should see the following.	Check 'Pass', if the actual results match the 'Expected Result'; otherwise, check 'Fail'.	Include unexpected results, suggestions, etc.
1.	Navigate to the validation website's REDCap log-in page  Login as user1005_1  Go to User Rights page.	User successfully logged into the system. Navigates to <u>Home</u> page.  Verify user1005_1 has design rights per Test requirements	<input checked="" type="checkbox"/> Pass  <input type="checkbox"/> Fail	See 6_Assign User Rights
2.	Go to Project Setup Per Project Setup requirements, verify: <ul style="list-style-type: none"> <li>• Surveys are disabled</li> <li>• Longitudinal is enabled</li> <li>• The project is in development status.</li> </ul>	Settings are correct per requirements  The project is in development status.	<input checked="" type="checkbox"/> Pass  <input type="checkbox"/> Fail	
3.	Look at the "Design your data collection instruments" section	Visible in this section: Buttons: "Online Designer", "Data Dictionary", and "REDCap Shared Library" Links: "Download PDF of all instruments", "Download current data dictionary", and "Check for Identifiers"	<input checked="" type="checkbox"/> Pass  <input type="checkbox"/> Fail	
4.	Select "Download the current Data Dictionary"  Save the file as FirstProject1005.csv.	The file contains all the fields and metadata for the project. Spot check that the first field is the record_id field.  File is saved.	<input checked="" type="checkbox"/> Pass  <input type="checkbox"/> Fail	
5.	Add a new row of data under the last field: Variable name: dd_form Form name: data_dictionary_form		<input checked="" type="checkbox"/> Pass  <input type="checkbox"/> Fail	

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	Field type: text Field Label: Testing data dictionary upload			
	Save	The new row is saved in the file.		
6.	In the Project Setup tab, Select the Data Dictionary button.  Upload FirstProject1005.csv file  Commit	Document uploads  Message "Changes Made Successfully"	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
7.	In the FirstProject1005.csv file, add a new row of data under the last field:  Variable name: dd_form Form name: field_validation_form Field type: text Field Label: Testing data dictionary upload		<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
	Save	The new row is saved in the file.		
8.	In the Project Setup tab, Select the Data Dictionary button.  Upload FirstProject1005.csv file  Commit	Document uploads  Error message: The following variable/field names were duplicated...dd_form	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
9.	In the FirstProject1005.csv file,  Change the second dd_form variable name to dd_test  Change field_validation_form to data_dictionary_form		<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
	Save	The edits are saved in the file.		
10.	In the Project Setup tab, Select the Data Dictionary button.  Upload FirstProject1005.csv file  Commit	Document uploads  Message "Changes Made Successfully"	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
11.	In Project Setup, go to Online Designer  Open Data Dictionary Form	Two fields exist. Both are called : Testing data dictionary upload	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	

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	Return to list of instruments	Online Designer tab visible		
12.	<p>In Online Designer, create new instrument:</p> <p>Select the Create button located in the Data Collection Instruments header.</p> <p>Choose the last Add instrument here button to add the new instrument at the bottom.</p> <p>Name: Demo Branching</p> <p>Select Create</p>	<p>A new instrument appears called Demo Branching</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
13.	<p>In Online Designer, rename My First Instrument:</p> <p>Choose action dropdown: Rename</p> <p>Enter: Data Types</p> <p>Save.</p> <p>Close all message prompts</p>	<p>Instrument name is Data Types.</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
14.	<p>In Online Designer, copy My First Instrument 2</p> <p>Choose action: Copy</p> <p>New instrument name: Text Validation</p> <p>Select Copy Instrument</p>	<p>Message "Success! The instrument was successfully copied."</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
15.	<p>Open Text Validation</p> <p>Confirm each field is appended with _v2.</p> <p>Return to list of instruments</p>	<p>Each field is appended with _v2</p> <p>Online Designer tab is visible</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
16.	<p>In Online Designer, delete My First instrument 2</p> <p>Choose action: Delete</p> <p>Confirm the delete</p>	<p>Message: Deleted! The data collection instrument has been deleted.</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	



