MONASH University

Introduction to REDCap™

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Helix

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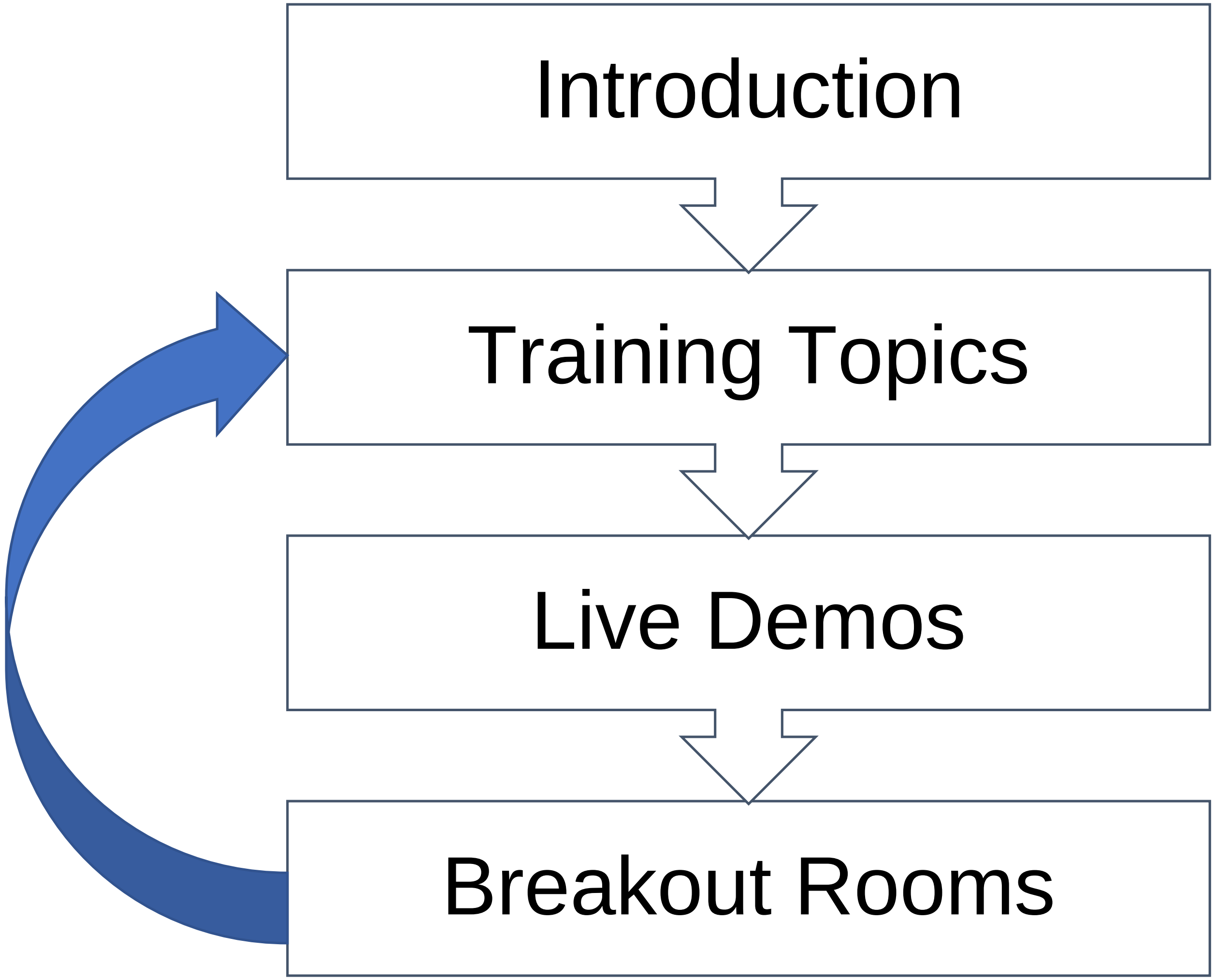
Course Approach



History and Background

Who Created REDCap and Who Uses it?

THEN

2004: Developed at Vanderbilt Univ.

2006: Global consortium started

2014: Monash joined

NOW

Worldwide:

- +5890 institutions /143 countries
- +1.3M projects
- +1.9M users

REDCap @ Monash:

- +1000 projects
- +3700 users

REDCap is licensed for free to non-profits around the world

What is REDCap?

A secure web application for managing your data online

REDCap Acronym

Research
Electronic
Data
Capture

~~Redcap~~
~~RedCap~~
~~Redcap~~
~~RedCAP~~
REDCap ✓

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What is it for?

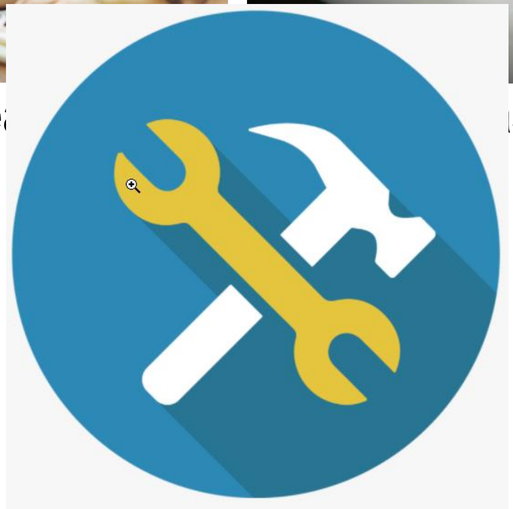
Use Cases

Clinical Resear
and Clinica

ity Rese

sic Research

Global Health



Operational Support

Advantages of REDCap

Accessible

- web-based access (on and off campus)
- access for multi-site collaborations

Customisable

- fast and flexible to design
- modifications at anytime

Accurate

- ensures consistent and accurate data entry
- data quality checks to look for errors

Secure

- Data are stored in a secured area
- Daily backup and software upgrades

Supported

- User group and training

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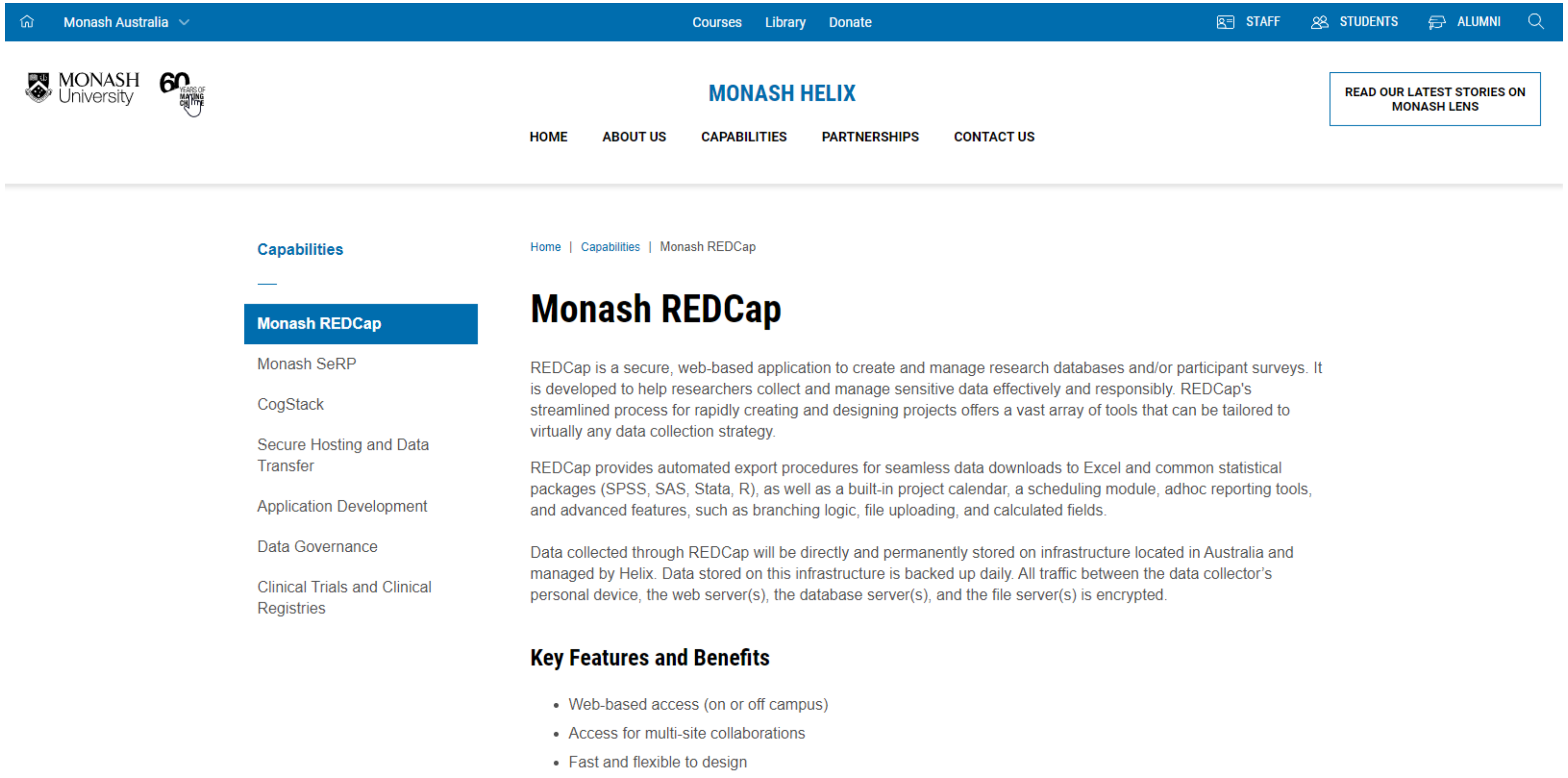
REDCap @Monash

https://www.monash.edu/researchinfrastructure/helix/capabilities/redcap

- User charges (free)
- Terms of Use (citation)
- How to request?
- General help and support
- Customisation support



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REDCap @Monash

How do I get access to REDCap?

Monash University Research

The P.I. must be from Monash University

https://redcap.link/monashredcap

Monash Health Translation Precinct (MHTP) Research

The P.I. must be from MHTP, Hudson or Monash University

https://redcap.link/mhtpredcap

REDCap @Monash

Free

and

Individualised Support

(cost recovery)

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Training Topics

Project Setup

- Design your data instruments
- Enable modules and customisations
- User Rights and Permissions
- Testing your project
- Moving to production
- Post Production Changes

Using Surveys

- Enabling surveys
- Settings & customisations
- Public link vs private links

Training Topics

Applications & Tools

- Record status dashboard
- Project audit trail
- Field history
- Codebook
- Data export
- Data quality

Training project

My Project Study ID : ________

Demographics Form Date : ______

Study ID:	
First name:	
Last Name:	
DOB: (dd-mm-yyyy)	
Age:	
Gender:	☐ Male ☐ Female ☐ Other
If 'Other', please specify	
Email:	

My Project Study ID : ________

Diagnosis Form Date : ______

Primary Diagnosis:____________________

Comorbidities:

(Tick all that apply, or 'none of the above')

☐ Diabetes

☐ Renal Insufficiency

☐ Myocardial

☐ Other/s

If Other/s, please specify ________________

____

☐ None of the above

My Project Study ID : ________

Initial Survey Date : ______

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the **last 4 Weeks.**
(one response for each question)

	All the time	Most of the time	Some of the time	A little of the time	None of the time
a. Have you felt calm and peaceful?					
b. Did you have a lot of energy?					
c. Have you felt downhearted and depressed?					

Project Setup

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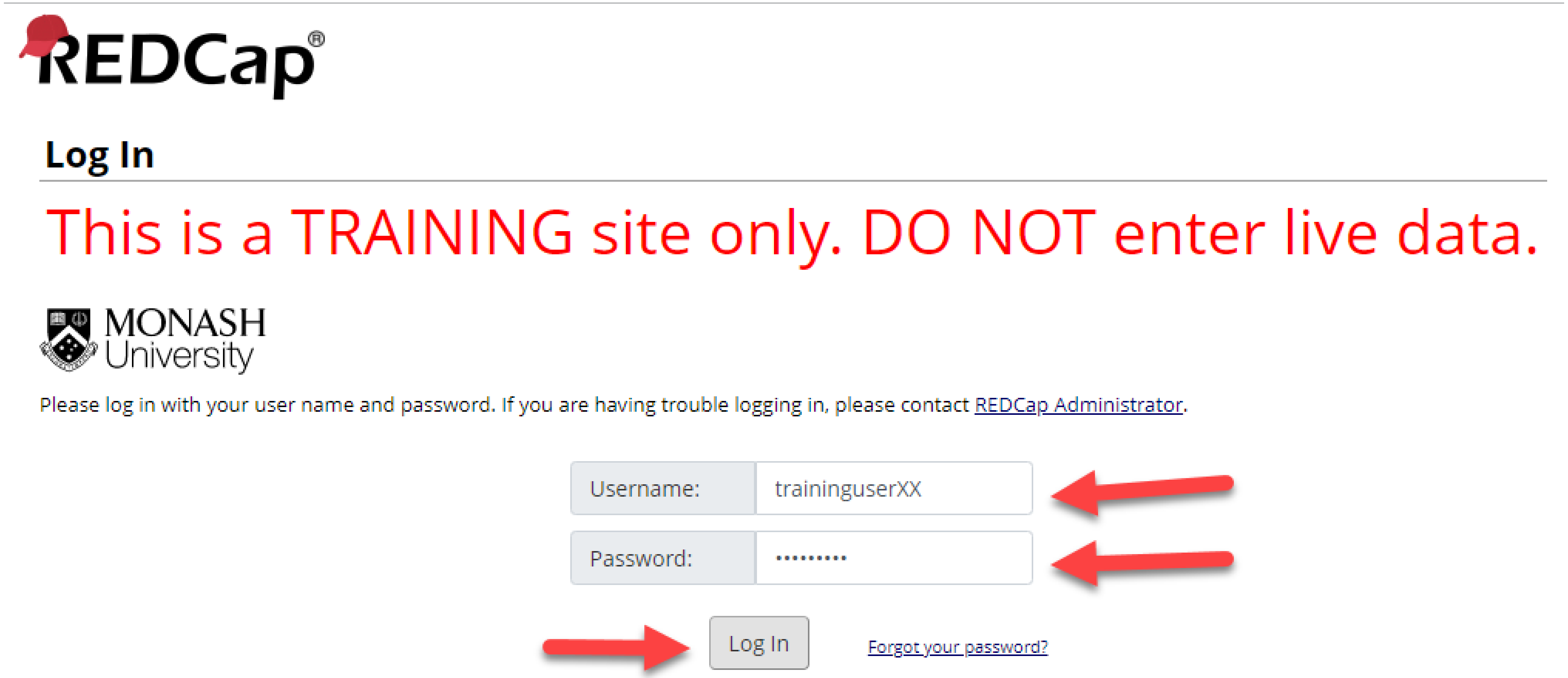
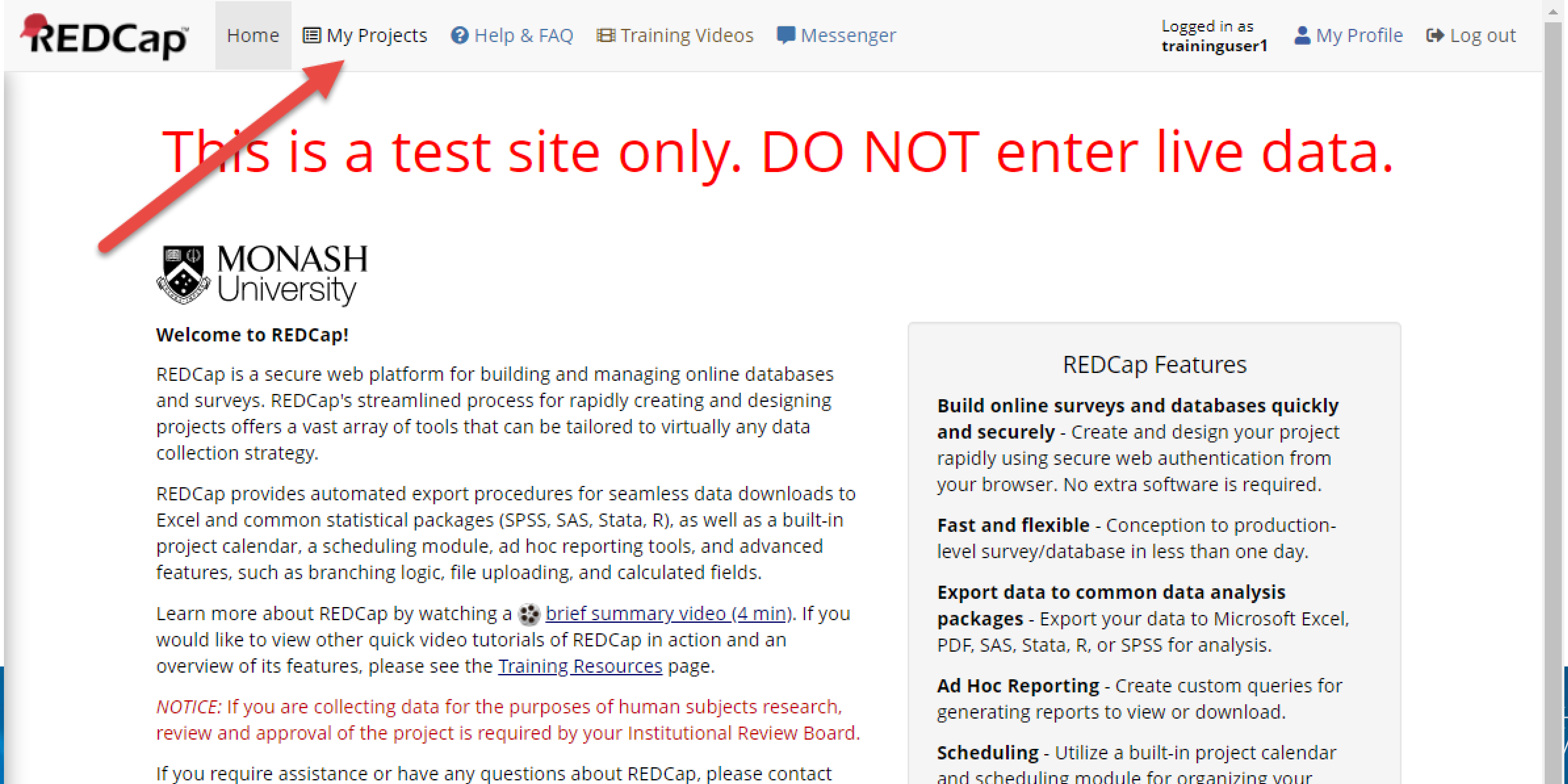
REDCap Access: https://redcap-training.helix.monash.edu/



My Projects


REDCap
Home
My Projects
Help & FAQ
Training Videos
Messenger
Logged in as traininguser1
My Profile
Log out
This is a test site only. DO NOT enter live data.
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Welcome to REDCap!
REDCap is a secure web platform for building and managing online databases and surveys. REDCap's streamlined process for rapidly creating and designing projects offers a vast array of tools that can be tailored to virtually any data collection strategy.
REDCap provides automated export procedures for seamless data downloads to Excel and common statistical packages (SPSS, SAS, Stata, R), as well as a built-in project calendar, a scheduling module, ad hoc reporting tools, and advanced features, such as branching logic, file uploading, and calculated fields.
Learn more about REDCap by watching a brief summary video (4 min). If you would like to view other quick video tutorials of REDCap in action and an overview of its features, please see the Training Resources page.
NOTICE: If you are collecting data for the purposes of human subjects research, review and approval of the project is required by your Institutional Review Board.
If you require assistance or have any questions about REDCap, please contact
REDCap Features
Build online surveys and databases quickly and securely - Create and design your project rapidly using secure web authentication from your browser. No extra software is required.
Fast and flexible - Conception to production-level survey/database in less than one day.
Export data to common data analysis packages - Export your data to Microsoft Excel, PDF, SAS, Stata, R, or SPSS for analysis.
Ad Hoc Reporting - Create custom queries for generating reports to view or download.
Scheduling - Utilize a built-in project calendar and scheduling module for organizing your

REDCap Home | My Projects | Help & FAQ | Training Videos | Send-It

Logged in as **traininguser01** My Profile Log out

This is a TRAINING site only. DO NOT enter live data.

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Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. Read more To review which users still have access to your projects, visit the User Access Dashboard.

My Projects Organize Collapse All Filter projects by title

Project Title	Records	Fields	Instruments	Type	Status
Unorganized Projects					
2021 - Training 01	0	2	1 form		

REDCap®

Logged in as traininguser01
Log out

My Projects

Project Home and Design

Project Home · Project Setup
Designer · Dictionary · Codebook
Project status: **Development**

Data Collection

Record Status Dashboard
- View data collection status of all records
Add / Edit Records
- Create new records or edit/view existing ones
Show data collection instruments

Applications

Project Dashboards
Alerts & Notifications
Calendar
Data Exports, Reports, and Stats
Data Import Tool
Data Comparison Tool
Logging
Field Comment Log
File Repository
User Rights and DAGs
Customize & Manage Locking/E-signatures
Data Quality
API and API Playground
External Modules

Help & Information

Help & FAQ
Video Tutorials
Suggest a New Feature

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2021 - Training 01 PID 731

Project Home | Project Setup | Other Functionality | Project Revision History

Project status: Development

Completed steps **0** of **7**

Main project settings

Not started
I'm done!

Enable Use surveys in this project? [?]
VIDEO: How to create and manage a survey
Enable Use longitudinal data collection with defined events? [?]
Modify project title, purpose, etc.

Design your data collection instruments

Not started
I'm done!

Add or edit fields on your data collection instruments. This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). Quick links: Download PDF of all instruments OR Download the current Data Dictionary

Go to Online Designer or Data Dictionary   Explore the REDCap Instrument Library

Have you checked the Check For Identifiers page to ensure all identifier fields have been tagged?

Learn how to use [$] Smart Variables | Piping | @ Action Tags | Field Embedding | Special Functions

Enable optional modules and customizations

Optional
I'm done!

Enable Repeatable instruments [?]
Disable Auto-numbering for records [?]
Enable Scheduling module (longitudinal only) [?]
Enable Randomization module [?]
Enable Designate an email field for communications (including survey invitations and alerts) [?]
Additional customizations

Set up project bookmarks (optional)

Training Site

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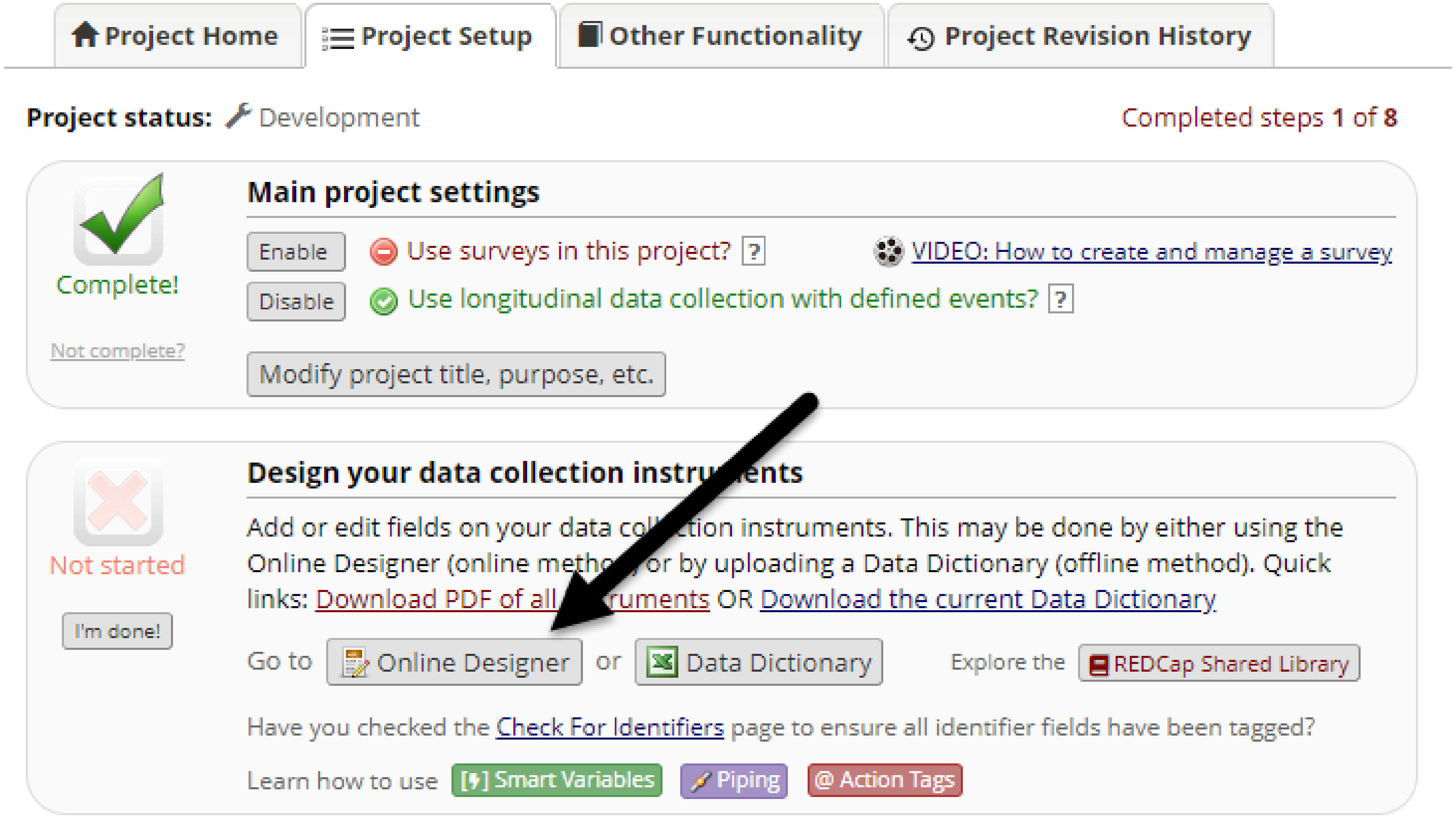
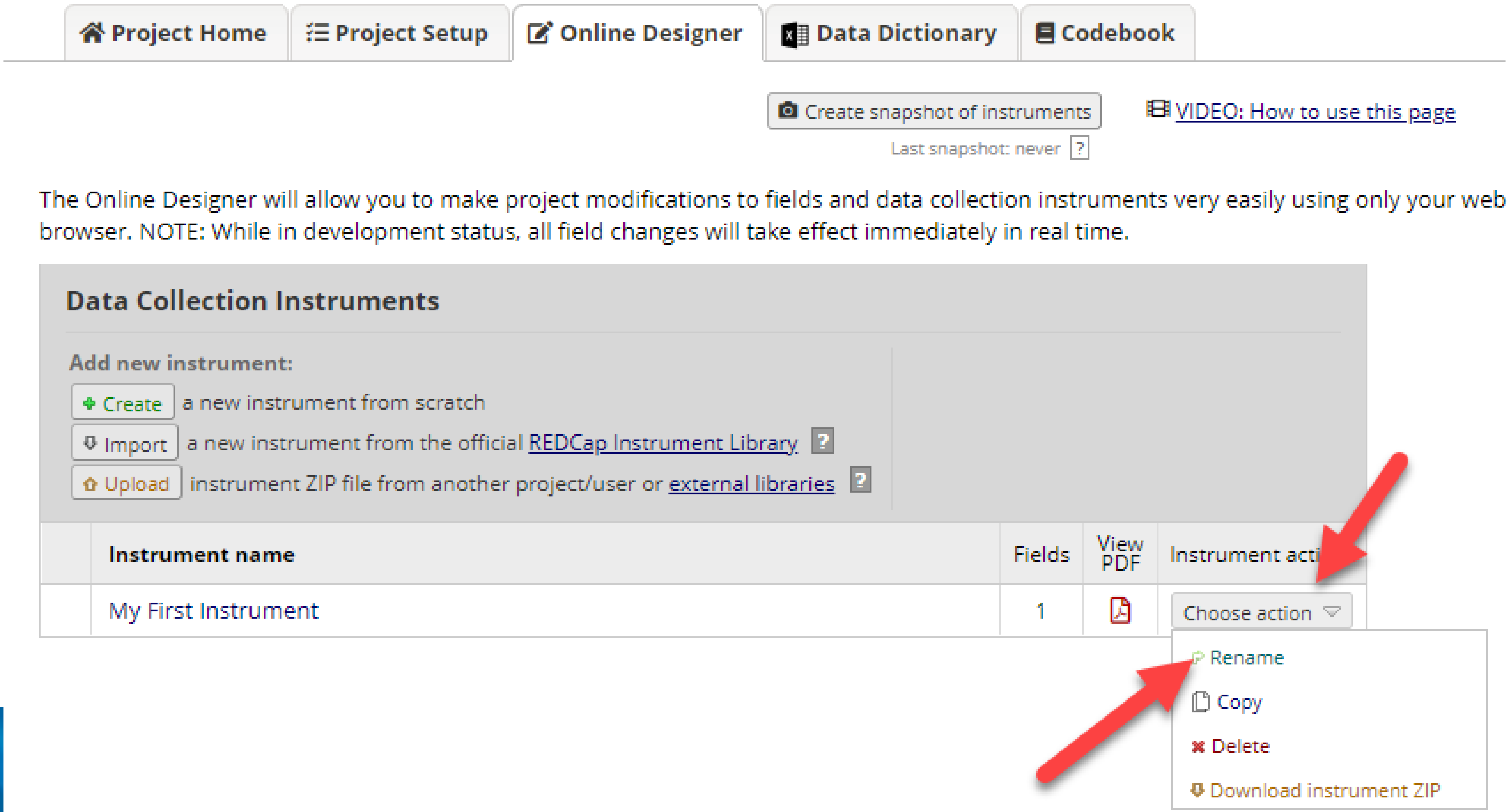
Online Designer