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17.	In Online Designer, reorder Text Validation  Select to the left of the Text Validation instrument to activate the move feature. Drag the instrument to the first position.	Text Validation is the first instrument in the list.	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
18.	Go to Project Setup, then Designate Instruments for My Event Designate all instruments in arm 1 to Event 1. Save	Each data collection instrument in Arm 1, Event 1 is marked in the grid.  Changes saved in grid.	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	Reference: 4_ManageProjectCreationDeletionSettings.docx
19.	Go to Online Designer and open the Data Types instrument	Data Types instrument appears in edit mode	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
20.	Add Field at bottom of list  View field types in dropdown	Add New Field box is displayed.  Verify these field types are available (ignore remaining): Text Box Notes Box Calculated Field Multiple Choice – Drop Down Multiple Choice – Radio Buttons Checkboxes Signature File Upload Descriptive Text Begin New Section	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
21.	Select field type= Text Box	The following metadata fields display for customization (defaults):  Field Label Variable Name Validation (None) Required (No) Identifier (No) Custom Alignment (RV) Field Note (null)	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
22.	Enter: Field Label= "Text Box" Enter: Variable Name = "textbox" Leave remaining fields with default values  Save	Field is created as described.	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

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23.	<p>Edit textbox variable name to confirm the system rejects names that do not follow rules: must begin with lower case letter and may contain only lower case letters, numbers or the symbol underscore</p> <p>Enter test variable names:</p> <p>2 and Save</p> <p>Close pop up. Enter variable name: 2ABC and Save</p> <p>ABC#2 and Save</p> <p>A2bc and Save</p> <p>Return Variable name to "textbox"</p> <p>Save</p>	<p>Illegal characters are removed or changed as soon as user Selects outside the field "variable name".</p> <p>Confirm variable name is:</p> <p>2 is deleted. Error message prompting for a variable name.</p> <p>2ABC is changed to abc</p> <p>ABC#2 is changed to abc_2</p> <p>A2bc is changed to a2bc</p> <p>Variable name is textbox</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
24.	<p>Add Field at bottom of list</p> <p>Field Type: Notes Box</p> <p>Field Label: Notes Box</p> <p>Variable Name: notesbox</p> <p>Leave all other values as defaults.</p> <p>Save</p>	<p>The new field is created. A large data entry box is available..</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
25.	<p>Add Field at bottom of list</p> <p>Field Type: Calculated Field</p> <p>Field Label: Calculated Field</p> <p>Variable Name: calculated_field</p> <p>Calculation Equation: 3 * 2</p> <p>Leave all other values as defaults.</p> <p>Save</p>	<p>When Calculated Field is selected, Calculation Equation metadata field displays.</p> <p>The new field is created. An option to view the equation is provided.</p>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

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26.	<p>Add Field at bottom of list</p> <p>Field Type: Multiple Choice – Drop Down List (single answer)</p> <p>Field Label: Multiple Choice Dropdown Auto</p> <p>Choices: DDChoice1 DDChoice2 DDChoice3</p> <p>Move cursor to Variable Name field</p> <p>Close pop up.</p> <p>Variable Name: multiple_dropdown_auto</p> <p>Leave all other values as defaults.</p> <p>Save</p>	<p>Multiple Choice – Drop Down is selected, Choices (one choice per line) metadata field displays.</p> <p>Pop up message: Raw values for choices are added automatically 1, DDChoice1 2, DDChoice2 3, DDChoice3</p> <p>The new field is created. The three choices exist.</p>	<input checked="" type="checkbox"/> <b>Pass</b>  <input type="checkbox"/> <b>Fail</b>	
27.	<p>Add Field at bottom of list</p> <p>Field Type: Multiple Choice – Drop Down List (single answer)</p> <p>Field Label: Multiple Choice Dropdown Manual</p> <p>Choices: 5, DDChoice5 7, DDChoice6 6, DDChoice7</p> <p>Variable Name: multiple_dropdown_manual</p> <p>Leave all other values as defaults.</p> <p>Save</p>	<p>Multiple Choice – Drop Down is selected, Choices (one choice per line) metadata field displays.</p> <p>Note the choices are not in numerical order {5, 7, 6}</p> <p>The new field is created. The numbered choices do not need to be in numerical order.</p>	<input checked="" type="checkbox"/> <b>Pass</b>  <input type="checkbox"/> <b>Fail</b>	
28.	<p>Add Field at bottom of list</p> <p>Field Type: Multiple Choice – Radio Buttons (single answer)</p>	<p>When Multiple Choice – Radio Buttons is selected, Choices (one</p>	<input checked="" type="checkbox"/> <b>Pass</b>  <input type="checkbox"/> <b>Fail</b>	