Online Designer



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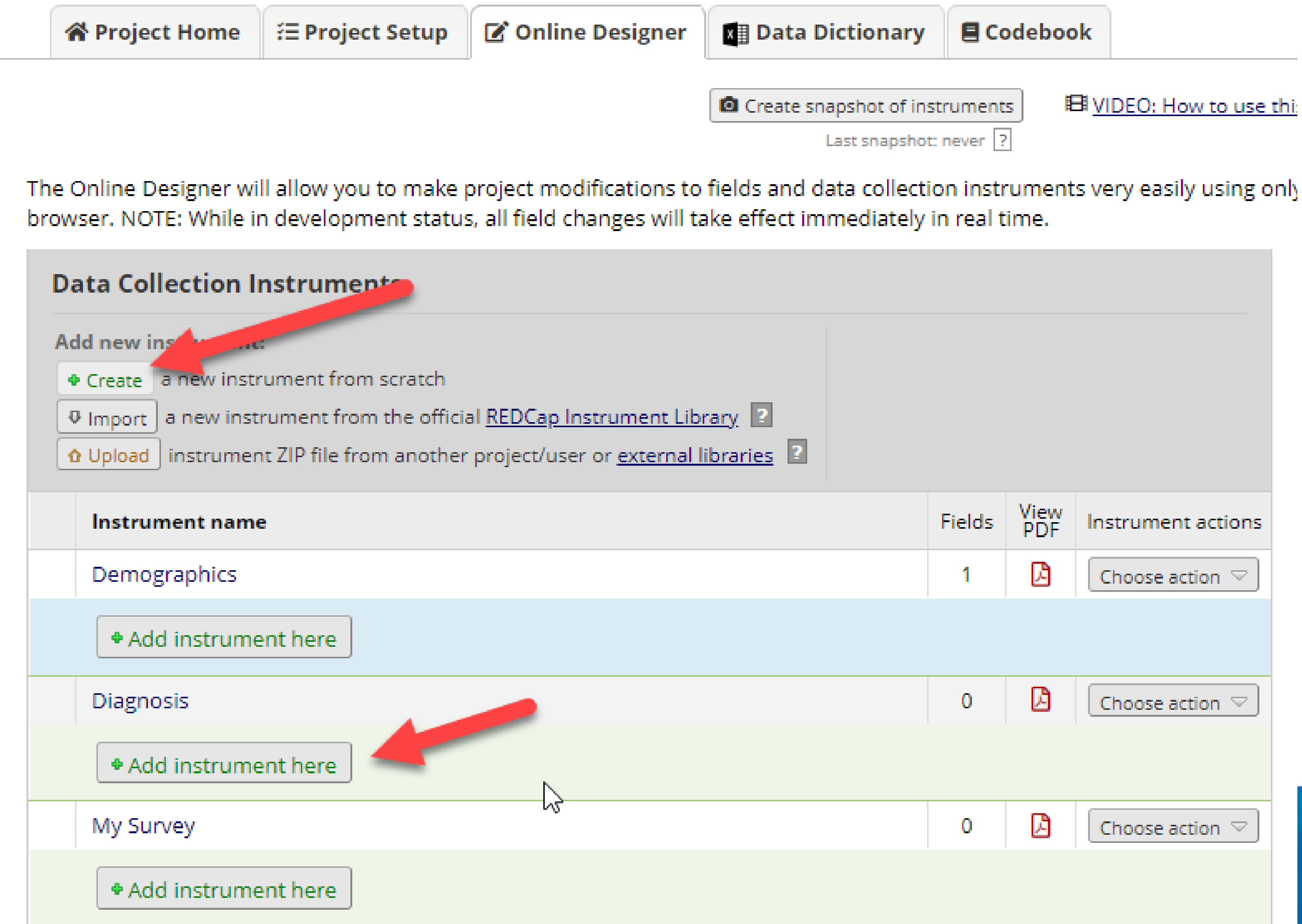
Online Designer



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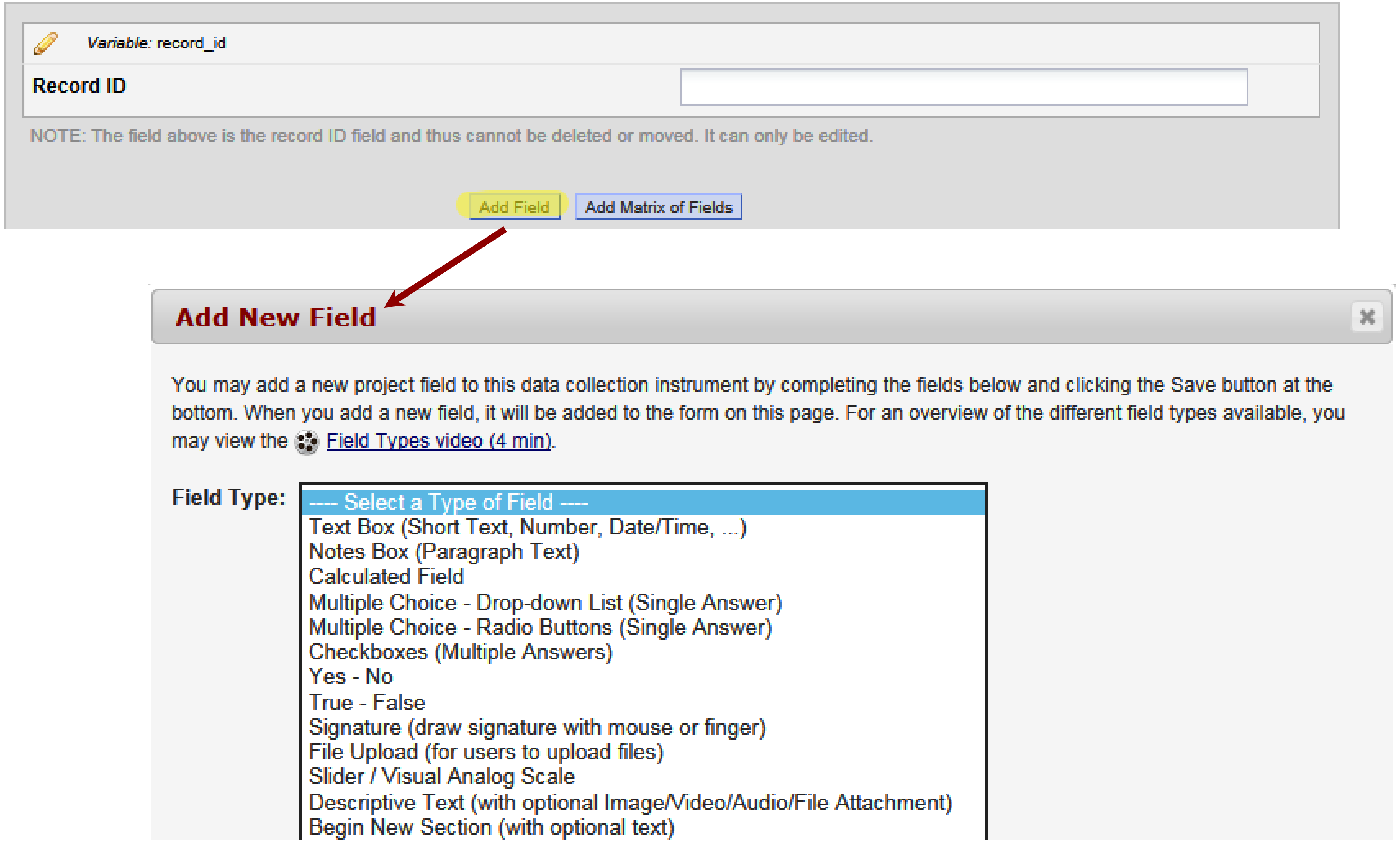
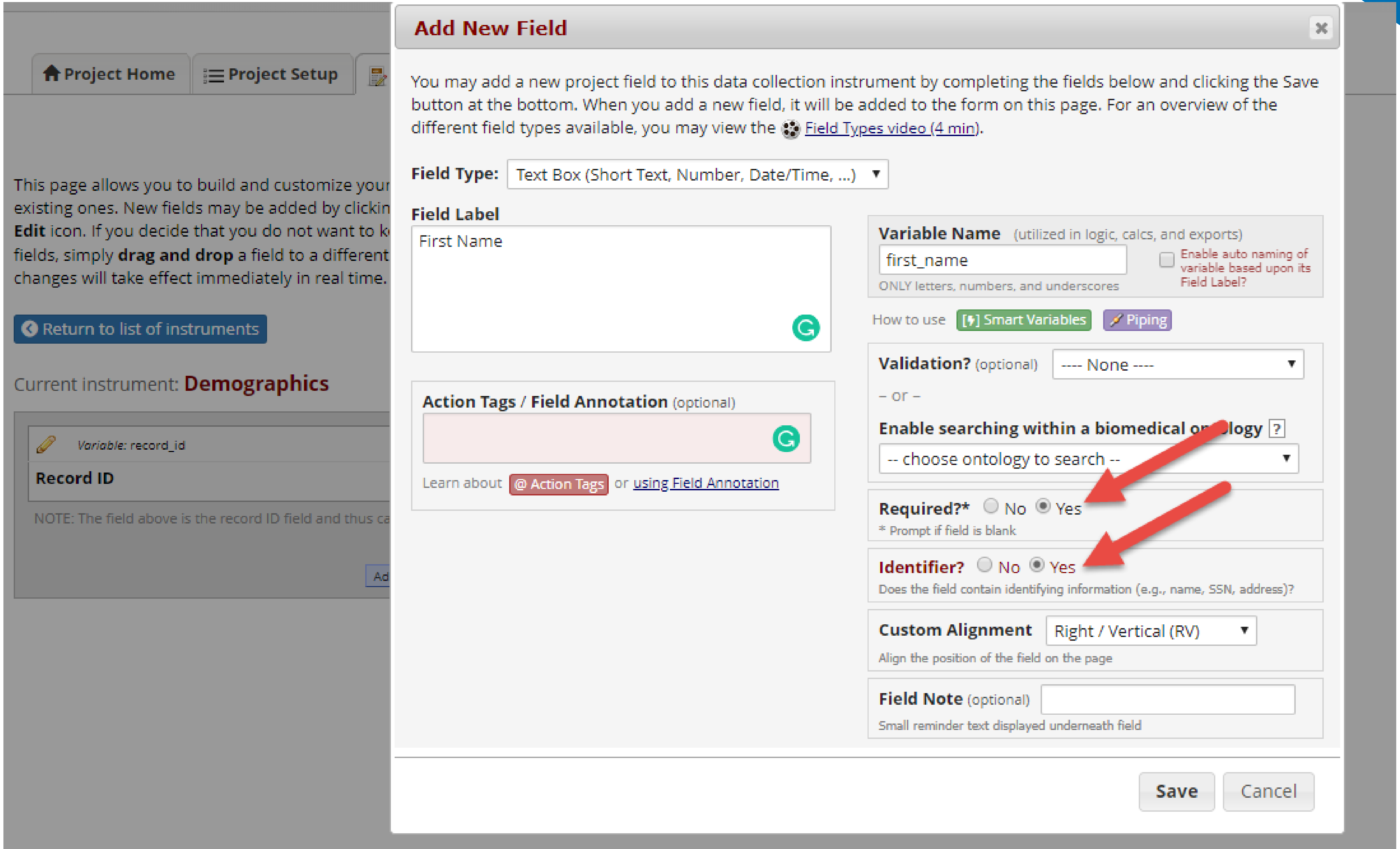
Online Designer



Step 2: Online Designer



Calculated Field

Edit Field

You may add a new project field to this data collection instrument by completing the fields below and clicking the Save button at the bottom. When you add a new field, it will be added to the form on this page. For an overview of the different field types available, you may view the Field Types video (4 min).

Field Type: Calculated Field

Field Label Use the Rich Text Editor ?

Age at registration

Calculation Equation How do I format the equation? Learn how to use Special Functions

datediff([dob], [reg_date], "y")

✔ Valid (The determination of validity may not be 100% accurate in all contexts.) Clear calculation

Test calculation with a record: -- select record --

Action Tags / Field Annotation (optional)

Learn about @ Action Tags or using Field Annotation

Variable Name (utilized in logic, calcs, and exports)

age

Enable auto naming of variable based upon its Field Label?

ONLY letters, numbers, and underscores

How to use [$] Smart Variables Piping Field Embedding

Required?* No Yes

* Prompt if field is blank

Identifier? No Yes

Does the field contain identifying information (e.g., name, SSN, address)?

Custom Alignment Right / Vertical (RV)

Align the position of the field on the page

Field Note (optional)

Small reminder text displayed underneath field

Save Cancel

Note:

The field is only calculated when the form is saved.

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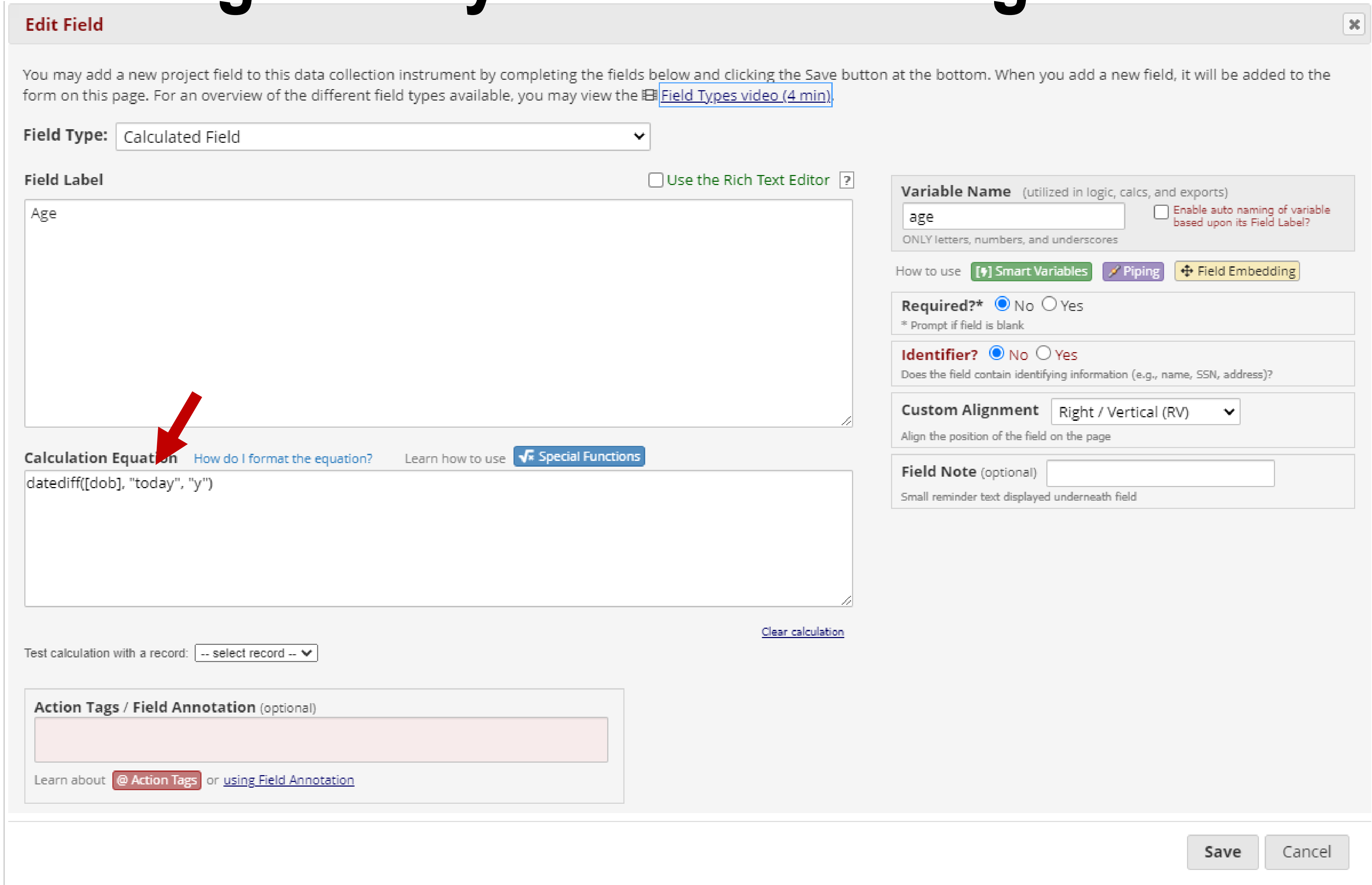
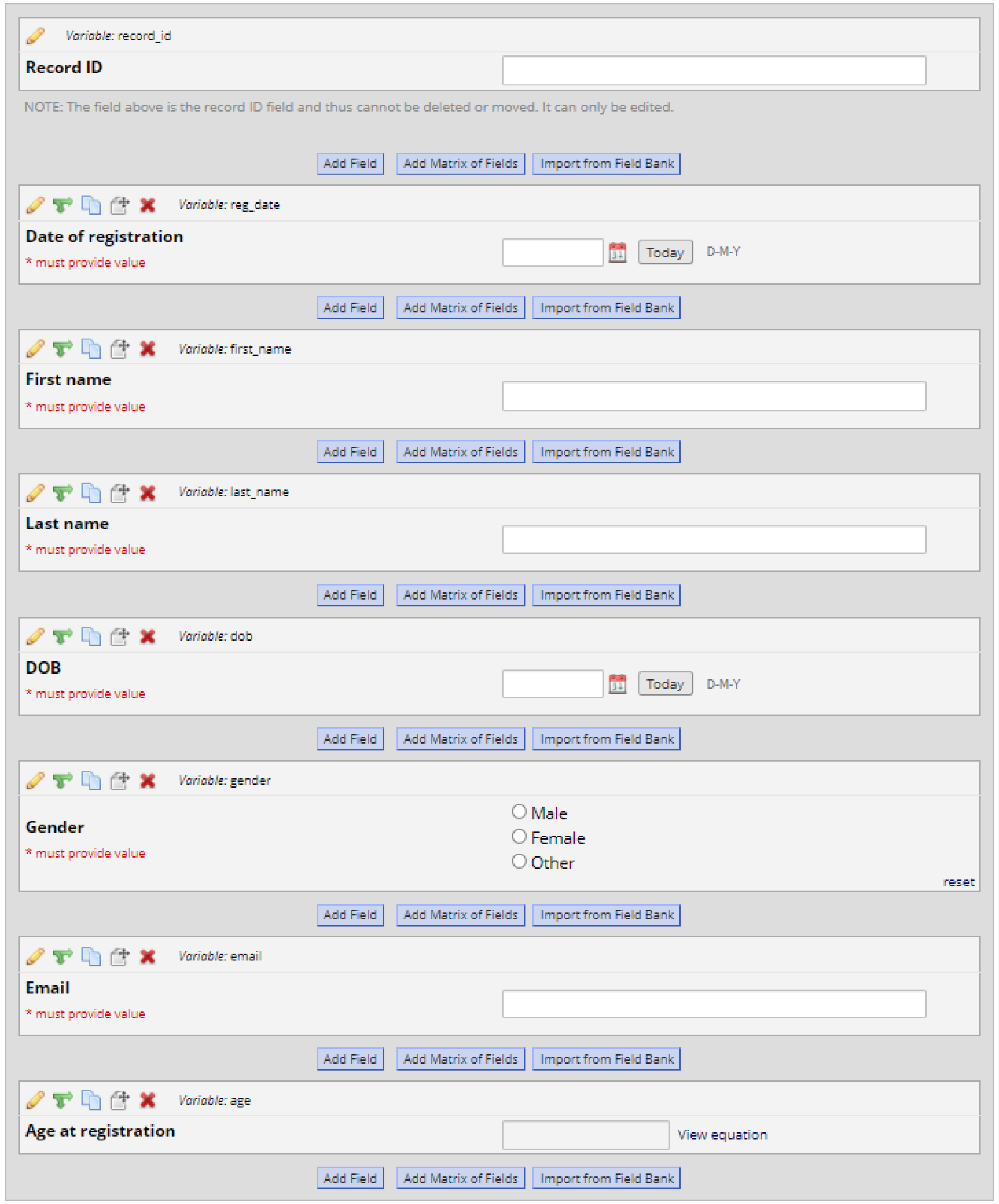
Using “Today” to Calculate Age



Warning:

The age will be re-calculated to the age when the form is re-saved.

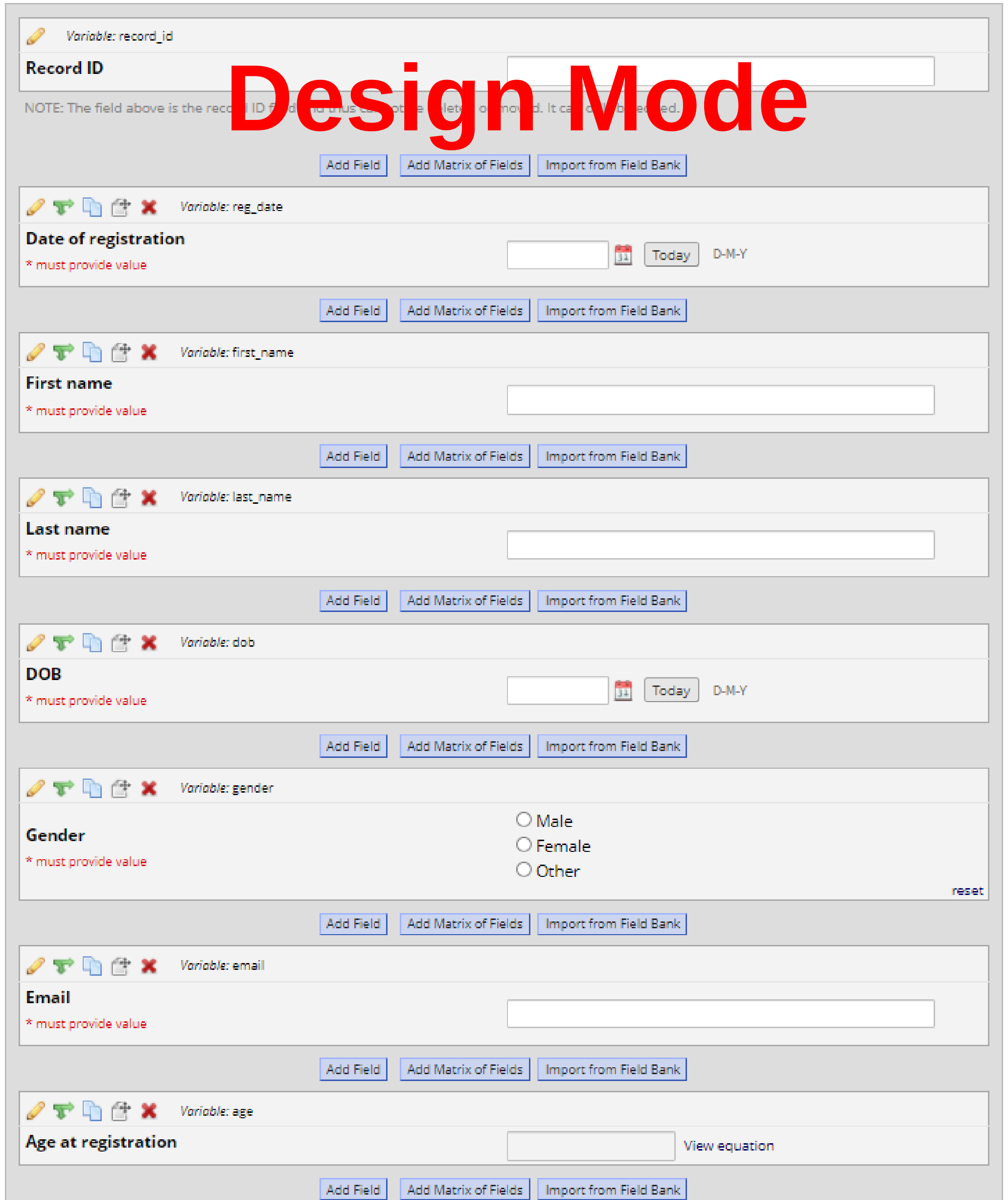
Step 2: Online Designer

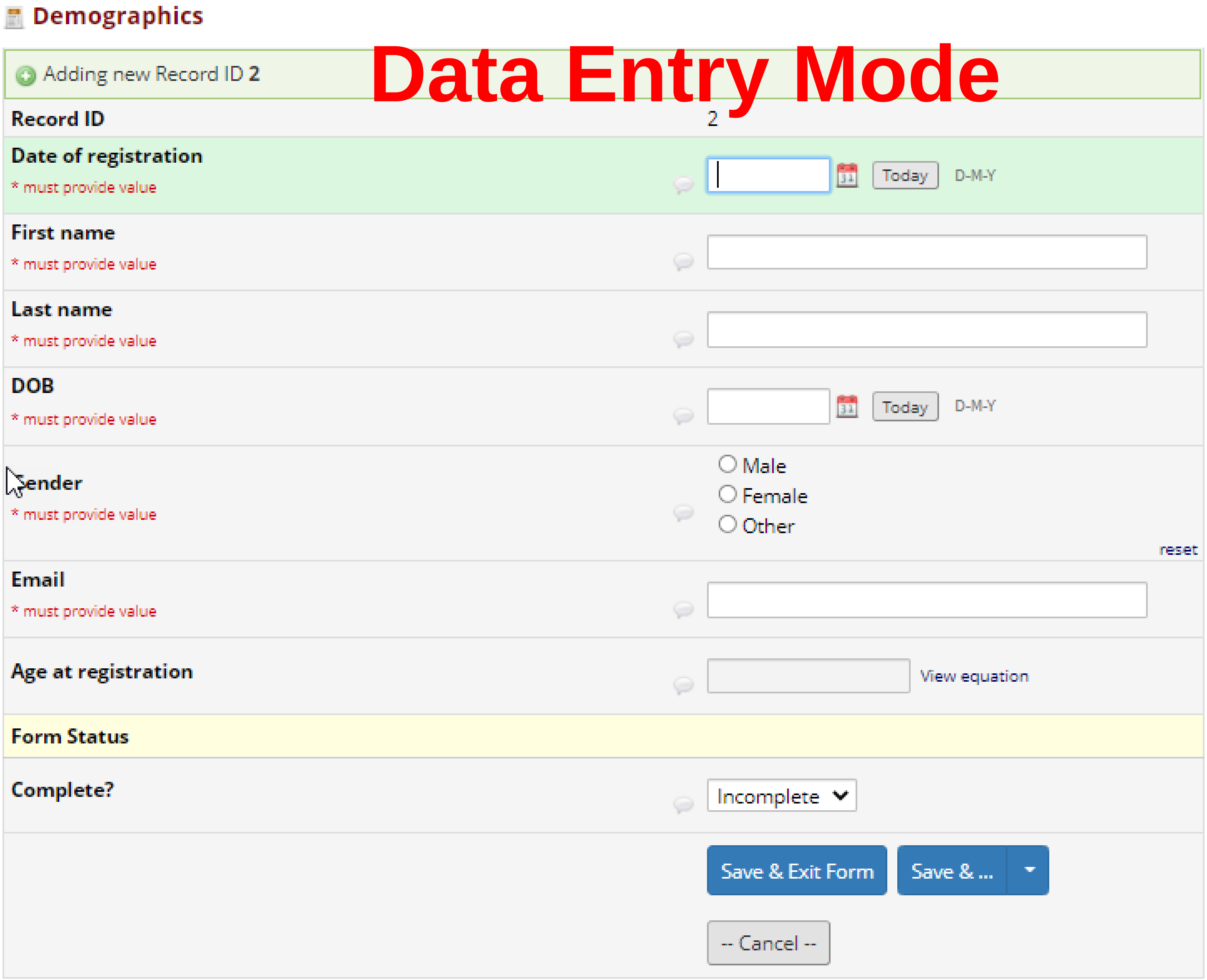


Instrument: **Demographics** (demographics) Collapse

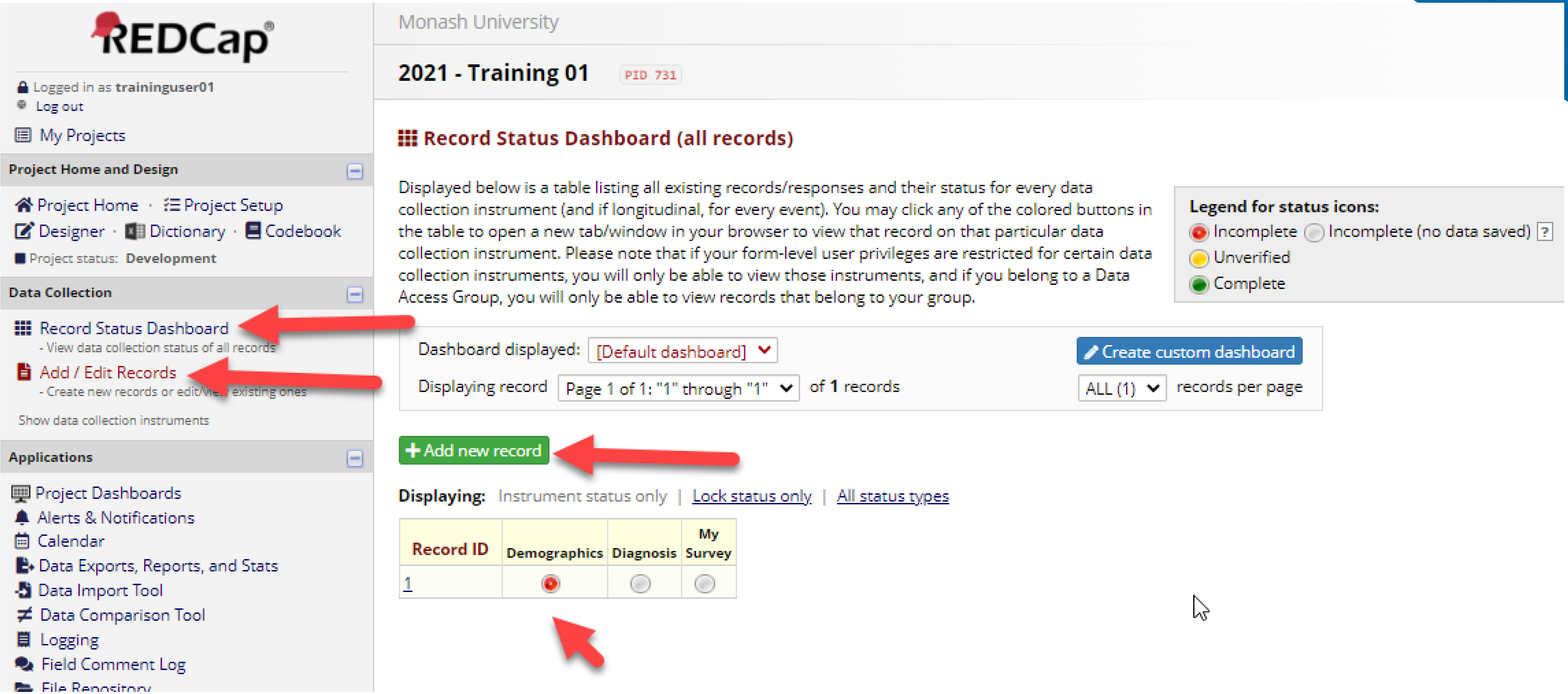
#	Variable / Field Name	Field Label *Field Note*	Field Attributes (Field Type, Validation, Choices, Calculations, etc.)
1	record_id	Record ID	text
2	reg_date	Date of registration	text (date_dmy), Required
3	first_name	First name	text, Required
4	last_name	Last name	text, Required
5	dob	DOB	text (date_dmy), Required
6	gender	Gender	radio, Required 1 Male 0 Female 99 Other
7	email	Email	text (email), Required
8	age	Age at registration	calc Calculation: datediff([reg_date], [dob], "y")
9	demographics_complete	Section Header: *Form Status* Complete?	dropdown 0 Incomplete 1 Unverified 2 Complete

Design vs Data Entry





Data Entry Mode



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Breakout Room

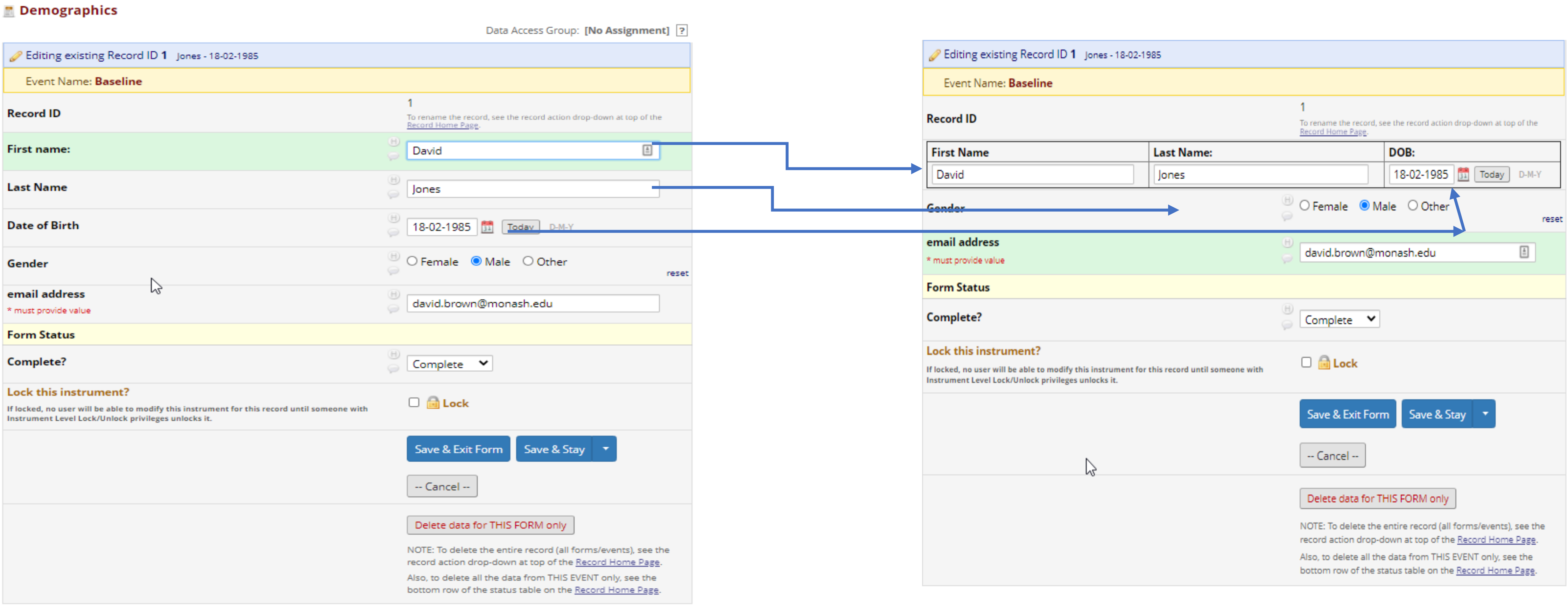
Exercise - 8 minutes

Create demographics forms

Step 2: Edit/Copy/Move/Delete Fields

Improving Form Layout

Field Embedding



Improving Form Layout

Field Embedding continued

How to embed a field/s

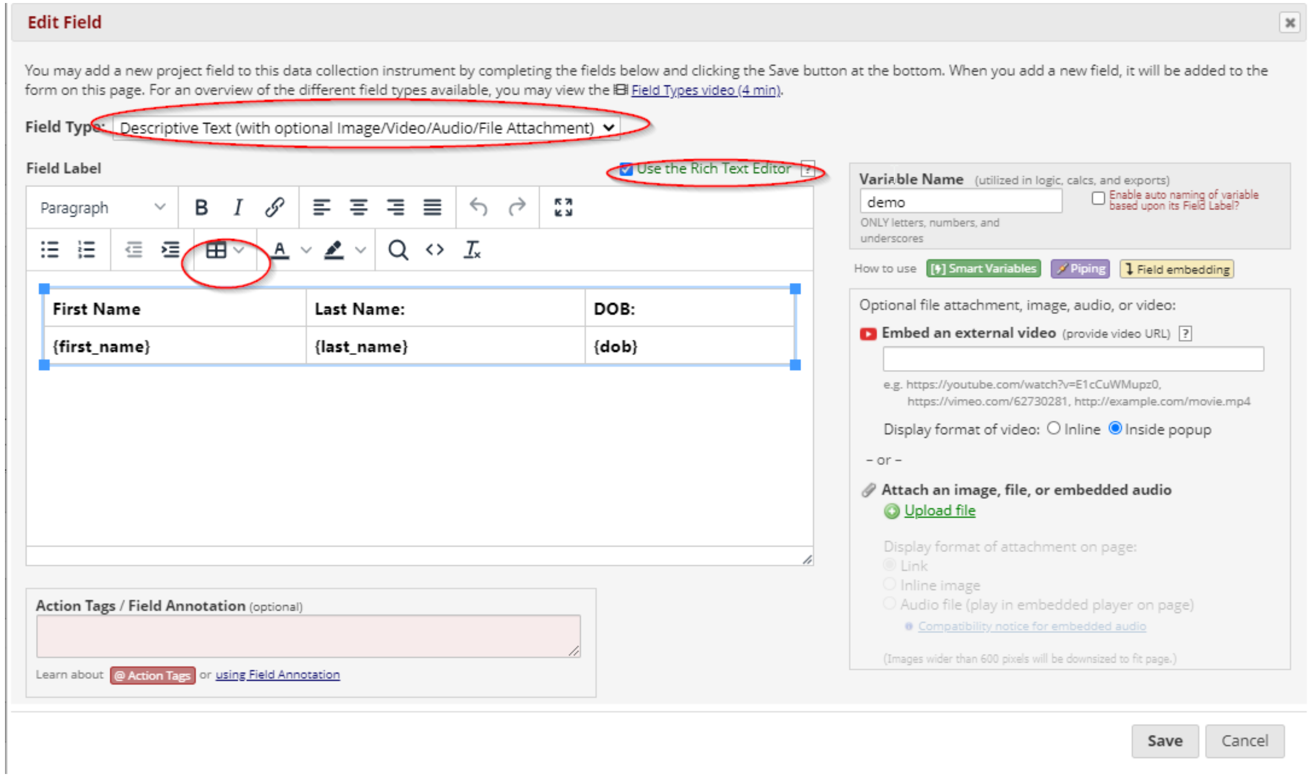
1. Create the fields on your form eg. first_name, last_name, dob, etc

2. Create another field that will contain placeholders for the field/s to be embedded. This is usually ‘Descriptive Text’ field type

3. Enable the Rich text Editor

4. Create a table structure to suit the field you are collecting. (Consider any field labels you may want)

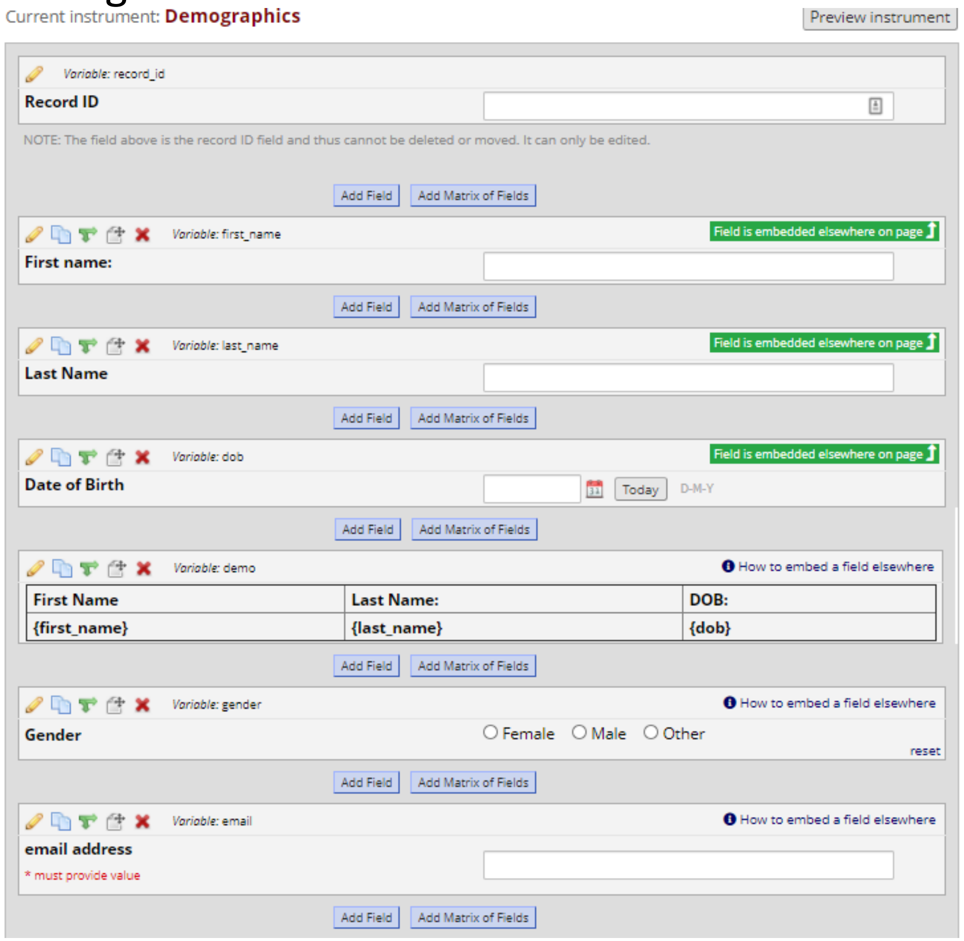
5. Populate each cell with the variable name to be entered. Note: the variable name must be contained within braces “{ }”. Eg. {first_name}



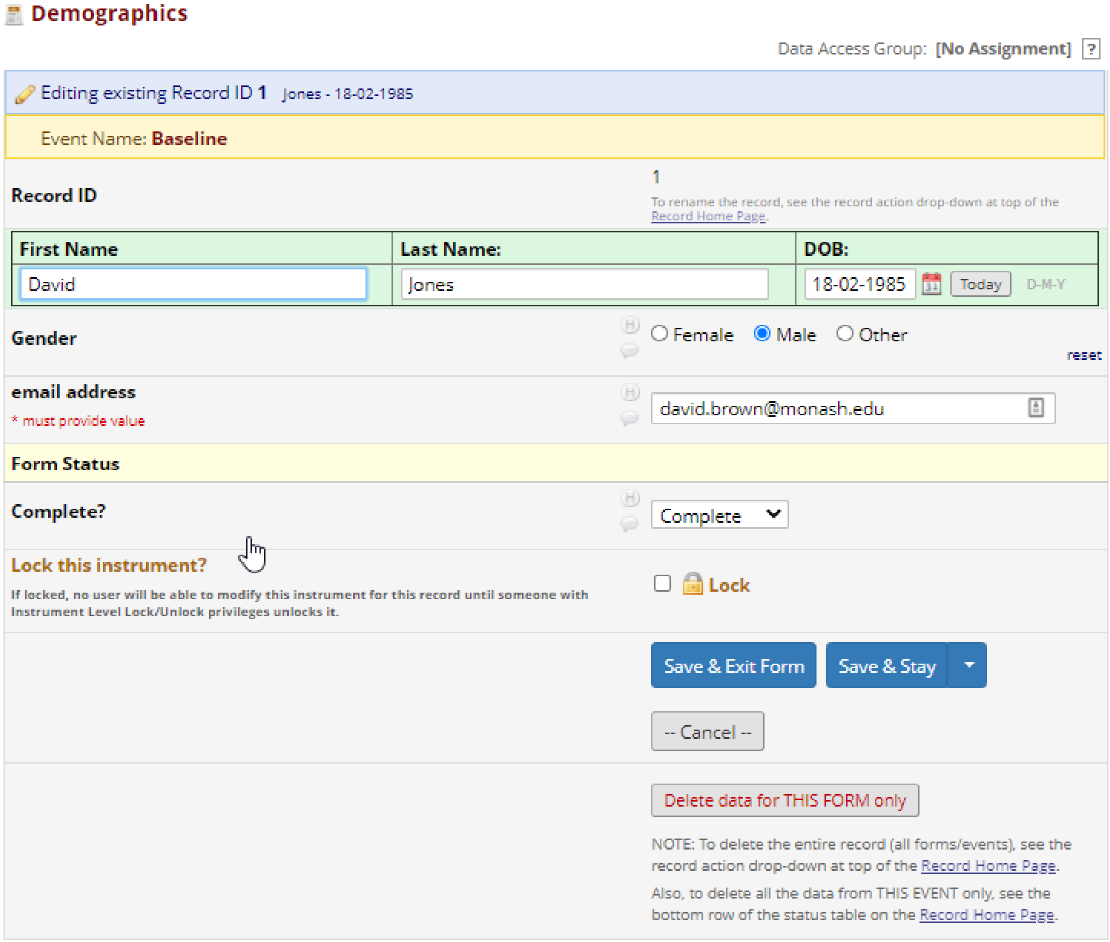
Note; The fields to be embedded must all be on same form.