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	<p>Field Label: Radio Button Auto</p> <p>Choices (may include periods): Choice1 Choice2 Choice.3</p> <p>Move cursor to Variable Name field</p> <p>Close pop up.</p> <p>Variable Name: multiple_radio_auto</p> <p>Leave all other values as defaults.</p> <p>Save</p>	<p>choice per line) metadata field displays.</p> <p>Pop up message: Raw values for choices are added automatically 1, Choice1 2, Choice2 3, Choice.3</p> <p>The new field is created. The period in choice 3 is accepted.</p>		
29.	<p>Add Field at bottom of list</p> <p>Field Type: Multiple Choice – Radio Buttons (single answer)</p> <p>Field Label: Radio Button Manual</p> <p>Choices: 9..9, Choice99 100, Choice100 101, Choice101</p> <p>Variable Name: radio_button_manual</p> <p>Leave all other values as defaults.</p> <p>Save</p>	<p>When Multiple Choice – Radio Buttons is selected, Choices (one choice per line) metadata field displays. Choice99 Choice100 Choice101</p> <p>The new field is created. The periods are accepted.</p>	<input checked="" type="checkbox"/> Pass Fail <input type="checkbox"/>	
30.	<p>Edit (pencil icon) Radio Button Manual</p> <p>Cancel</p>	<p>Verify Choices: 9..9, Choice99 100, Choice100 101, Choice101</p> <p>Returns to Online Designer</p>	<input checked="" type="checkbox"/> Pass Fail <input type="checkbox"/>	
31.	<p>Add Field at bottom of list</p> <p>Field Type: Checkboxes</p> <p>Field Label: Checkbox</p>		<input checked="" type="checkbox"/> Pass Fail <input type="checkbox"/>	

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	Choices: 1, Checkbox1 2, Checkbox2 3, Checkbox3  Variable Name: checkbox  Leave all other values as defaults.  Save	The new field is created. The three choices exist.		
32.	Add Field at bottom of list  Field Type: Signature (draw signature...)  Field Label: Signature  Variable Name: signature  Leave all other values as defaults.  Save	The new field is created. The Add signature link exists.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
33.	Add Field at bottom of list  Field Type: File Upload  Field Label: File Upload  Variable Name: file_upload  Leave all other values as defaults.  Save	The new field is created. The Upload document link exists.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
34.	Add Field at bottom of list  Field Type: Descriptive Text (with optional Image/File Attachment)  Field Label: Descriptive Text with File  Variable Name: descriptive_text_file		<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	



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	Select Upload file  Browse and Select 7_image.jpg file. Upload document.  Close message  Leave all other values as defaults.  Save	The Attach an image, file, or embedded audio message box appears.  Message "Document was successfully uploaded!"  The new field is created. The field displays the attachment name 7_image.jpg.		
35.	Add Field at bottom of list  Field Type: Descriptive Text (with optional Image/File Attachment)  Field Label: Descriptive Text  Variable Name: descriptive_text  Leave all other values as defaults.  Save	The new field is created.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
36.	Confirm the Descriptive Text exist as built. View record 1 in Arm 1, Event 1 Add/Edit Records, Select record 1 in arm 1.  Select Data Types instrument  Scroll down to Descriptive Text with File question near the bottom of the form.	Data Types form for record 1 displays.  Descriptive Text Image 7_image.jpg displays.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
37.	Select and open the 7_image.jpg  Close the image viewer and select Stay on Page.  Save and Exit form.  **Note: if browser tab closes, log back in as user1005_1.	The image displays  Data Types form for record 1 displays.  Record Home Page displays.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	

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38.	Go to Project Setup/Online Designer Open Data Types instrument Add Field at bottom of list Field Type: Begin New Section Field Label: Section Break Save Close pop up	The following metadata fields display for customization (defaults): Field Label  Pop-up box displays "Sorry, but Section Headers cannot be the last field on a data entry form" Data Types instrument displays.	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
39.	Add Field after File Upload field Field Type: Begin New Section Field Label: Section Break Save	Section header displays highlighted in yellow.	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
40.	Add Field at bottom of list Field Type: Text Box Field Label: Identifier Variable Name: identifier Select Identifier field Yes Leave all other values as defaults. Save	The new field is created.	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
41.	Add Field at bottom of list Field Type: Text Box Field Label: Required Variable Name: required Select Required field Yes Leave all other values as defaults. Save		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	