Improving Form Layout

Design Mode



Data Entry Mode

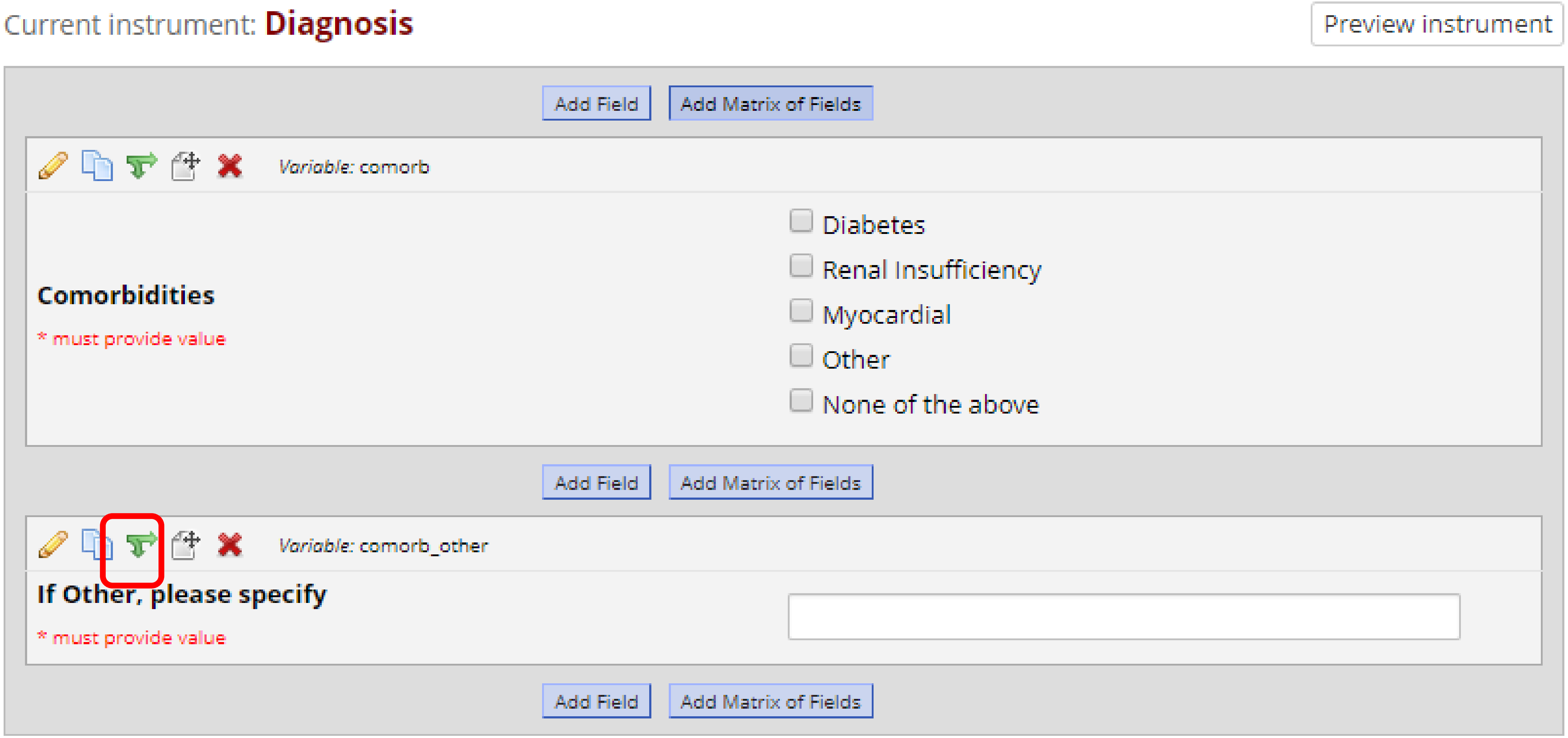


Breakout Room

Exercise - 8 minutes

Field embedding

Step 2: Branching Logic



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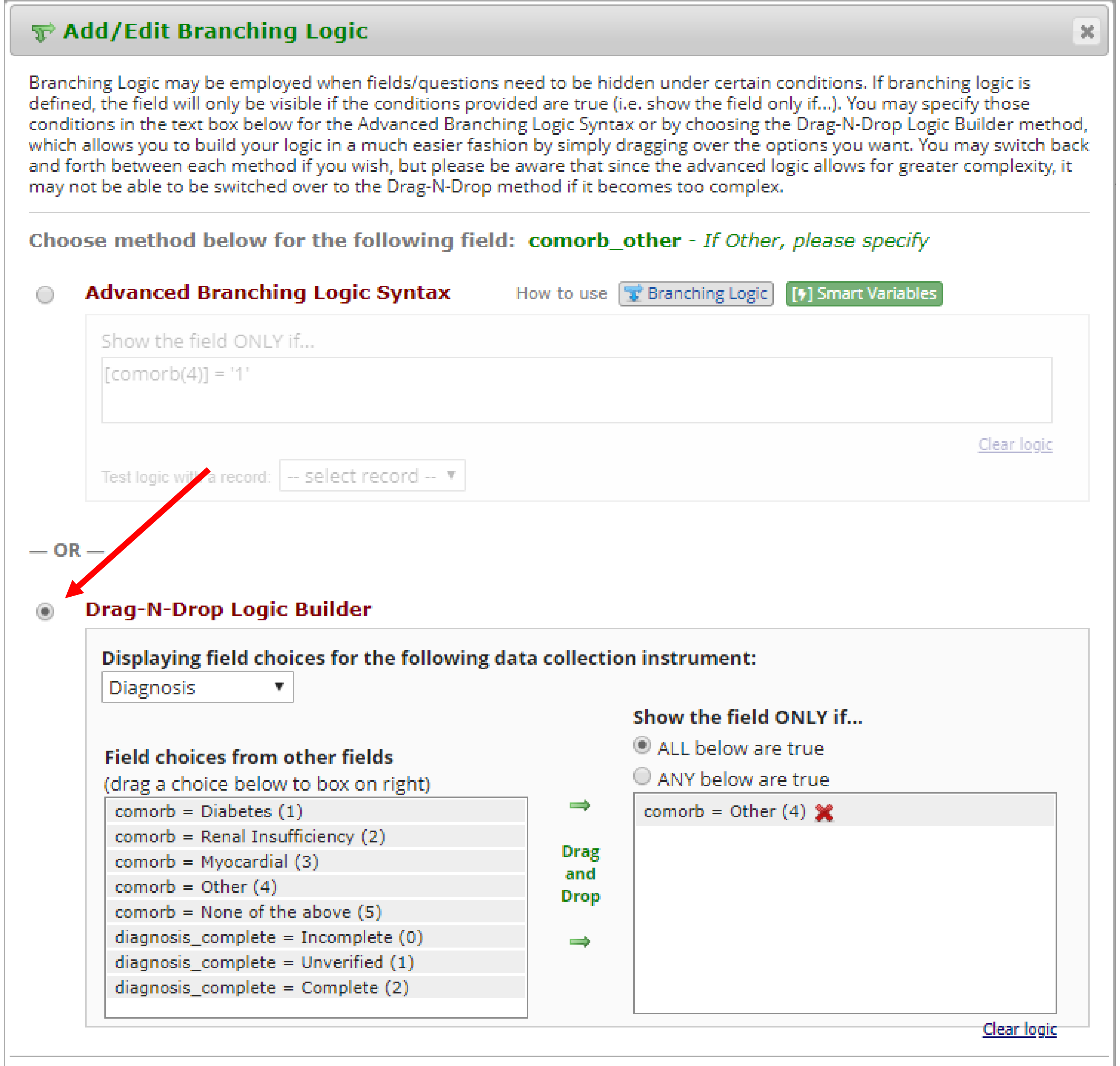
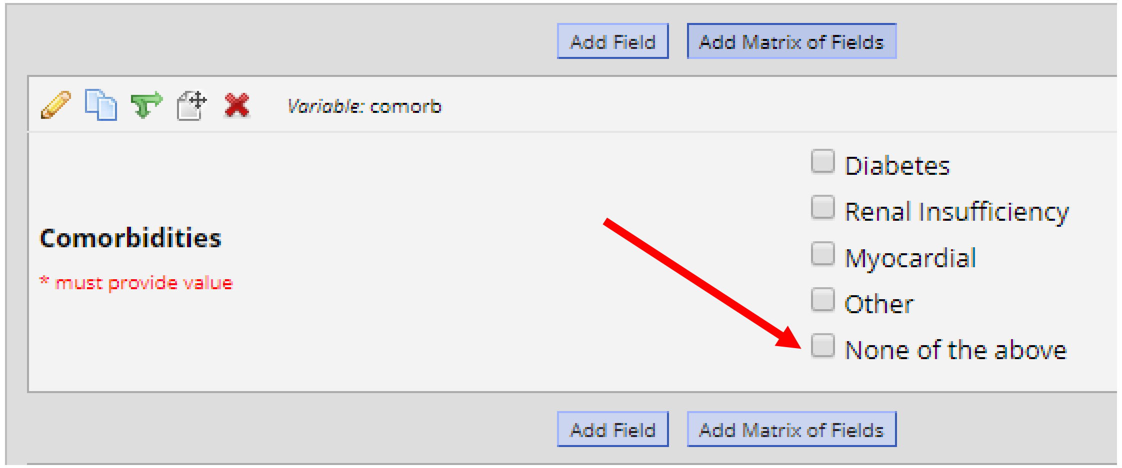
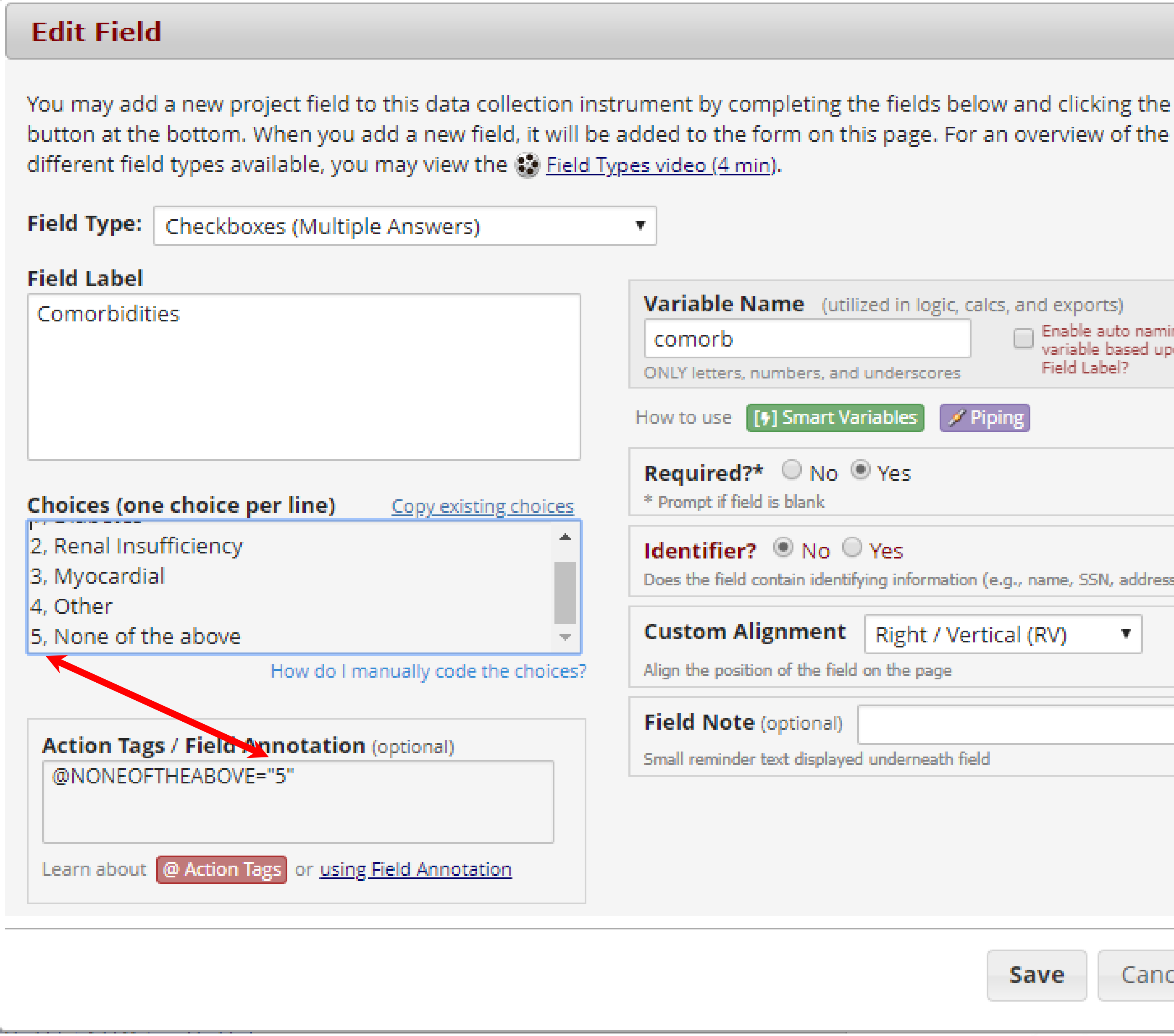


Step 2: Branching Logic

Action Tags



Add Field
Add Matrix of Fields
Variable: comorb
Comorbidities
* must provide value
Diabetes
Renal Insufficiency
Myocardial
Other
None of the above
Add Field
Add Matrix of Fields



Edit Field
You may add a new project field to this data collection instrument by completing the fields below and clicking the
button at the bottom. When you add a new field, it will be added to the form on this page. For an overview of the
different field types available, you may view the Field Types video (4 min).
Field Type: Checkboxes (Multiple Answers)
Field Label
Comorbidities
Variable Name (utilized in logic, calcs, and exports)
comorb
ONLY letters, numbers, and underscores
How to use
[⚡] Smart Variables
Piping
Required?* No Yes
* Prompt if field is blank
Choices (one choice per line)
Copy existing choices
2, Renal Insufficiency
3, Myocardial
4, Other
5, None of the above
How do I manually code the choices?
Identifier? No Yes
Custom Alignment
Right / Vertical (RV)
Align the position of the field on the page
Field Note (optional)
Small reminder text displayed underneath field
Action Tags / Field Annotation (optional)
@NONEOFTHEABOVE="5"
Learn about @ Action Tags or using Field Annotation
Save

Action Tags

Reports, and Stats Tool

Variable: record_id

Record ID

Edit Field

You may add a new project field to this data collection ins form on this page. For an overview of the different field ty

Field Type: Multiple Choice - Radio Buttons (Single A

Field Label

Gender

Choices (one choice per line) Copy existing choices

1, Male
0, Female
99, Other

Action Tags / Field Annotation (optional)

Learn about @ Action Tags or using Field Annotation

What are Action Tags?

View text on separate page

@ Action Tags

Action Tags are an excellent way to customize the data entry experience for surveys and forms. They are special terms that begin with the '@' sign that can be placed inside a field's Field Annotation when adding or editing a field. Each action tag has a corresponding action that is performed for the field when displayed on data entry forms and survey pages. Below is a comprehensive list of all available action tags that you may use. You can use as many as you want for a single field, but if you do use more than one tag for a field, make sure to put a space or line break between them. Because the action tags are used as part of the Field Annotation, they are not displayed anywhere on the page. To start using Action Tags, navigate to the Online Designer in a project, and when adding or editing a field, add the tag into the Action Tag/Field Annotation text box in the Edit Field popup.

All available action tags and their descriptions:

Add	@CALCDATE	Performs a date calculation by adding or subtracting a specified amount of time from a specified date or datetime field and then provides the result as a date or datetime value - e.g., @CALCDATE([visit_date], 7, 'd'). The first parameter inside the @CALCDATE() function should be a text field with date, datetime, or datetime_seconds validation, in which you may specify (if needed) the event and repeating instance - e.g., @CALCDATE([baseline_event][visit_date], 7, 'd'). The second parameter represents the offset number amount that should be added or subtracted. It can be a decimal number or integer. Tip: To subtract (i.e., go backwards in time), use a negative number. The third parameter represents the units of the offset amount, which will be represented by the following options: 'y' (years, 1 year = 365.2425 days), 'M' (months, 1 month = 30.44 days), 'd' (days), 'h' (hours), 'm' (minutes), 's' (seconds). The unit option must be wrapped in quotes or apostrophes. NOTE: Both the source field and the result field must be a text field with date, datetime, or datetime_seconds validation. It is important to realize that a field with @CALCDATE will not be editable on the survey page or data entry form, and the field will function almost exactly like a normal calculated field, in which its value may get updated via a data import, when running Data Quality rule H, or in real-time during normal data entry on a form or survey.
Add	@CALCTEXT	Evaluates logic that is provided inside a @CALCTEXT() function and outputs the result as text, typically performed with an if(x,y,z) function - e.g., @CALCTEXT(if([gender]='1', 'male', 'female')). NOTE: It is important to realize that a field with @CALCTEXT will not be editable on the survey page or data entry form, and the field will function almost exactly like a normal calculated field, in which its value may get updated via a data import, when running Data Quality rule H, or in real-time during normal data entry on a form or survey. If desired, it is possible to return the value as a number - e.g., @CALCTEXT(if([age] >= 18, 'adult', 5*[other_field])). Also, while it is possible to use static text (in quotes), field variables, or Smart Variables as the return values of the IF function - e.g., @CALCTEXT(if([age] >= 18, [dob], [event-label]) - it is NOT possible to pipe field variables or Smart Variables inside quotes for the return values.
Add	@CHARLIMIT	Sets the maximum number of characters that can be entered into a Text field or Notes field, and also displays the number of characters remaining. The format must follow the pattern @CHARLIMIT=??, in which ?? is the desired max character count (alternatively, the number value can be inside single or double quotes). NOTE: This action tag cannot be used at the same time as @WORDLIMIT for the same field. NOTE: This action tag does *not* get applied during any data imports (via API or Data Import Tool) but only operates when viewing survey pages and data entry forms.
		Sets a field's initial value. This allows a field to have a specified default value when viewing the field on a survey or data entry form that has not yet had any data saved for it (i.e., when the form status icon is gray or when a survey page has not had any data entered yet). The format must follow the pattern @DEFAULT="????", in which the desired default

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Breakout Room

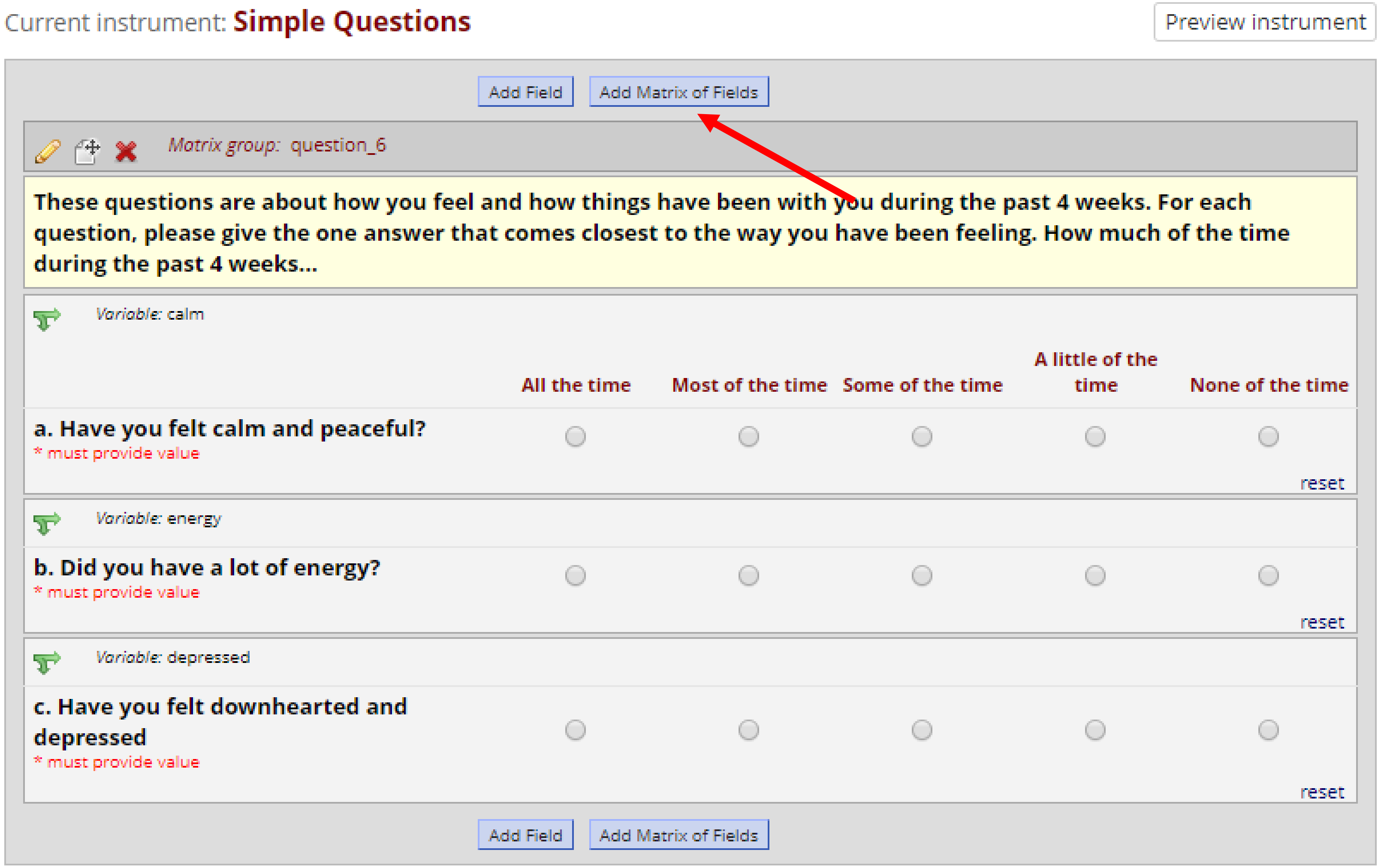
Exercise - 15 mins

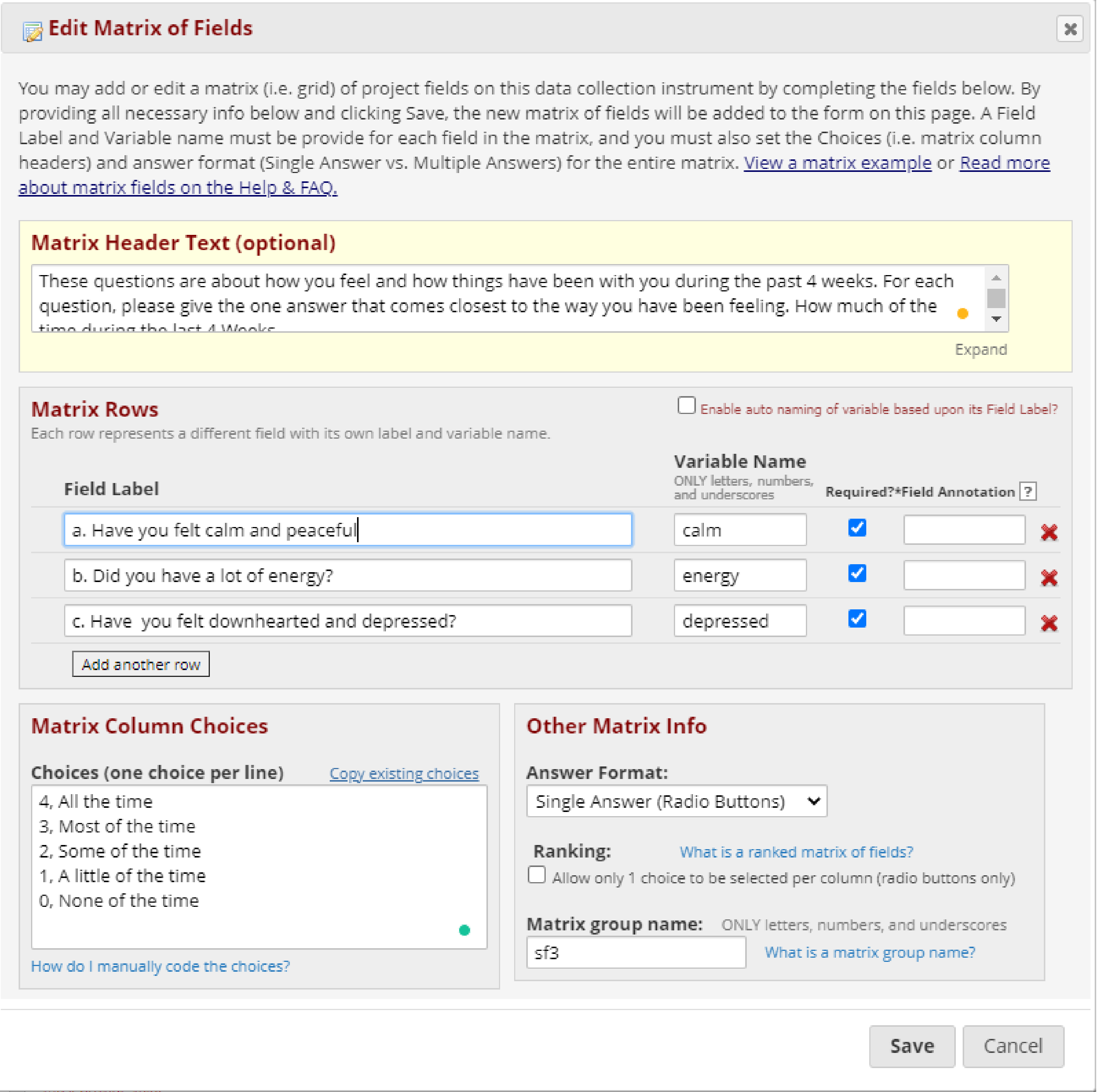
Create diagnosis form

Branching Logic

Action Tags

Step 2: Matrix Field





Step 2: Matrix Field

Piping

My Survey

Editing existing Record ID **1**

Record ID 1

First Name	Last Name	Age
John	Liman	30.99299323965128

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the last 4 Weeks.

	All the time	Most of the time	Some of the time	A little of the time	None of the time
a. Have you felt calm and peaceful * must provide value					
					reset
b. Did you have a lot of energy? * must provide value					
					reset
c. Have you felt downhearted and depressed? * must provide value					
					reset

Form Status

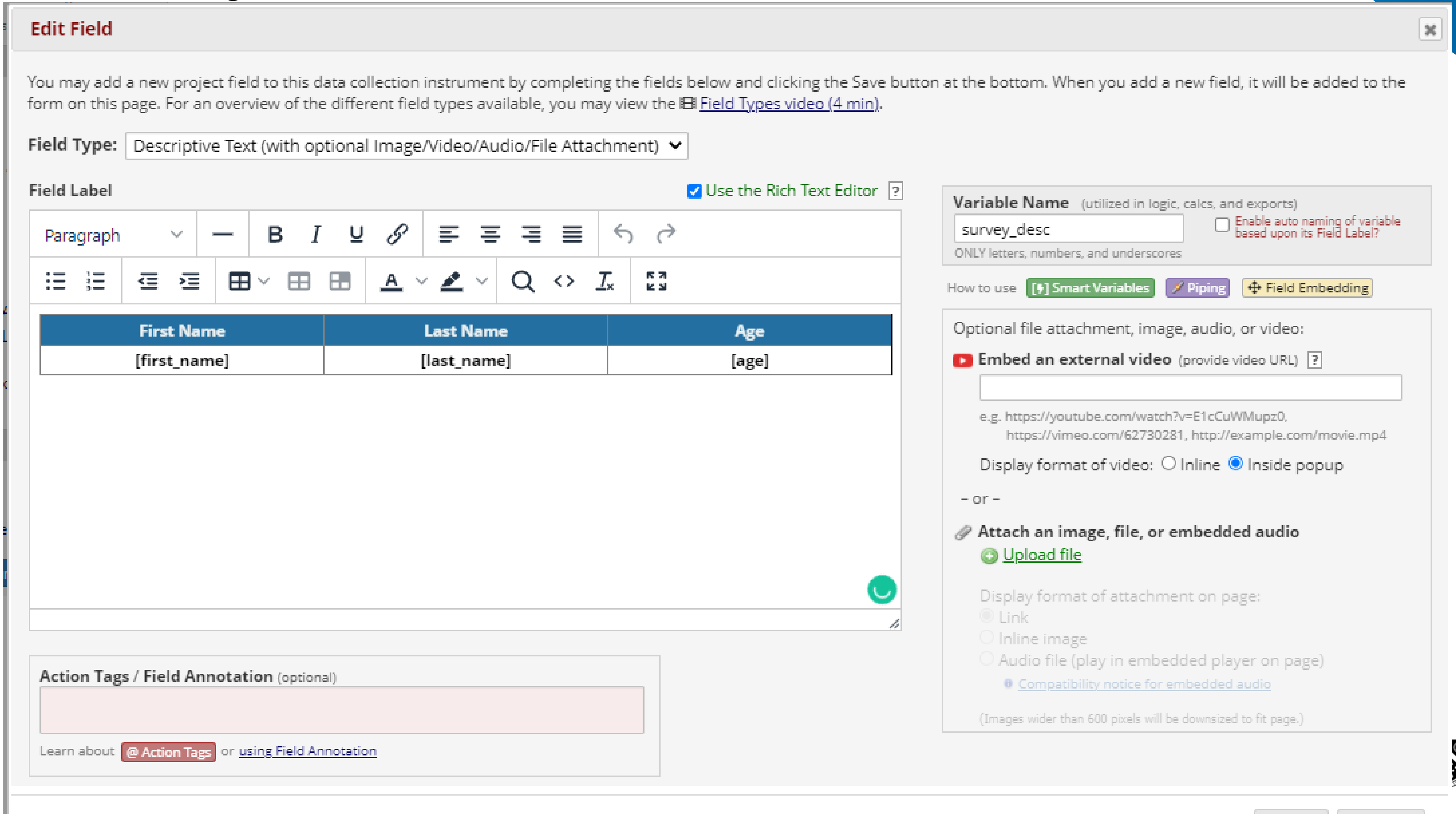
Complete? Incomplete

Save & Exit Form | Save & ...

-- Cancel --

Delete data for THIS FORM only

Piping


Edit Field
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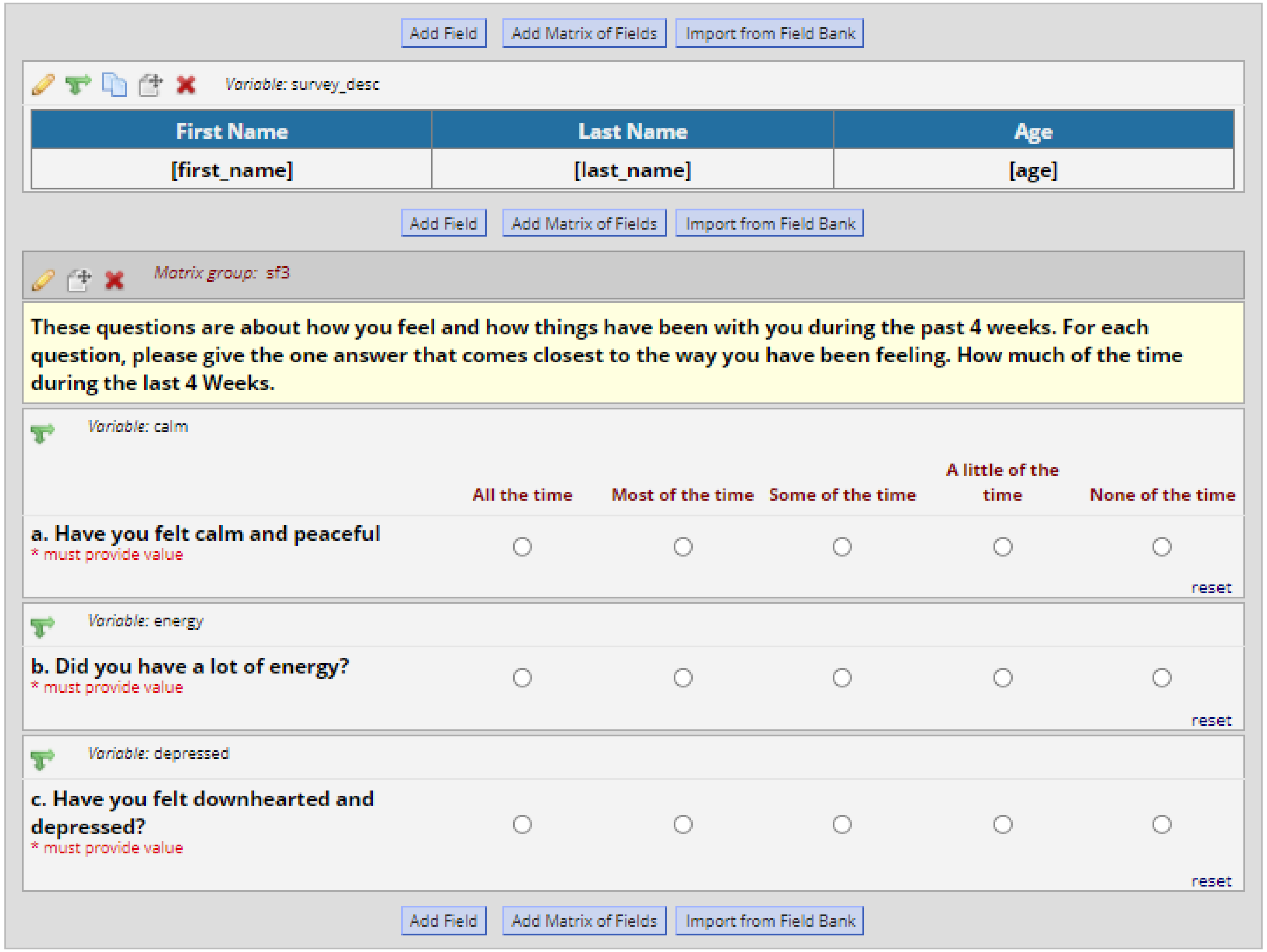
Field Type: Descriptive Text (with optional Image/Video/Audio/File Attachment)
Field Label
Use the Rich Text Editor
Paragraph
First Name | Last Name | Age
[first_name] | [last_name] | [age]
Action Tags / Field Annotation (optional)
Learn about @ Action Tags or using Field Annotation
Variable Name (utilized in logic, calcs, and exports)
survey_desc
Enable auto naming of variable based upon its Field Label?
ONLY letters, numbers, and underscores
How to use [$] Smart Variables Piping Field Embedding
Optional file attachment, image, audio, or video:
Embed an external video (provide video URL)
e.g. https://youtube.com/watch?v=E1cCuWMupz0, https://vimeo.com/62730281, http://example.com/movie.mp4
Display format of video: Inline Inside popup
– or –
Attach an image, file, or embedded audio
Upload file
Display format of attachment on page:
Link
Inline image
Audio file (play in embedded player on page)
Compatibility notice for embedded audio
(Images wider than 600 pixels will be downsized to fit page.)

Piping

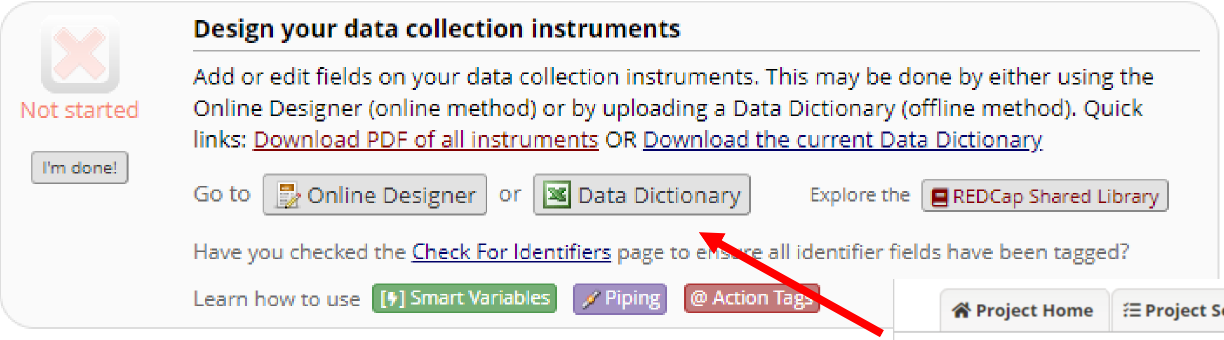

Add Field
Add Matrix of Fields
Import from Field Bank
Variable: survey_desc
First Name
Last Name
Age
[first_name]
[last_name]
[age]
Add Field
Add Matrix of Fields
Import from Field Bank
Matrix group: sf3
These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the last 4 Weeks.
Variable: calm
All the time
Most of the time
Some of the time
A little of the time
None of the time
a. Have you felt calm and peaceful
* must provide value
reset
Variable: energy
b. Did you have a lot of energy?
* must provide value
reset
Variable: depressed
c. Have you felt downhearted and depressed?
* must provide value
reset
Add Field
Add Matrix of Fields
Import from Field Bank

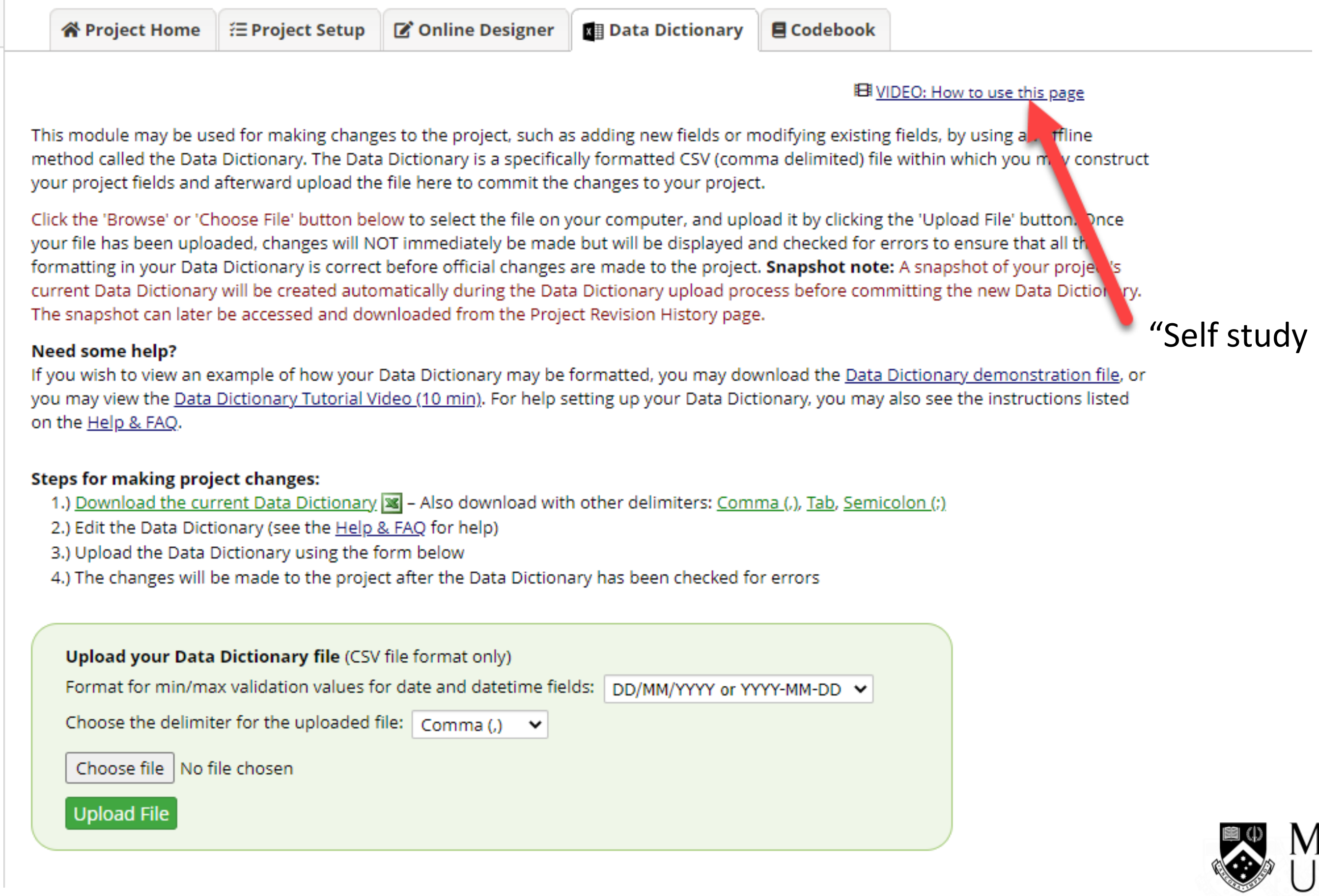
Breakout Room

Exercise - 10 mins

Matrix field
Piping

Step 2: Data Dictionary: Bulk Edit





"Self study material"

Use case:

- Numbering all questions
- Moving fields to another form
- Copy a group of fields

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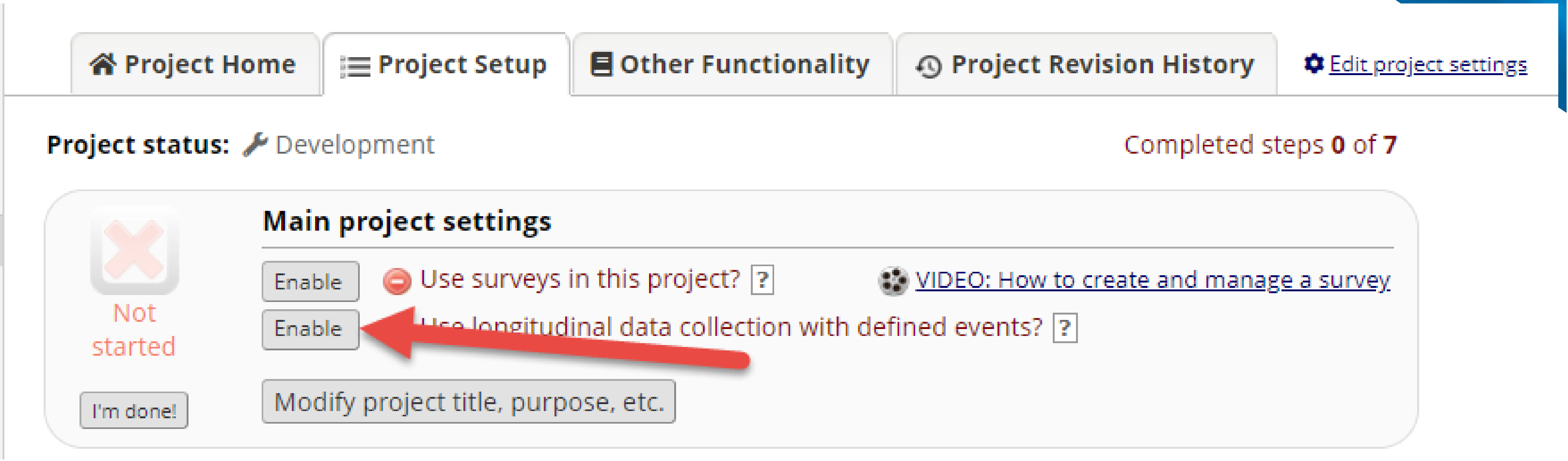
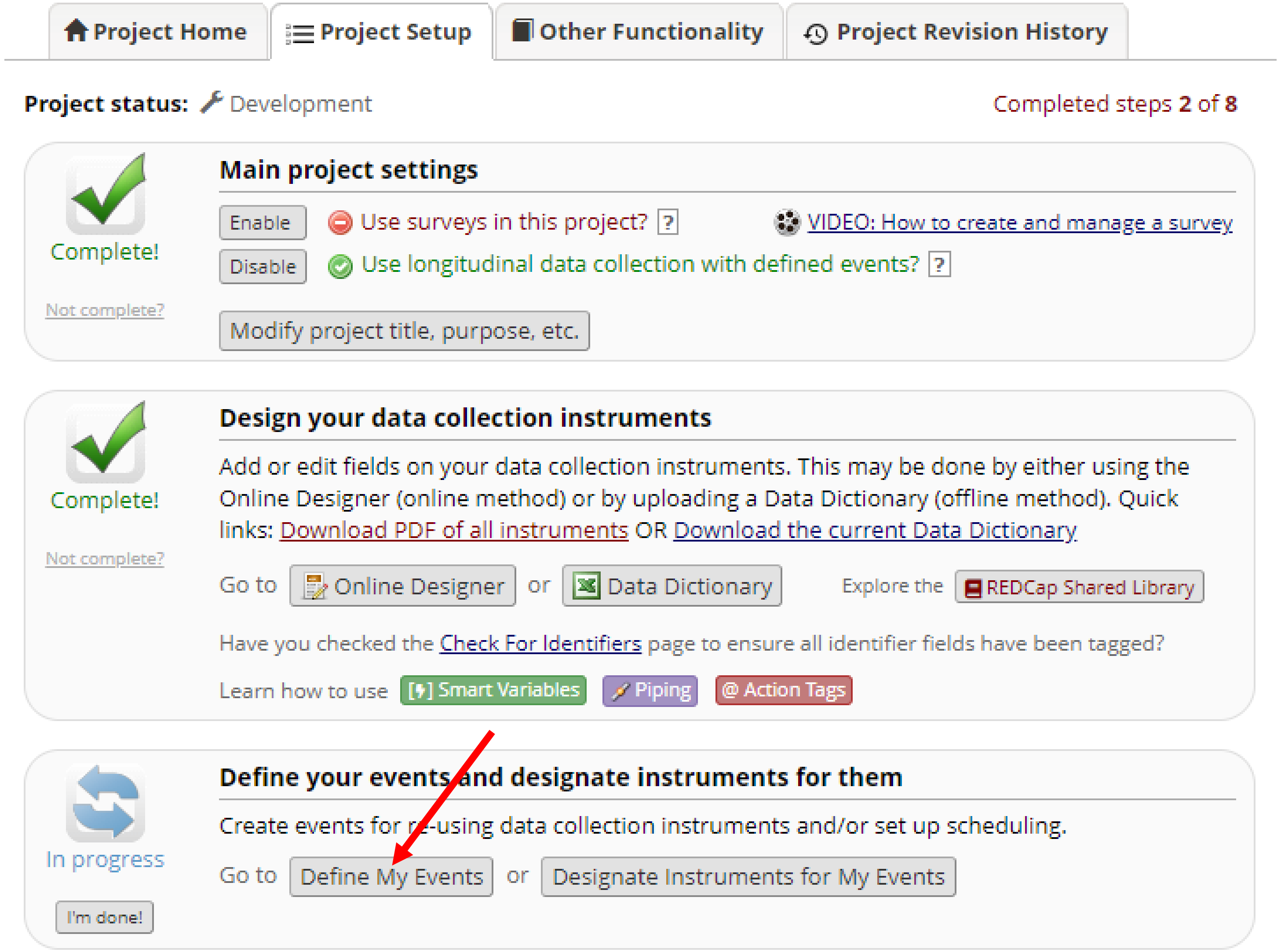
Longitudinal Study: Define Events



Longitudinal Study: Define Events



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Longitudinal Study: Define Events

Project Setup | Define My Events | Designate Instruments for My Events

This application allows you to define 'events' for your project that allow for the **utilization of data collection forms multiple times for any given project record** (often used when collecting longitudinal data). An 'event' may be a temporal event in the course of your project, such as a participant visit or a task to be performed. After events have been defined, you will need to designate the data collection instruments that you wish to utilize for any or all events, thus allowing you to use a form for multiple events for the same project record. You may **group your events into 'arms'**, in which you may have one or more arms/groups for your project. Each arm can have as many events as you wish. You may use the table below to create new events and/or arms, or modify existing ones. (One arm and one event will be initially defined as the default for all projects.)

STEP #1:
To add new events below, provide an **Event Name** for that event, and then click the *Add new event*. Once events have been added, you can easily change their order by dragging and dropping the event using the up-down arrow icon on the far left for a given row in the table.

STEP #2:
Once you have defined your events on this page, you may navigate to the Designate Instruments for My Events page, where you may select which data collection instruments that you wish to utilize for each event you defined.

Upload or download arms/events

Arm 1: Arm 1 | +Add New Arm

Arm name: **Arm 1**

Rename Arm 1

		Event #	Event Name	Custom Event Label (optional)	Unique event name (auto-generated)
		1	Baseline		baseline_arm_1
		2	Follow-up 3 Months		followup_3_months_arm_1
		3	Follow-up 6 Months		followup_6_months_arm_1

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Longitudinal Study: Define Events

Project Setup | Define My Events | Designate Instruments for My Events

Since you have defined multiple events on the Define My Events page, you may now select which data collection instruments that you wish to utilize for each event by using the table below. This allows you to enter data on any data collection form multiple times for any given project record. Any and all data collection instruments can thus be used for any event defined.

Click the *Begin Editing* button to change the relationships below by designating which forms you wish to utilize for which events. When you are finished making changes, click the *Save* button to finalize your changes.

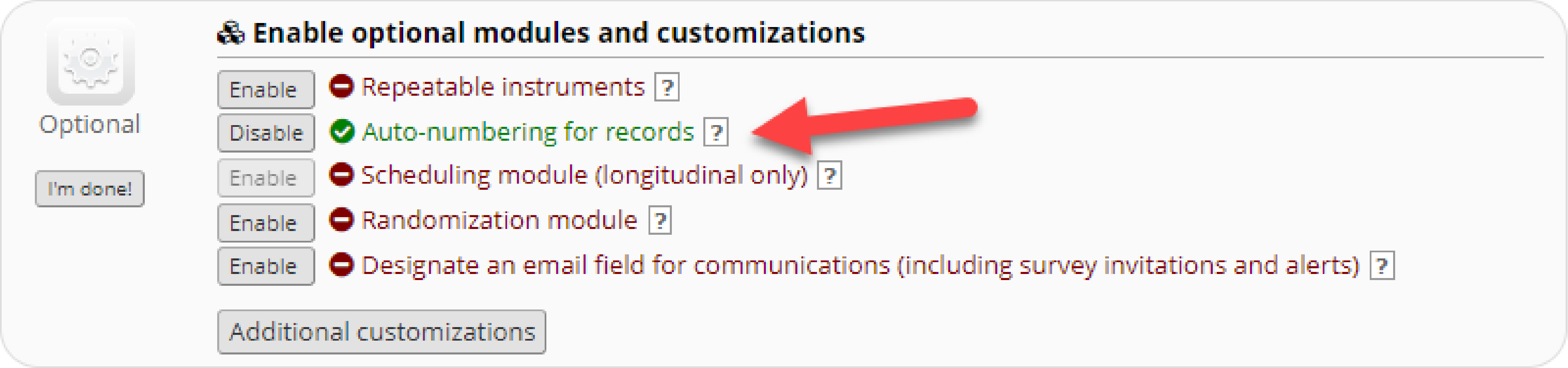
Upload or download instrument mappings

Begin Editing | Save

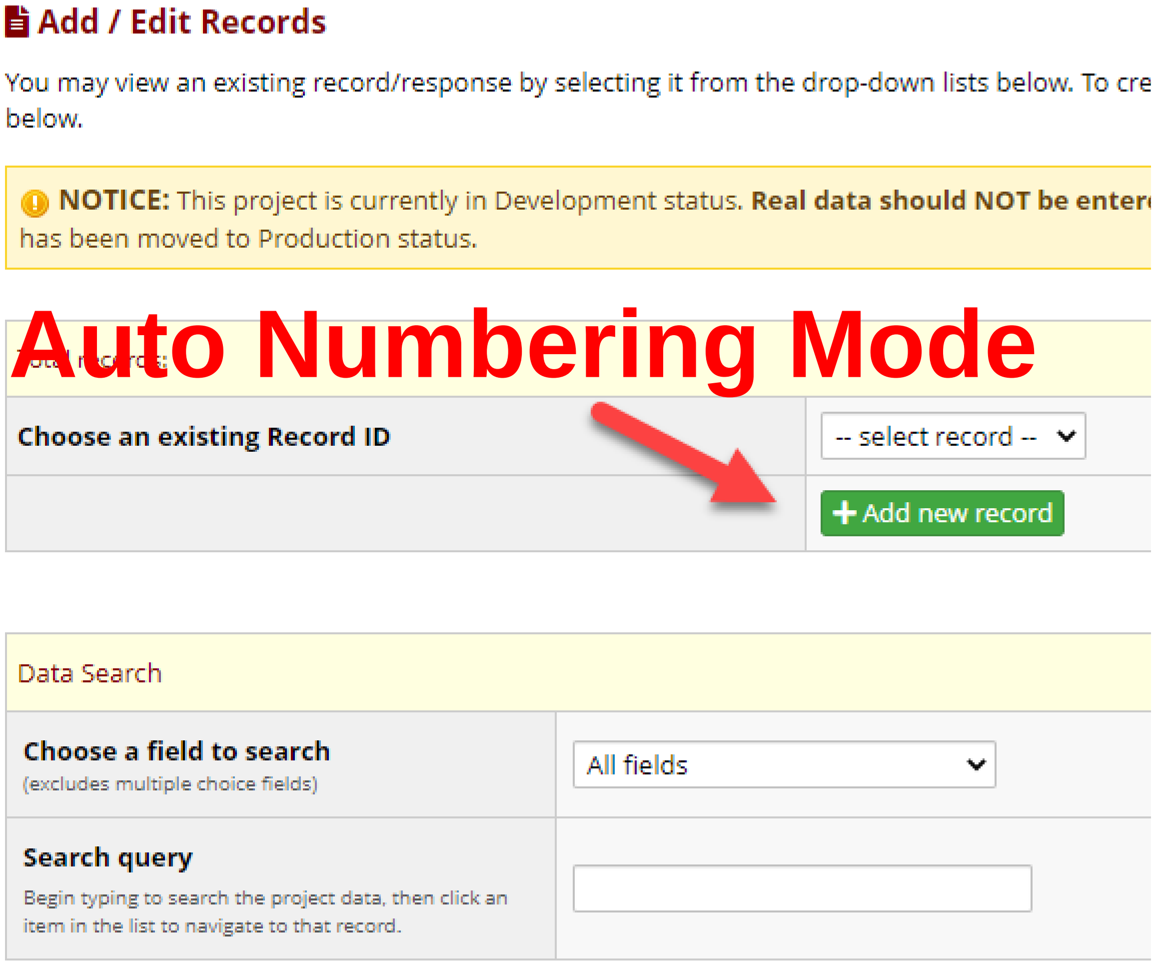
Select All | Deselect All

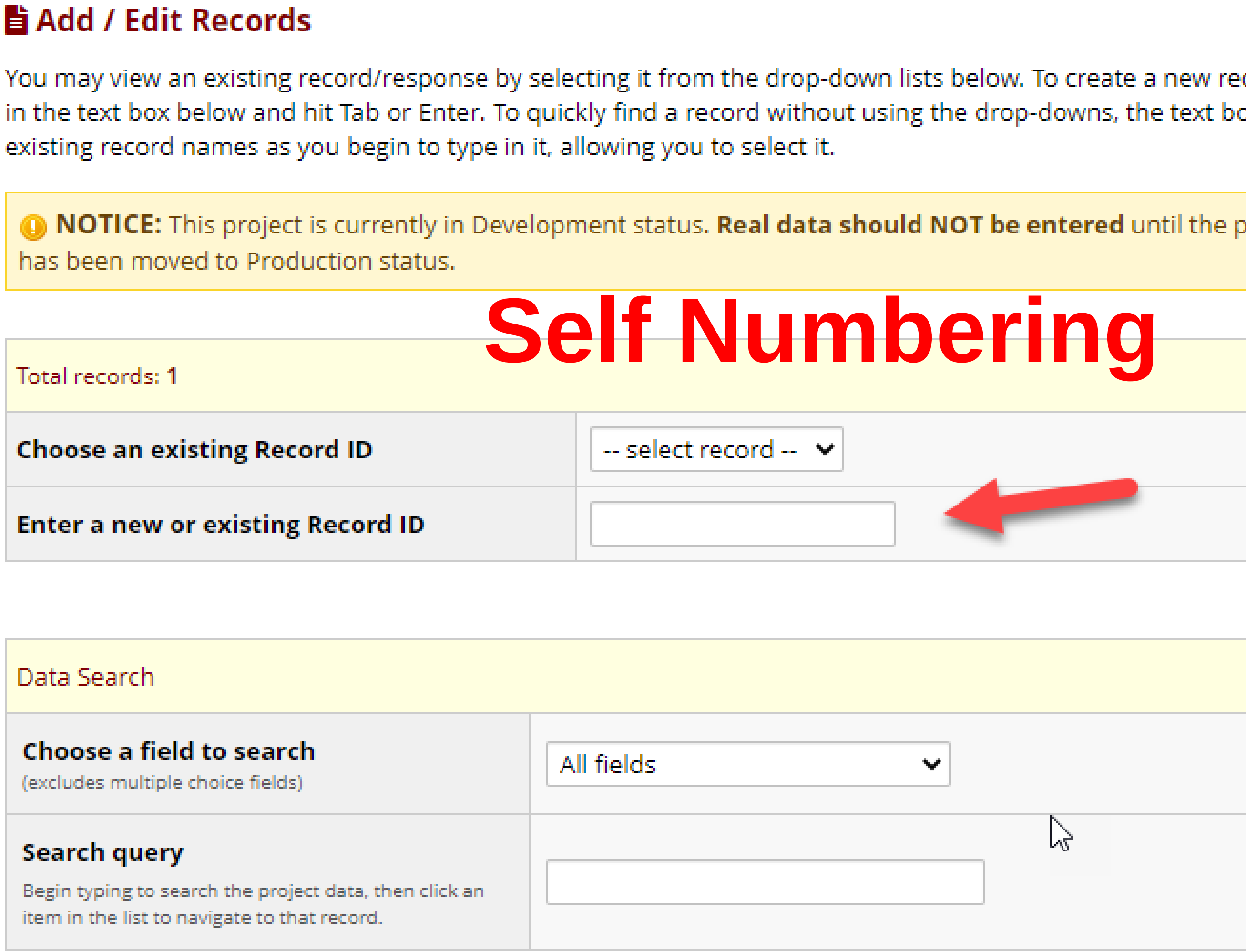
Data Collection Instrument	Baseline (1)	Follow-up 3 Months (2)	Follow-up 6 Months (3)
Demographics	☑	☐	☐
Diagnosis	☑	☐	☐
Simple Questions	☐	☑	☑