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		The new field is created. The "must provide value" phrase is in red.		
42.	Move the field on the existing form.  Select anywhere in the Required field and drag and drop above Identifier field	Questions are reordered successfully.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
43.	Return to list of instruments and Open Data Dictionary Form  Delete the first "Testing data dictionary upload" field: Select the red X  Confirm the delete	Data Dictionary Form has two fields, both named "Testing data dictionary upload".  Message pop up prompts confirmation of delete  Field is deleted.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
44.	Move a field between different data instruments using the Move Field to Another Location icon.  Select the Move icon on the remaining Testing data dictionary upload field.  In the move dropdown, select identifier field on the Data Types instrument.  Move Field  Close message  Return to list of instruments  Open Data Types	The Move field to another location screen appears.  Message pop up: "Successfully moved"  No fields remain on the Data Dictionary Form  Data Types fields display.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
45.	Edit (pencil icon) the Testing data dictionary radio upload field  Field Type: Text Box Field Label: Edit Field Variable Name: edit_field		<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	


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	Save	The field is saved as a text field, named Edit Field, variable name edit_field.		
46.	In the Data Types instrument, select icon "Copy" for Identifier field.  Select "Cancel"	Pop-up box displays "Copy Field?"  Field is not copied.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
47.	Select "Copy" for Identifier field.  Confirm the copy	Pop-up box displays "Copy Field?"  Pop-up box closes.  Two Identifier fields display. The variable name is auto generated to be unique.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
48.	Logout	User successfully logs out.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
	THIS ENDS THE TESTING FOR THIS SCRIPT  THIS SCRIPT IS THE SEVENTH OF SEVEN SCRIPTS MEANT TO BE DONE IN ORDER.		<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	
	**Verify there is 1 record and 4 instruments in this order: --Text Validation (3 fields) --Data Types (18 fields) --Data Dictionary Form (0 fields) --Demo Branching (0 fields)	Only one record exists and the 4 instruments appear in specified order with the specified number of fields. One user and the admin are on the project.	<input checked="" type="checkbox"/> Pass  Fail <input type="checkbox"/>	IF THE PROJECT VARIES FROM THE NUMBER OF RECORDS AND INSTRUMENTS IN ORDER, DO NOT REPLICATE. RENAME "FIRSTPROJECT" AND RERUN SCRIPTS 4 AND 7.
	ONLY FOR Regulatory & Software Validation committee:  After writing the <u>PREREQUISITE</u> scripts and before executing them, any projects and users created during the initial writing of these scripts will be deleted.	All projects and users deleted.		DO NOT DELETE PROJECTS AND USERS AFTER EXECUTING.



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<p>FOR ALL After <u>executing</u> the seventh and final prerequisite, the resulting project will be copied to create the 14 projects to test the remaining features. Rename using a pre-defined naming convention (example at right).</p> <p>Copy ALL of the optional selections (Select All) when making the copy.</p> <p>Remaining scripts:</p> <ul style="list-style-type: none"> <li>8 Field validation</li> <li>9 Branching logic</li> <li>10 Data Access Groups (DAGs)</li> <li>11 Project status</li> <li>12 Security settings (access)</li> <li>13 My Projects</li> <li>14 Direct data entry with data collection instrument</li> <li>15 Direct data entry through the survey feature</li> <li>16 Data import</li> <li>17 Data Comparison Tool / DDE Module</li> <li>18 Data quality</li> <li>19 Record locking and E-signatures</li> <li>20 Draft mode</li> <li>21 Export data (data extraction)</li> <li>22 Reporting</li> <li>23 Logging</li> </ul>	<p>A new properly-named script exists for each non-prerequisite feature.</p>	<p>Projects are copied from the Other Functionality tab.</p> <p>Each institution may use their own naming convention e.g. [script order number]_[feature name]_[software version number]</p> <p><input checked="" type="checkbox"/> Pass</p> <p>Fail <input type="checkbox"/></p>
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Conclusion		
Did the Actual Results for each test step match the Expected Results listed?	<input checked="" type="radio"/> Yes	No
<p><b>Comments/Additional Information:</b> (Indicate the step number of the step you wish to comment on.)</p>		
Completed By		Date: 4/DEC/20