Enable Optional Modules/Customisations



Auto Numbering vs Self Numbering





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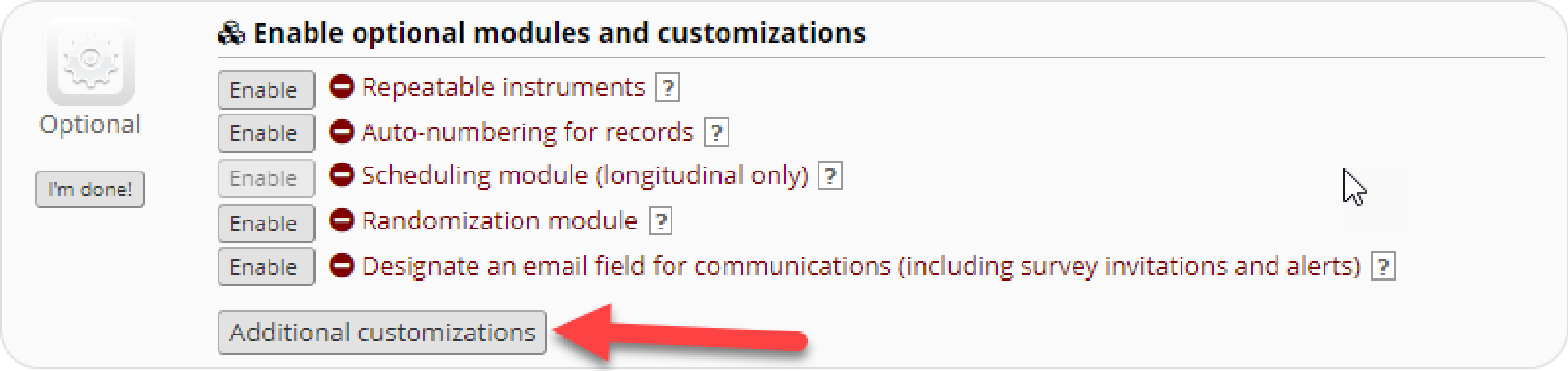
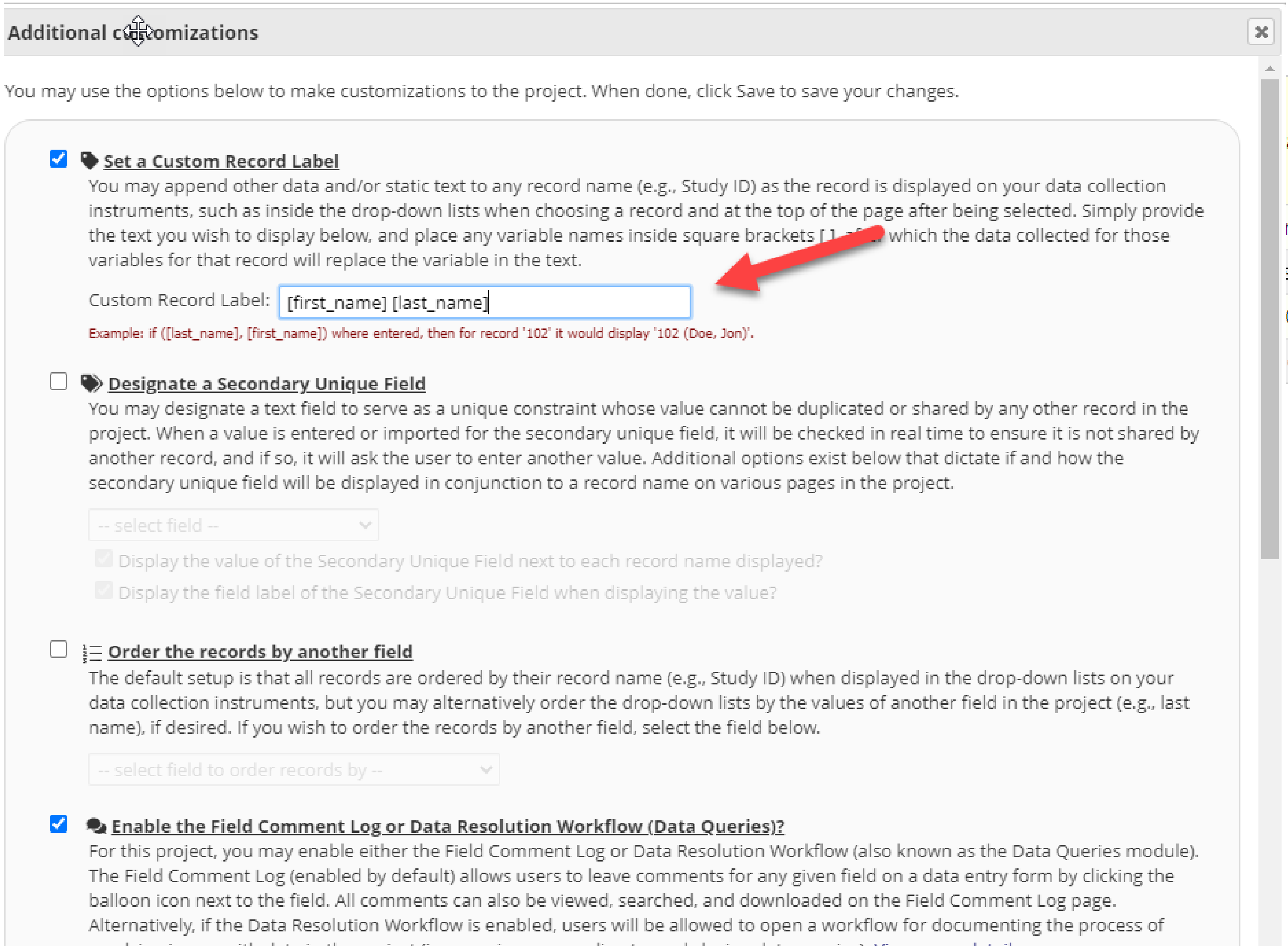
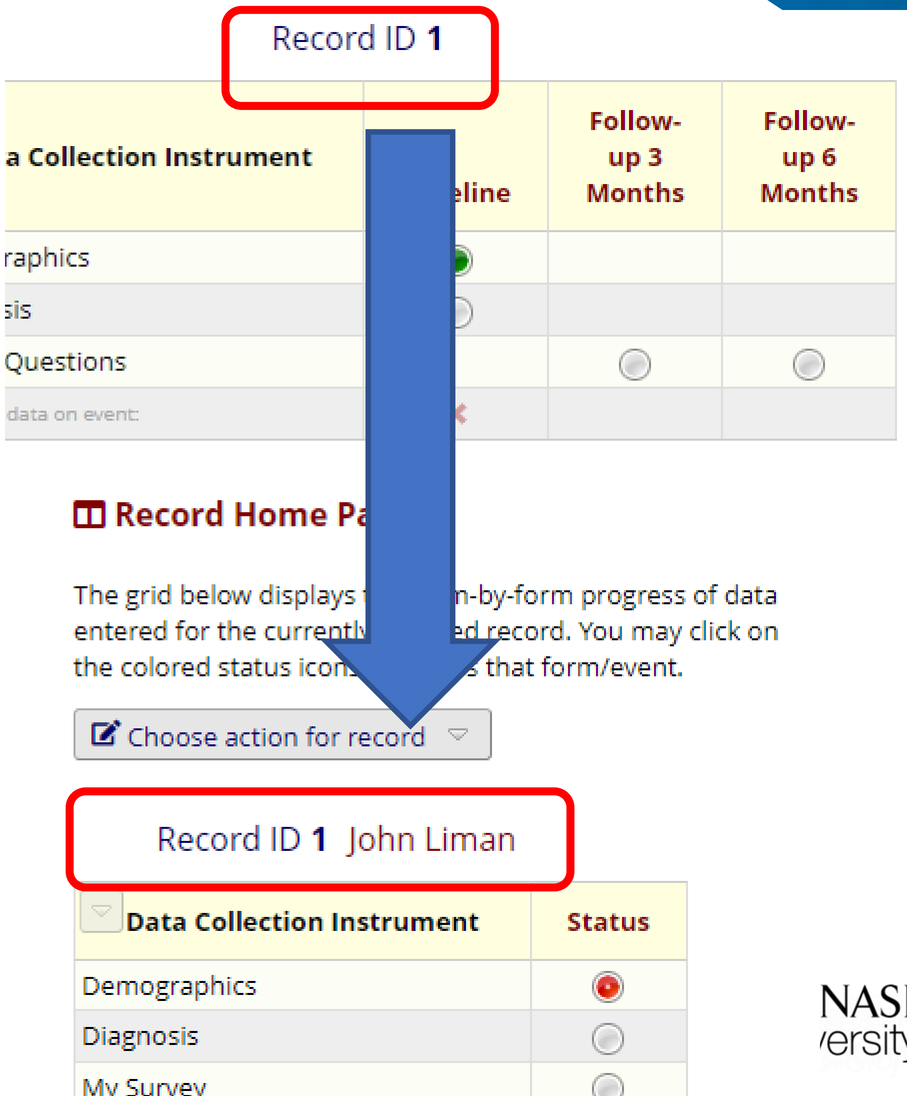
Enable Optional Modules/Customisations



Step 4: Enable optional Modules/Customisations



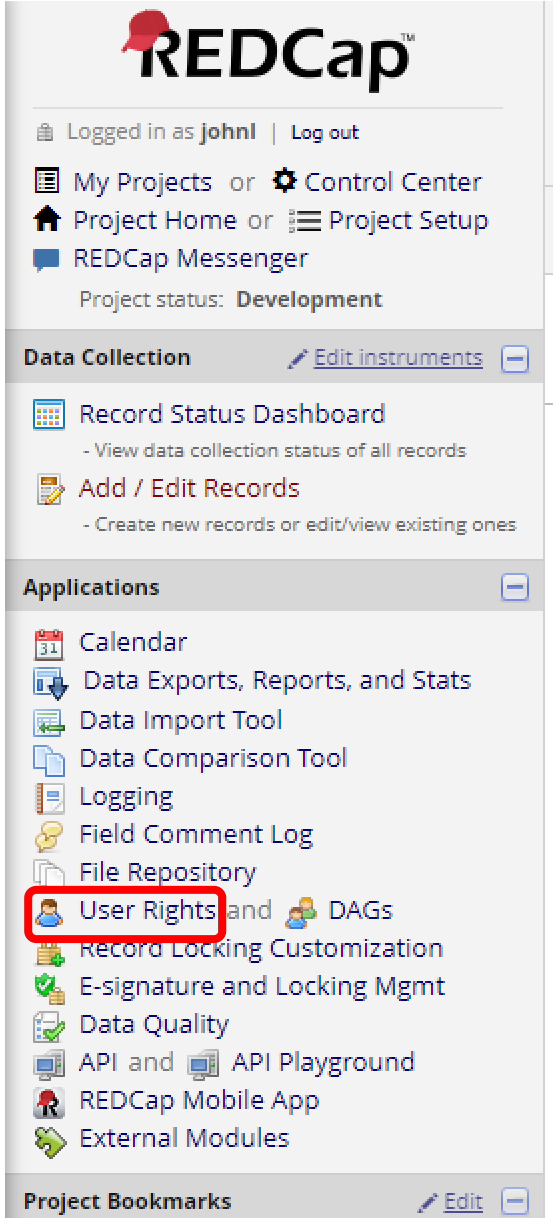


Breakout Room

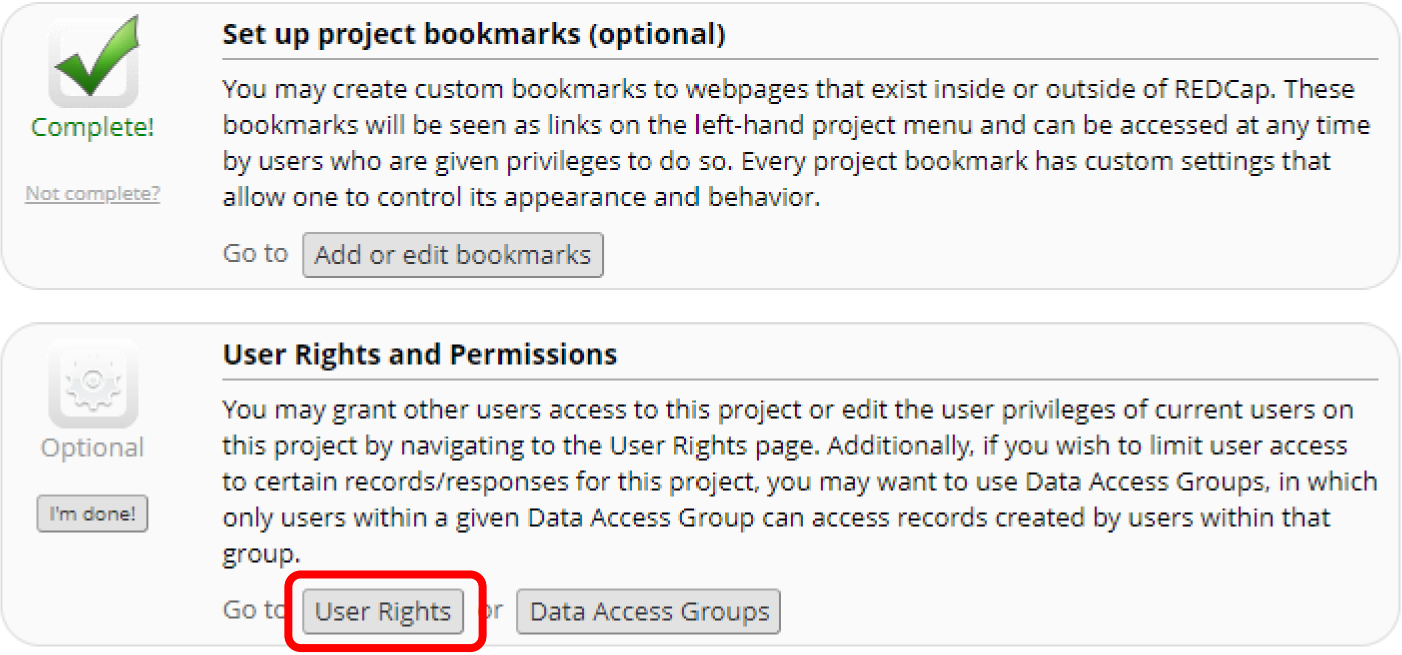
Exercise - 15 mins

- Create events
- Designate instruments to the events
- Auto-numbering vs Self numbering
- Customise label
- Break

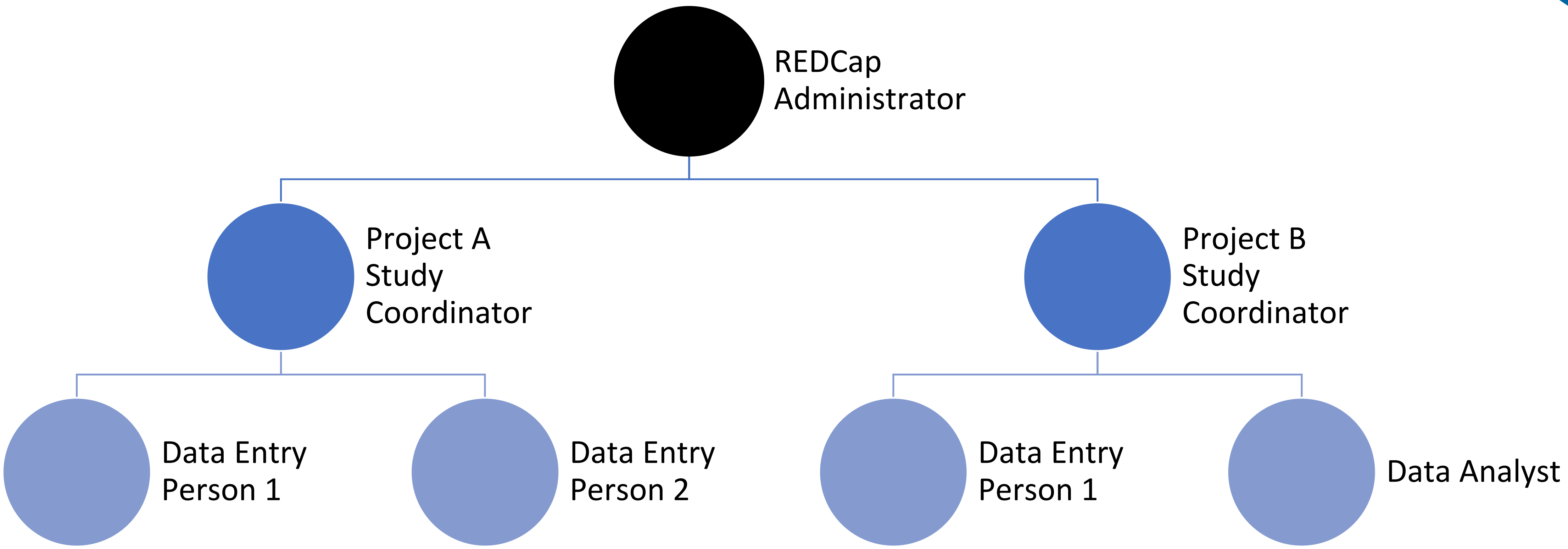
User Rights and Permissions



OR



Understanding Your Role



User Role

Project Home | Project Setup | User Rights | Data Access Groups

This page may be used for granting users access to this project and for managing the user privileges of those users. You may also create roles to which you may assign users (optional). User roles are useful when you will have several users with the same privileges because they allow you to easily add many users to a role in a much faster manner than setting their user privileges individually. Roles are also a nice way to categorize users within a project. In the box below you may add/assign users or create new roles, and the table at the bottom allows you to make modifications to any existing user or role in the project, as well as view a glimpse of their user privileges.

Add new users: Give them custom user rights or assign them to a role.

Add new user | Add with custom rights

— OR —

Assign new user | Assign to role

Create new roles: Add new user roles to which users may be assigned.

Enter new role name | Create role

(e.g., Project Manager, Data Entry Person)

Role name (click role name to edit role)	**Username** or users assigned to a role (click username to edit or assign to role)	**Expiration** (click expiration to edit)	**Project Design and Setup**	**User Rights**	**Data Access Groups**	**Data Export Tool**	**Reports & Report Builder**	**Graphical Data View & Stats**
—	**johnl** (John Liman)	never	✓	✓	✓	Full Data Set	✓	✓
Data Collector	[No users assigned]		✗	✗	✗	✗	✓	✓
Project Manager	[No users assigned]		✓	✓	✓	Full Data Set	✓	✓

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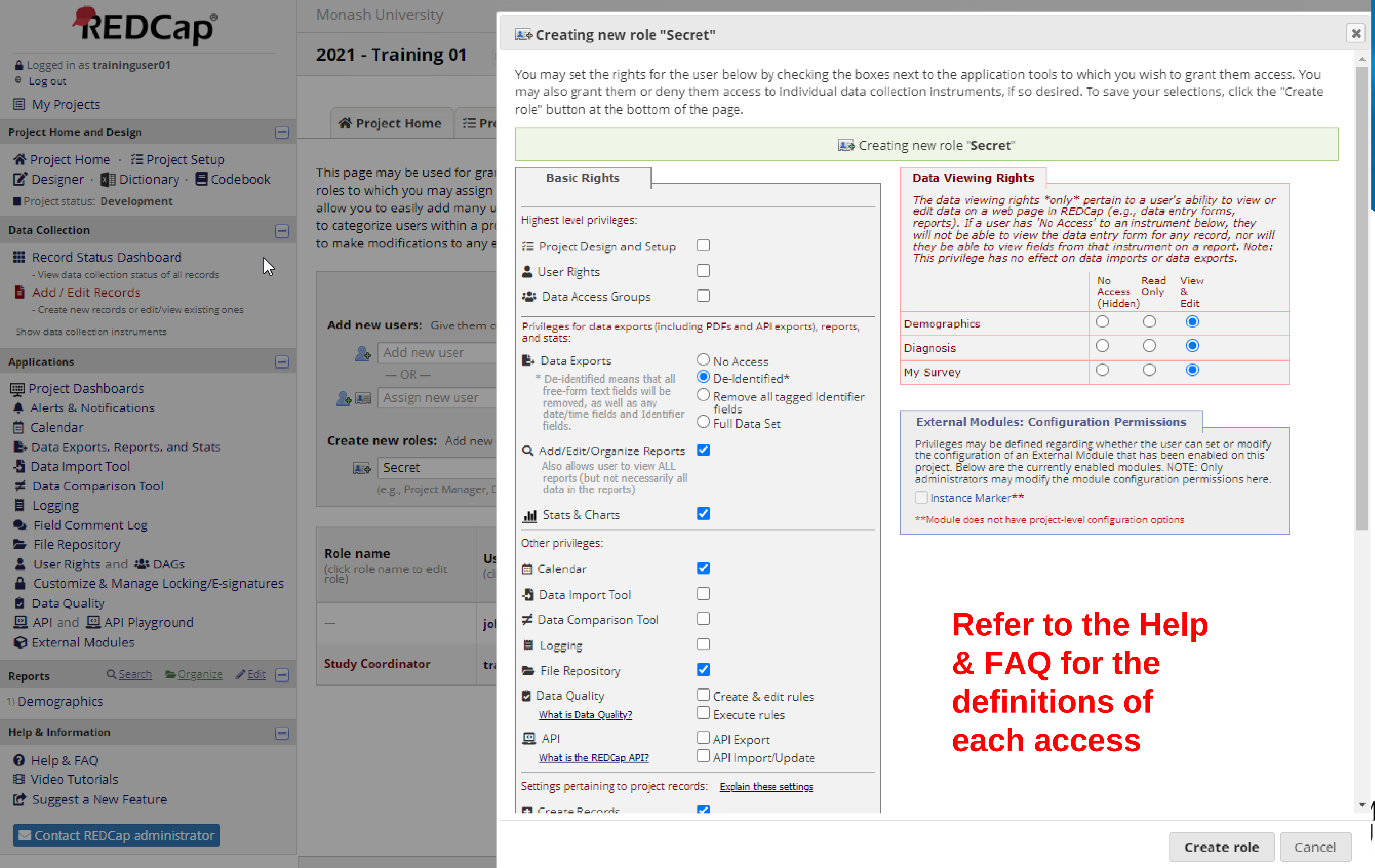

Refer to the Help & FAQ for the definitions of each access

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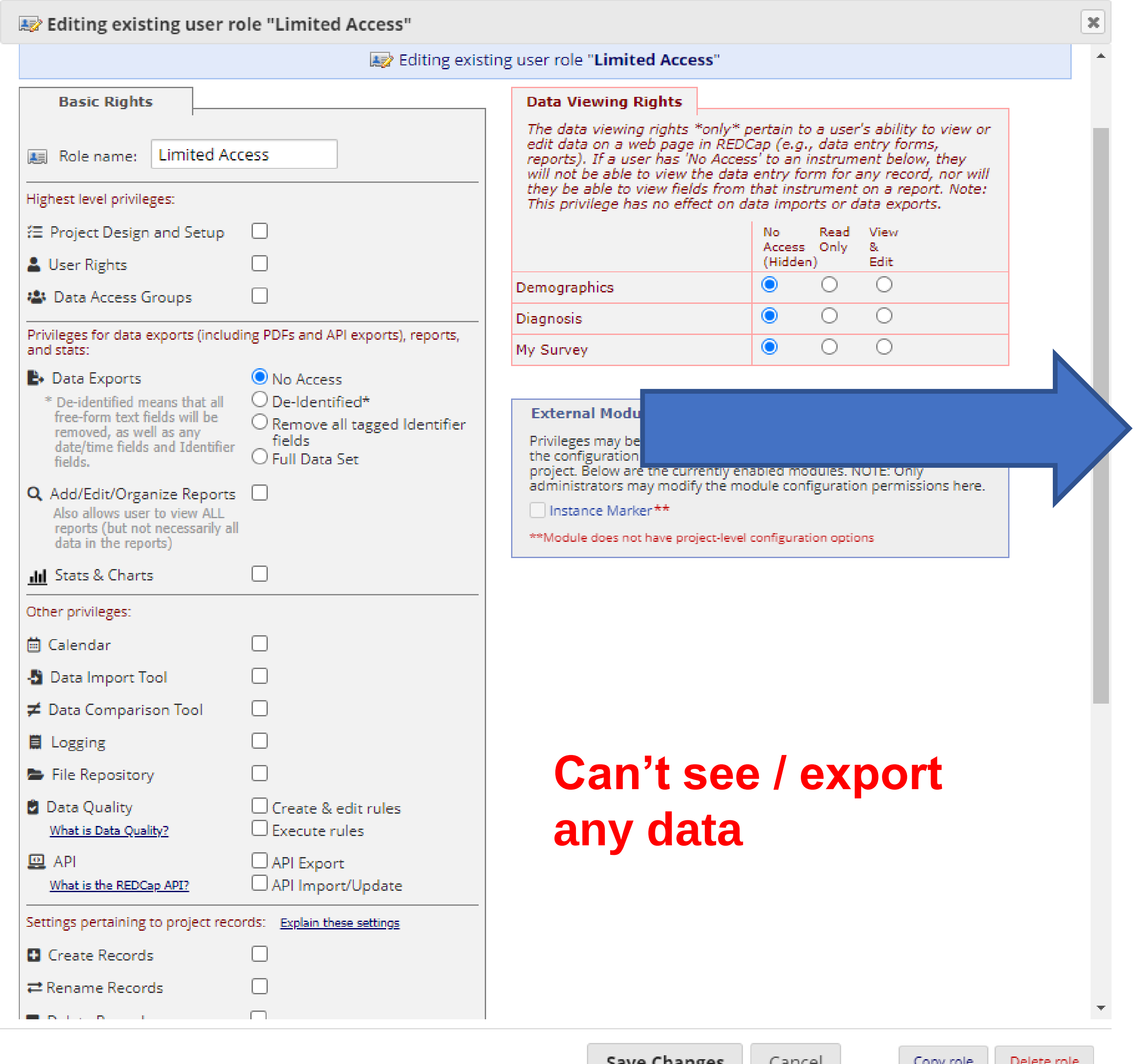
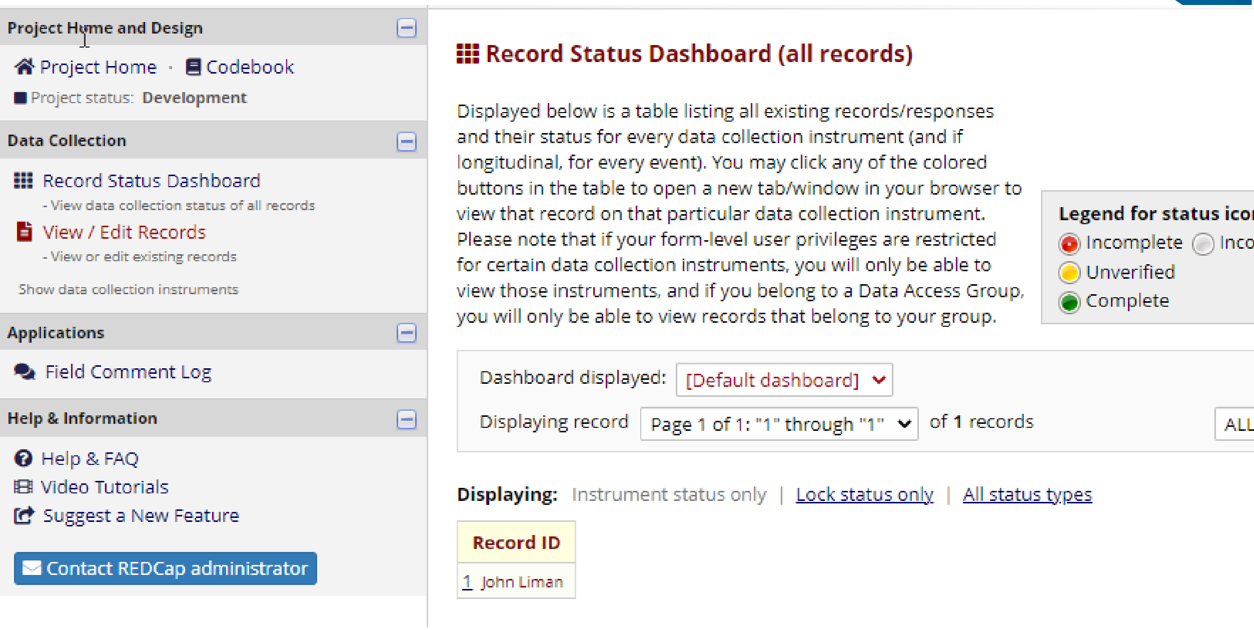
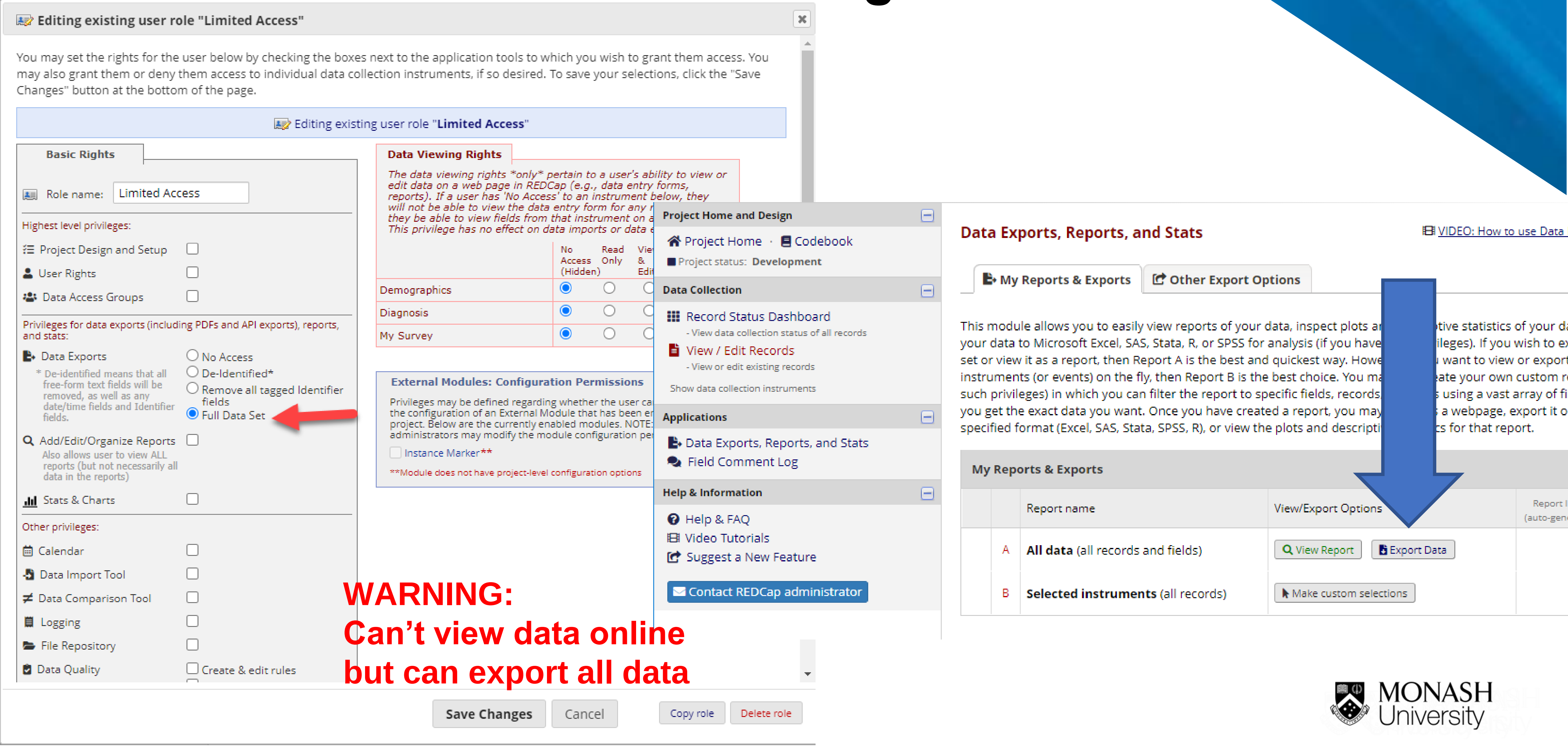
Understanding NO Access Rights





Can't see / export any data

Understanding NO Access Rights



WARNING:
Can't view data online but can export all data

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User Role

Project Home | Project Setup | User Rights | Data Access Groups

This page may be used for granting users access to this project and for managing the user privileges of those users. You may also create roles to which you may assign users (optional). User roles are useful when you will have several users with the same privileges because they allow you to easily add many users to a role in a much faster manner than setting their user privileges individually. Roles are also a nice way to categorize users within a project. In the box below you may add/assign users or create new roles, and the table at the bottom allows you to make modifications to any existing user or role in the project, as well as view a glimpse of their user privileges.

Add new users: Give them custom user rights or assign them to a role.

Add new user | Add with custom rights

— OR —

Assign new user | Assign to role

Create new roles: Add new user roles to which users may be assigned.

Enter new role name | Create role

(e.g., Project Manager, Data Entry Person)

Bad practice: Assign user without a role

Best practice: Always create role and assign user to the role

Role name (click role name to edit role)	**Username** or users assigned to a role (click username to edit or assign to role)	**Expiration** (click expiration to edit)	**Project Design and Setup**	**User Rights**	**Data Access Groups**	**Data Export Tool**	**Reports & Report Builder**	**Graphical Data View & Stats**
—	**johnl** (John Liman)	never	✓	✓	✓	Full Data Set	✓	✓
Data Collector	[No users assigned]		✗	✗	✗	✗	✓	✓
Project Manager	[No users assigned]		✓	✓	✓	Full Data Set	✓	✓

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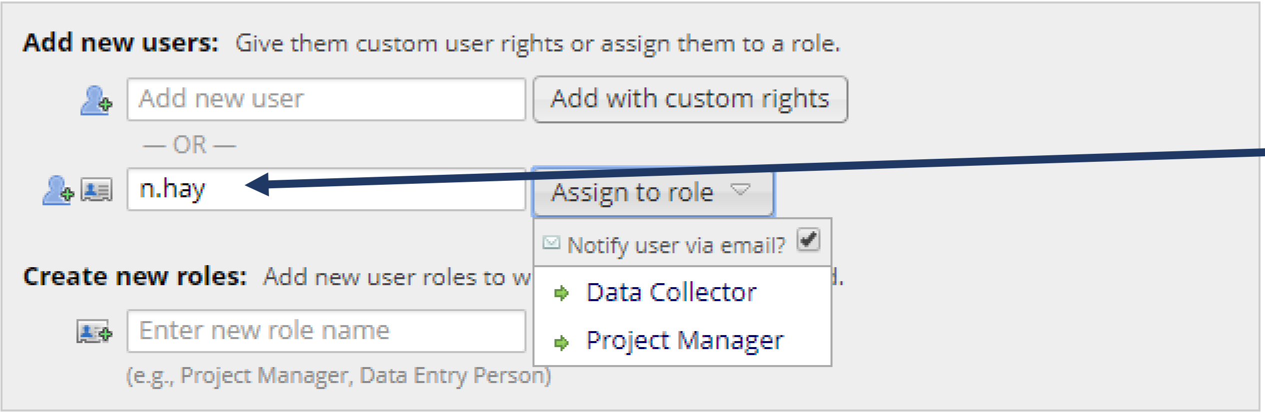
Assign User to Role



User must exist – if not exist raise a request at https://redcap.link/monashredcapaccount

Role name (click role name to edit role)	Username or users assigned to a role (click username to edit or assign to role)	Expiration (click expiration to edit)	Project Design and Setup	User Rights	Data Access Groups	Data Export Tool	Repo Rep Bui
—	johnl (John Liman)	never	✔	✔	✔	Full Data Set	✔
Data Collector	[No users assigned]		✖	✖	✖	✖	✔
Project Manager	[No users assigned]		✔	✔	✔	Full Data Set	✔

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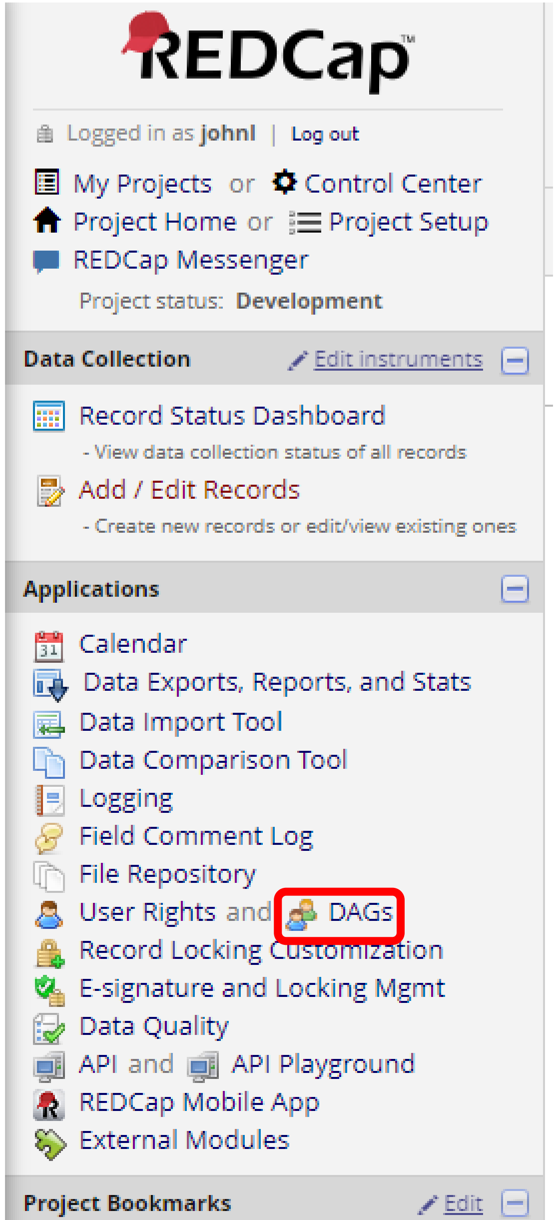
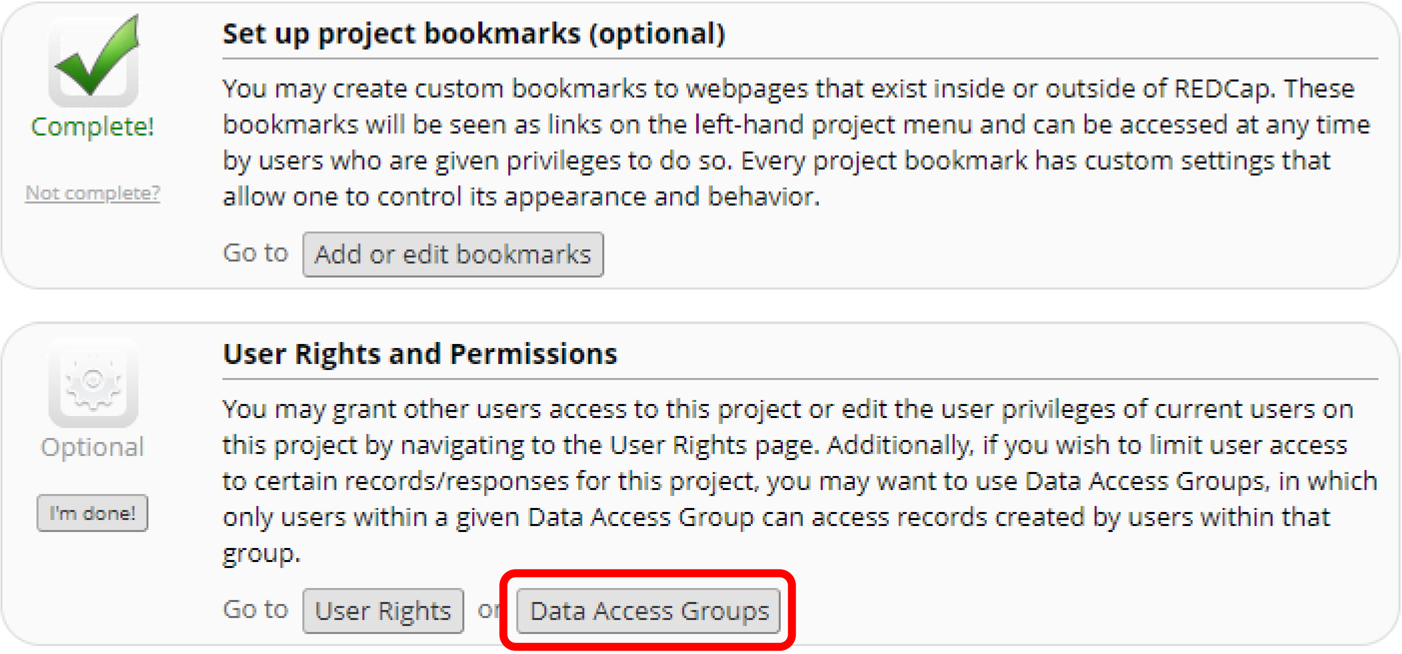
Data Access Groups



OR



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Data Access Group

Project Home | Project Setup | User Rights | Data Access Groups

VIDEO: How to use Data Access Groups

Access to certain project records may be limited by using Data Access Groups, in which only users within a given Data Access Group can access records created by users within that group. This may be useful in the case of a multi-site or multi-group project that requires that groups not be able to access another group's data.

Below you can create Data Access Groups for this project and afterward assign any current user to that group. You may delete the group at any time, if you wish. To rename an existing Data Access Group, simply click the group name in the table below and type the new name. You may assign a user to a Data Access Group by selecting the username and group name below and then clicking the 'Assign' button. Once assigned to a Data Access Group, the user will be able to see ONLY the project records created by themselves and others in that group. This includes being able to view records on data entry forms, in reports, and in exported data sets. Users can be un-assigned from a group by selecting the user name and selecting 'No Assignment'.

Create new groups: Add new data access groups to which users may be assigned.

Enter new group name | Add Group

Assign user to a group: Users may be assigned to any data access group.

Assign user -- Select User -- to [No Assignment] | Assign

Data Access Groups	Users in group	Number of records in group	Unique group name (auto-generated)	Group ID number	Delete group?
Alfred Hospital		0	alfred_hospital	1	✖
Cabrini Hospital		0	cabrini_hospital	2	✖
Royal Melbourne Hospital		0	royal_melbourne_ho	3	✖
St Vincent Hospital		0	st_vincent_hospita	4	✖
[Not assigned to a group]	johnl (John Liman) * Can view ALL records	1			

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Breakout Room

Exercise 10 mins

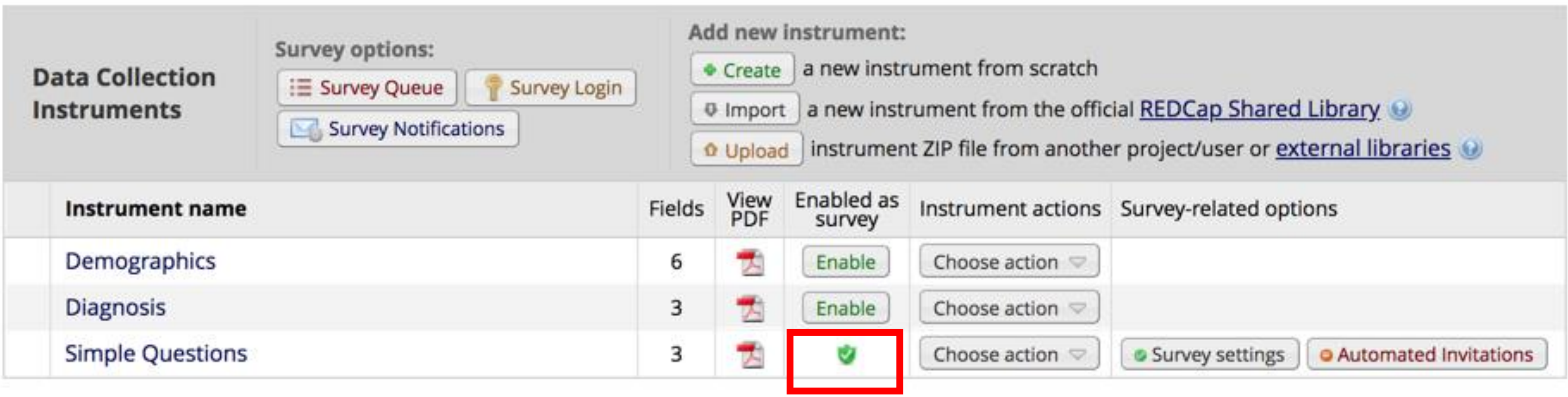
- Create Roles
- Assign user
- Create DAG
- Assign user to the DAG

Using Surveys

Creating a Survey

1. Enable the survey feature

2. Enable the form as a survey



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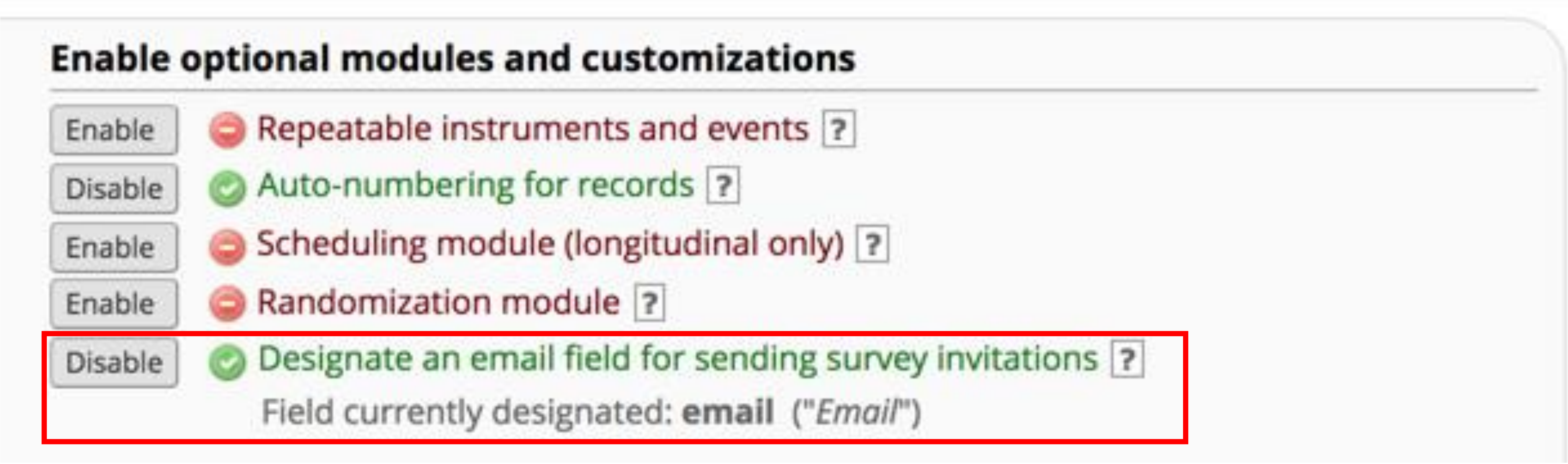
Creating a Survey

3. Designate an email field for sending survey invitations



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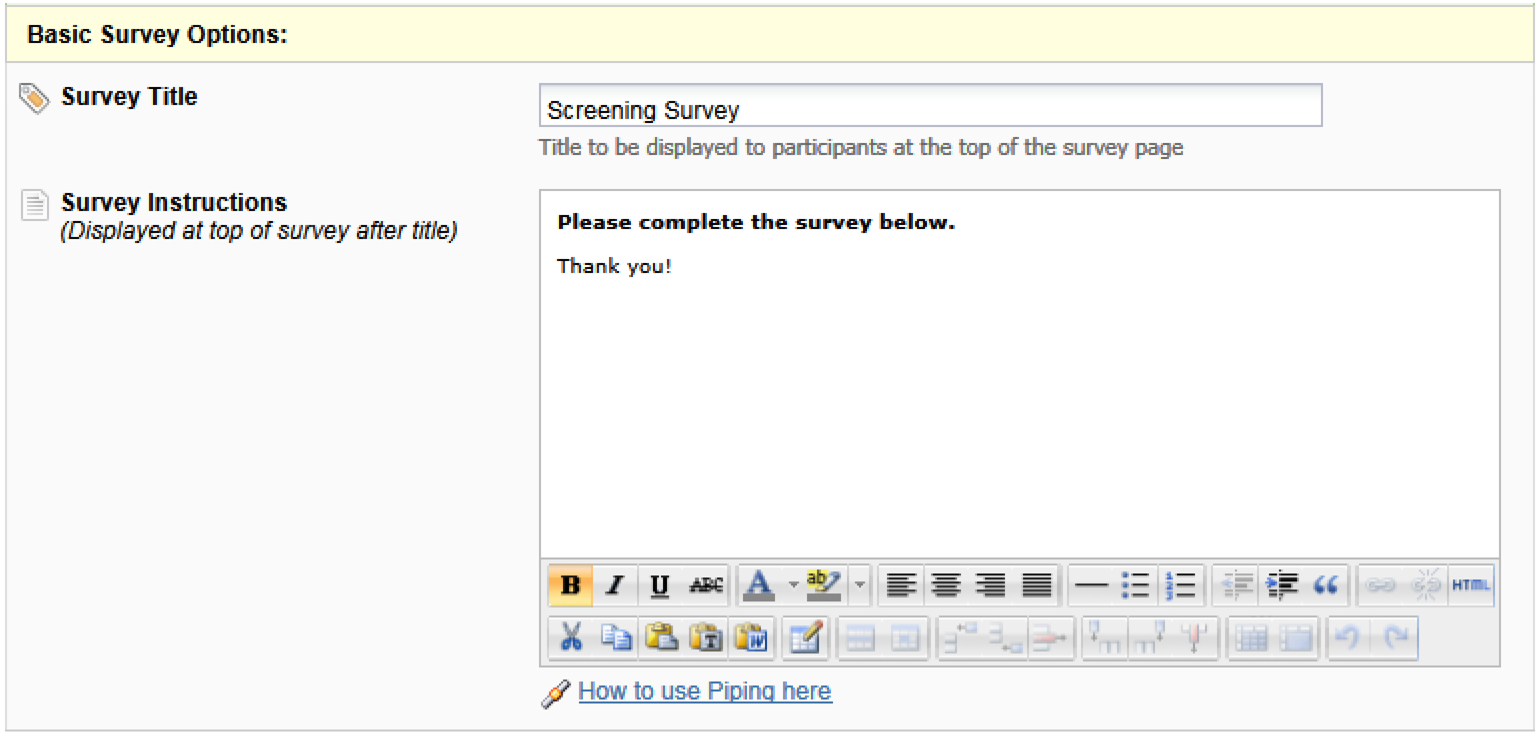
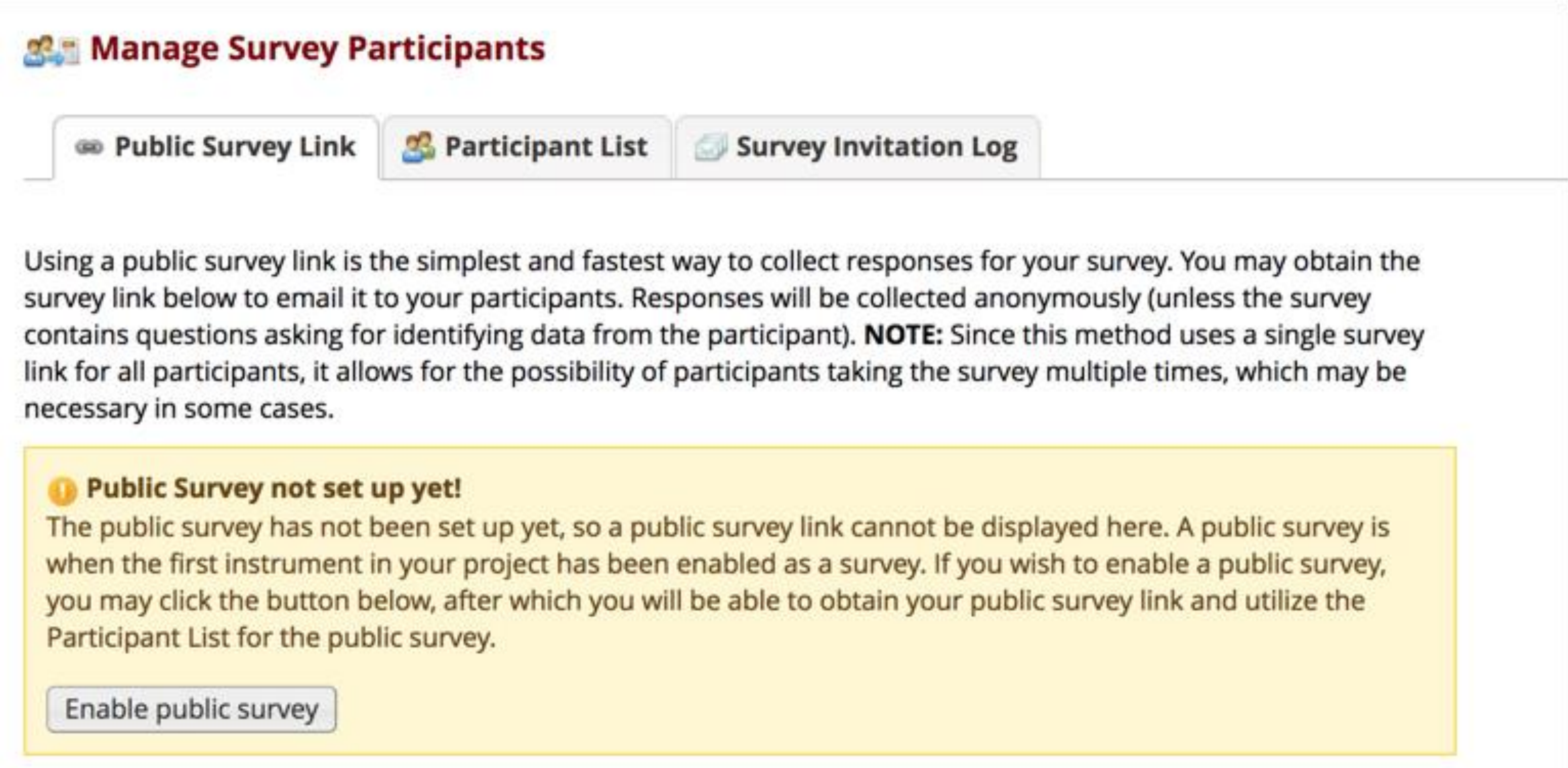
Survey Settings

Set the status title, color, instructions, etc



Public Survey Link



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Participant List

Manage Survey Participants

Public Survey Link | Participant List | Survey Invitation Log

The Participant List option allows you to **send a customized email** to anyone in your list and **track who responds to your survey**. It is also possible to identify an individual's survey answers, if desired, by providing an Identifier for each participant (this feature must first be enabled by clicking the 'Enable' button in the table below). More details

Participant List belonging to "Simple Questions" - Baseline

Displaying 1 - 9 of 9 | Add participants | Compose Survey Invitations | Export list

Email	Record	Participant Identifier	Responded?	Invitation Scheduled?	Invitation Sent?	Link	Survey Access Code and QR Code
christopher.robyn@monash.edu	2	Disabled		-			
Christpoher.Mace@monash.edu	8	Disabled		-			
John.Doe@monash.edu	6	Disabled		-			
john.liman@monash.edu	1	Disabled		-			
Kelly.Hillman@monash.edu	7	Disabled		-			
Kenny.Rogers@monash.edu	5	Disabled		-			
michael.wong@monash.edu	4	Disabled		-			
Michelle.Pullman@monash.edu	9	Disabled		-			
sum.bar.dee@monash.edu	3	Disabled		-			

Test Your Project!!

Complete!

Not complete?

Test your project thoroughly

It is important to test the essential components of your project before moving it into production. Try creating a few test records and entering some data for each to ensure that your data collection instruments look and behave how you expect, especially branching logic and calculations. Then review your test data by creating reports and exporting your data to view in Excel or a statistical analysis package. If you have surveys, complete the surveys as if you were a participant by using the Public Survey Link or Participant List by sending a survey invitation to yourself. If other project modules will be used regularly, test them out a bit too. The best way to test your project is to use it as if you were entering real production data, and it is always helpful to have colleagues (especially team members) take a look at your project to get a fresh set of eyes looking at it.

Move to Production

Not started

Move your project to production status

Move the project to production status so that real data may be collected. Once in production, you will not be able to edit the project fields in real time anymore. However, you can make edits in Draft Mode, which will then need to be approved by a REDCap administrator before taking effect.

Go to **Move project to production**

Move Project To Production Status?

Production mode puts into place safeguards to protect your real data against loss or damage

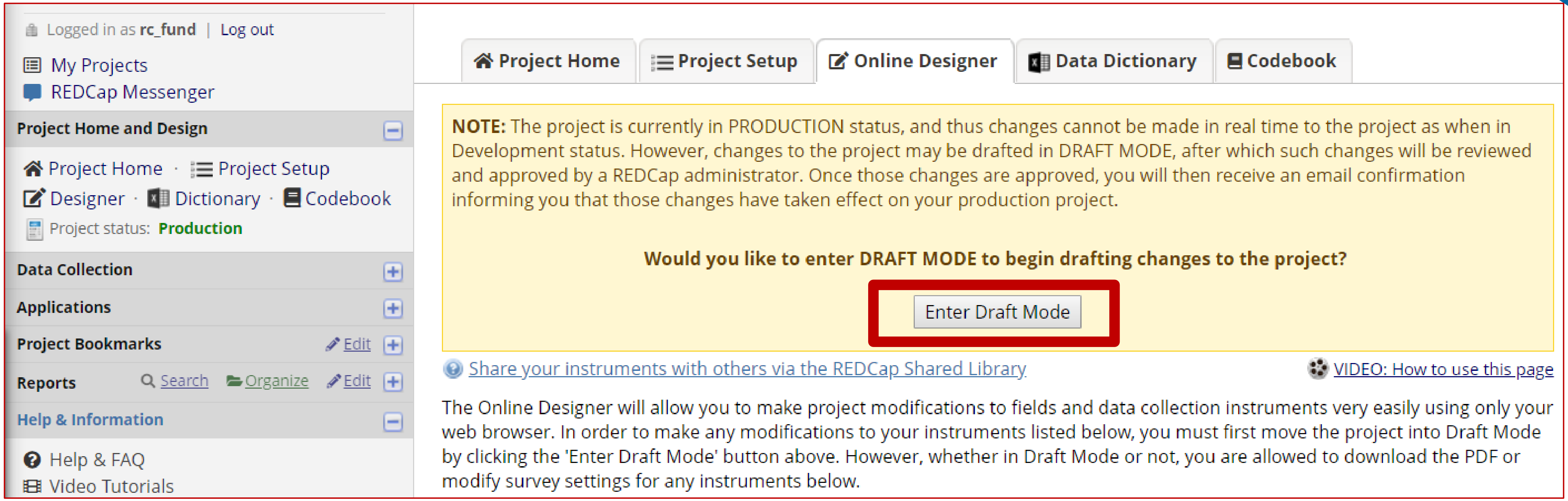
Keep existing data or delete?

- Keep ALL data saved so far.
- Delete ALL data, calendar events, documents uploaded for records/responses, survey responses (if applicable), and any logging events pertaining to data collection.

Once in production, you will not be able to edit the project fields in real time anymore. However, you can make edits in Draft Mode, which will be auto-approved or else might need to be approved by a REDCap administrator before taking effect.

YES, Move to Production Status | Cancel

Making changes in Production



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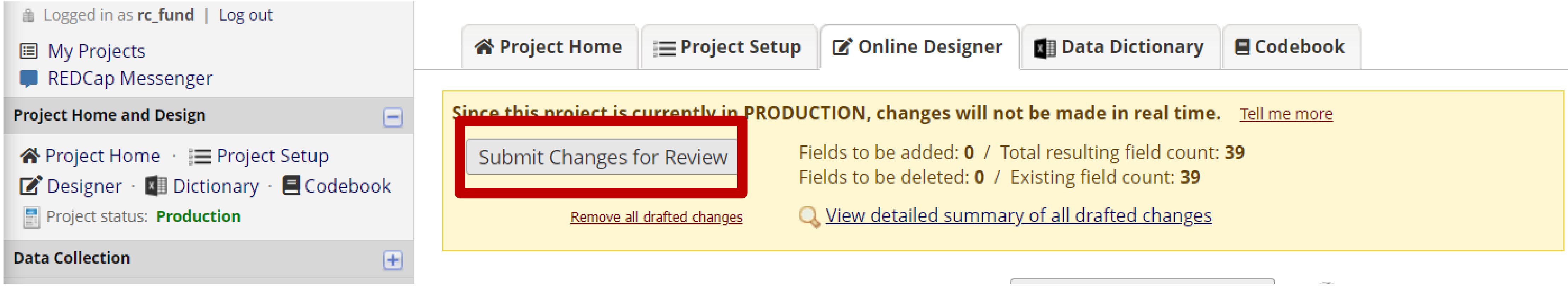
Making Changes in Production



Breakout Room

10 min

Create Survey

Move to production
Add new field
Submit for review

Useful Application and Tools

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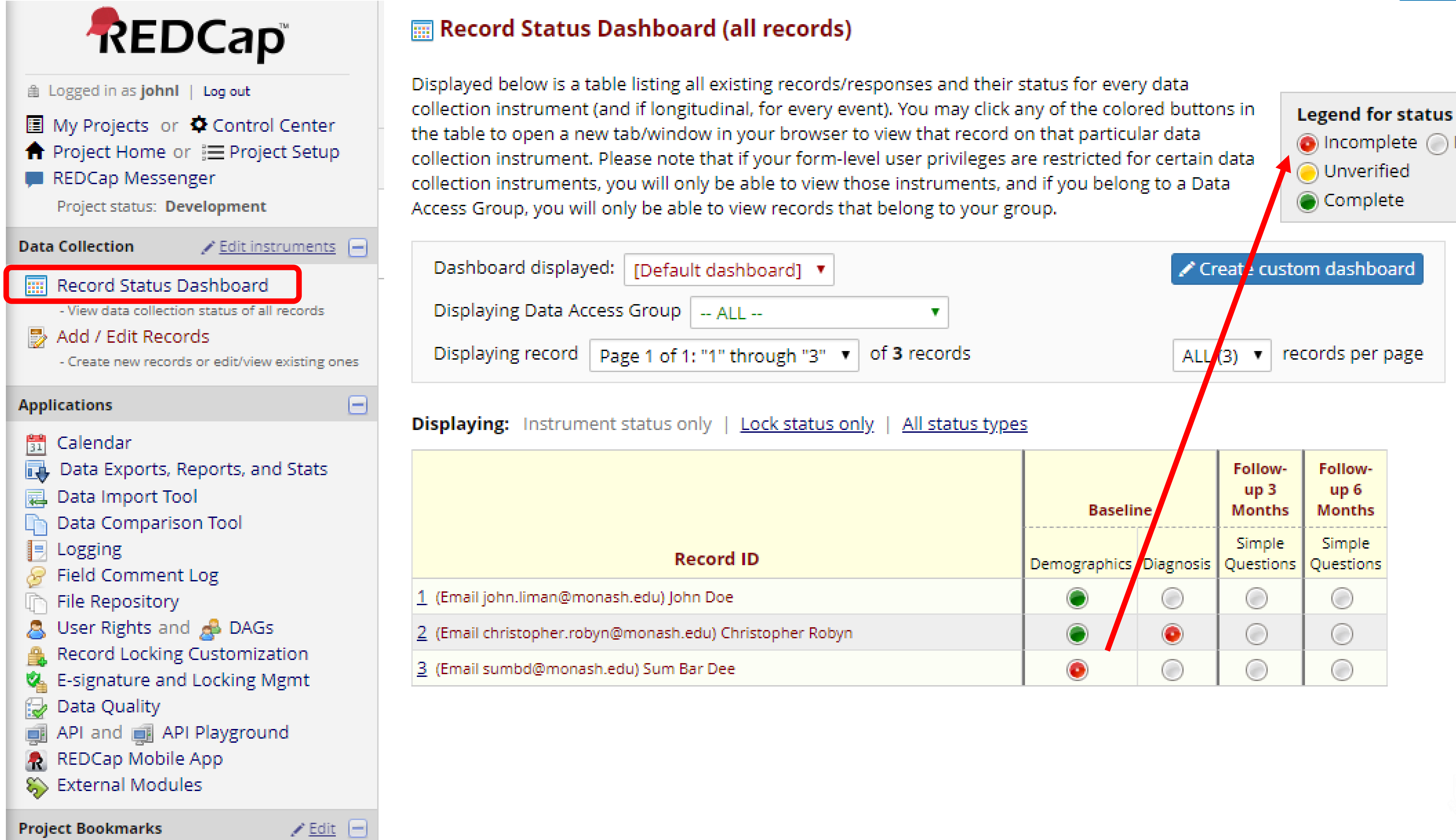
Record Status Dashboard



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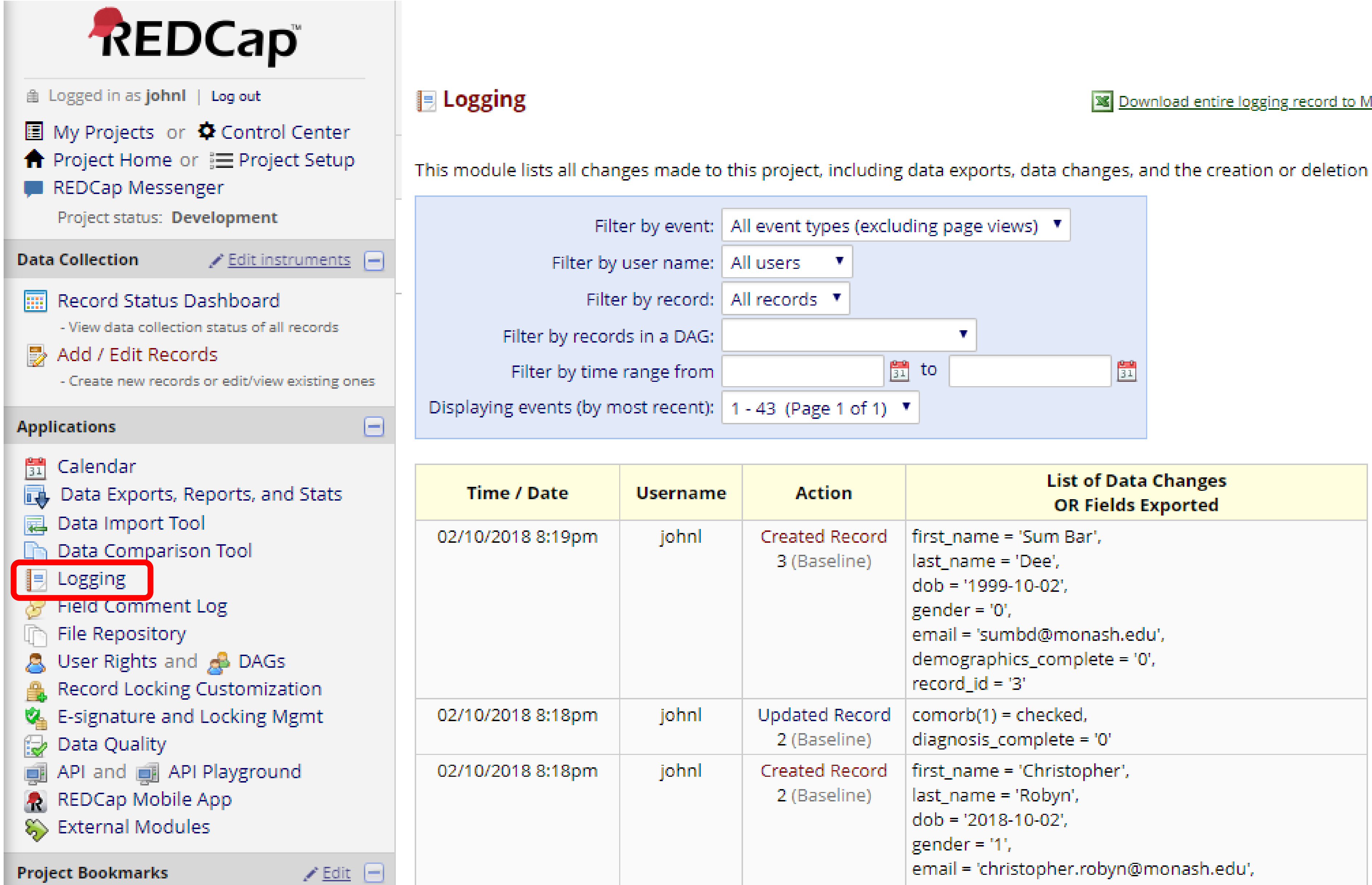
Project Log/Audit Trail



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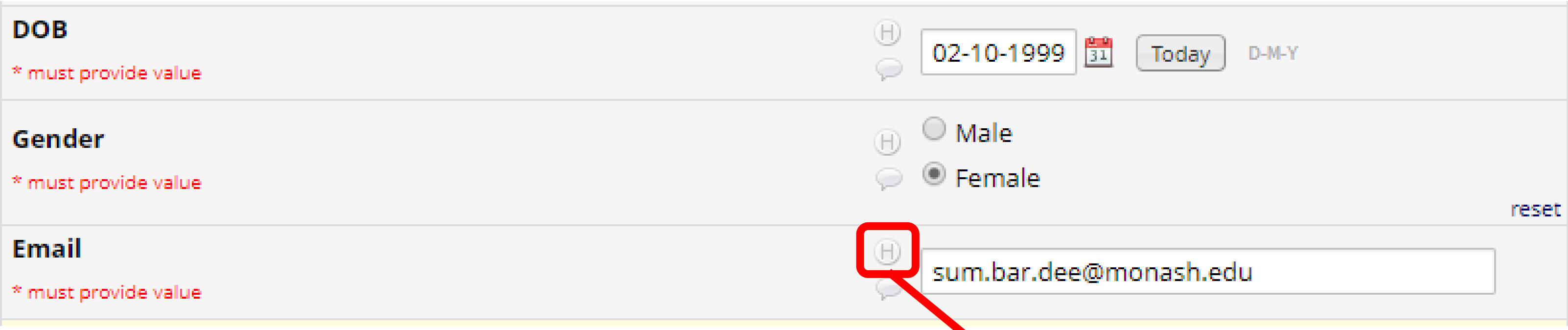
Field Data History



Data History for variable "email" for record "3"

Listed below is the history of all data entered for the variable "**email**" for Record ID "**3**". The data history results are sorted from earliest to most recent.

Date/Time of Change	User	Data Changes Made
02/10/2018 8:19pm	johnl	sumbd@monash.edu
02/10/2018 8:25pm	johnl	sum.bar.dee@monash.edu

Close

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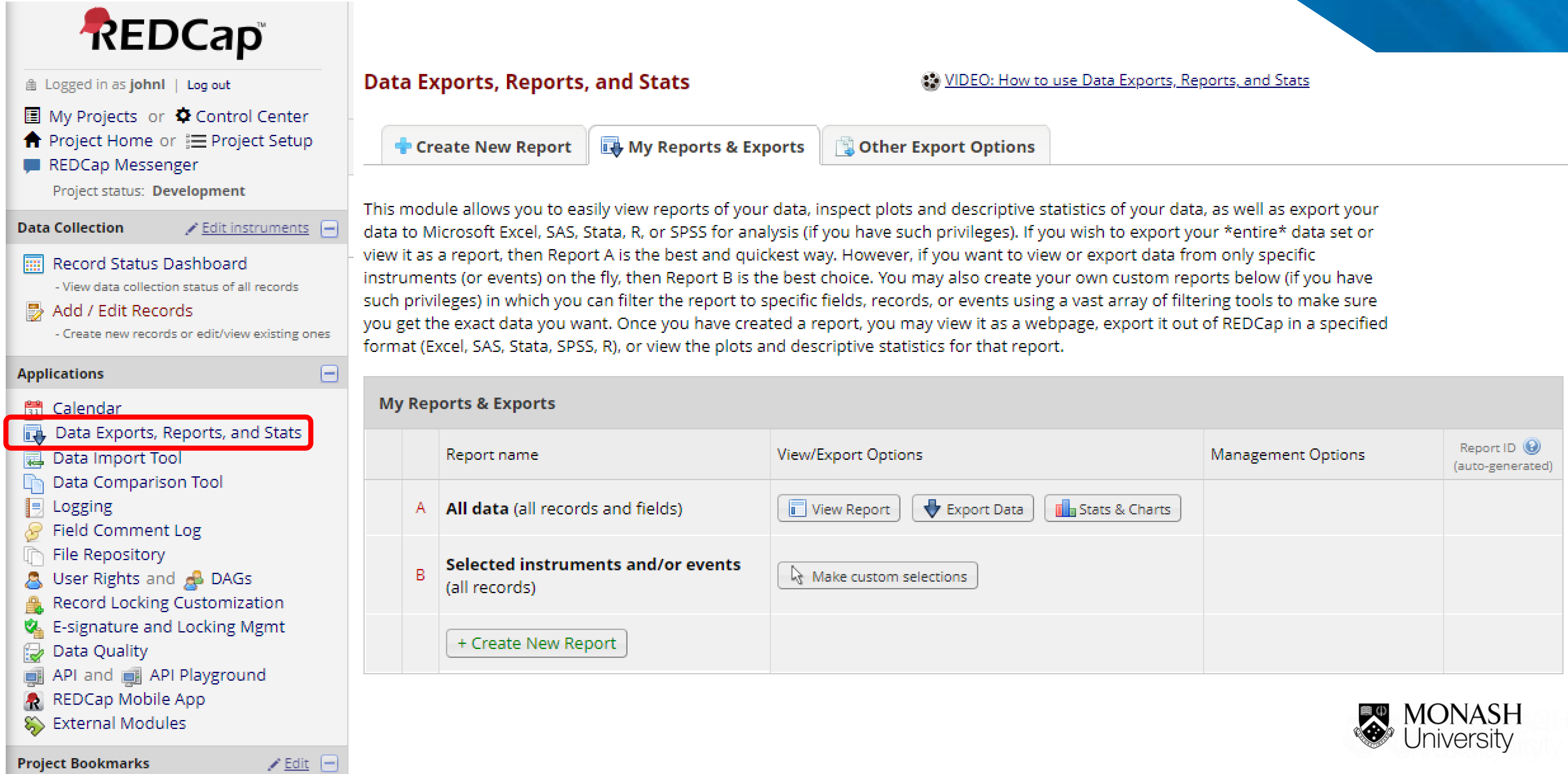
Data Exports



Create New Reports

Data Exports, Reports, and Stats

VIDEO: How to use Data Exports, Reports, and Stats

Create New Report | My Reports & Exports | Other Export Options

You may create a new report by selecting the fields/variables below that you want to include in the report. You may add as many fields to your report as you wish, and you can choose which users may view this report. You will also need to provide a name for your report, which will then be displayed on the project's left-hand menu for anyone to whom you have given access. You can filter the results returned in the report in a variety of ways, including using complex AND/OR logic. When you are finished, click the Save Report button at the bottom. The new report will then be added to your list of reports, after which you may immediately begin viewing them or exporting them.

Name of Report: Ready for Follow-Up

STEP 1

User Access: Choose who sees this report on their left-hand project menu ?

All users – OR – **Custom user access** (Choose specific users, roles, or data access groups who will have access)

STEP 2

Fields to include in report Quick Add

Add all fields from selected instrument: -- choose instrument --

Field 1	record_id "Record ID"	Instrument: **Demographics**
Field 2	first_name "First Name"	Instrument: **Demographics**
Field 3	last_name "Last Name"	Instrument: **Demographics**
Field 4	dob "DOB"	Instrument: **Demographics**

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Create New Reports

STEP 3

☑ Show data for all events for each record returned ?

How to use filters and AND/OR logic

Filters (optional)		Operator / Value
Filter 1	demographics_complete "Complete?" in All events	= Complete
AND		
Filter 2	-- select a field -- in All events	

Live Filters (optional)

Live Filters can be selected on the report page for dynamically filtering data in real time. Only multiple choice fields can be used as Live Filters (as well as Events, if longitudinal, and Data Access Groups, if any exist).

Live Filter 1	[Data Access Groups]
Live Filter 2	-- select a field --
Live Filter 3	-- select a field --

STEP 4

Order the Results (optional)

First by	record_id "Record ID"	Ascending order
Then by	Type variable name or field label	Ascending order
Then by	Type variable name or field label	Ascending order

Save Report Cancel

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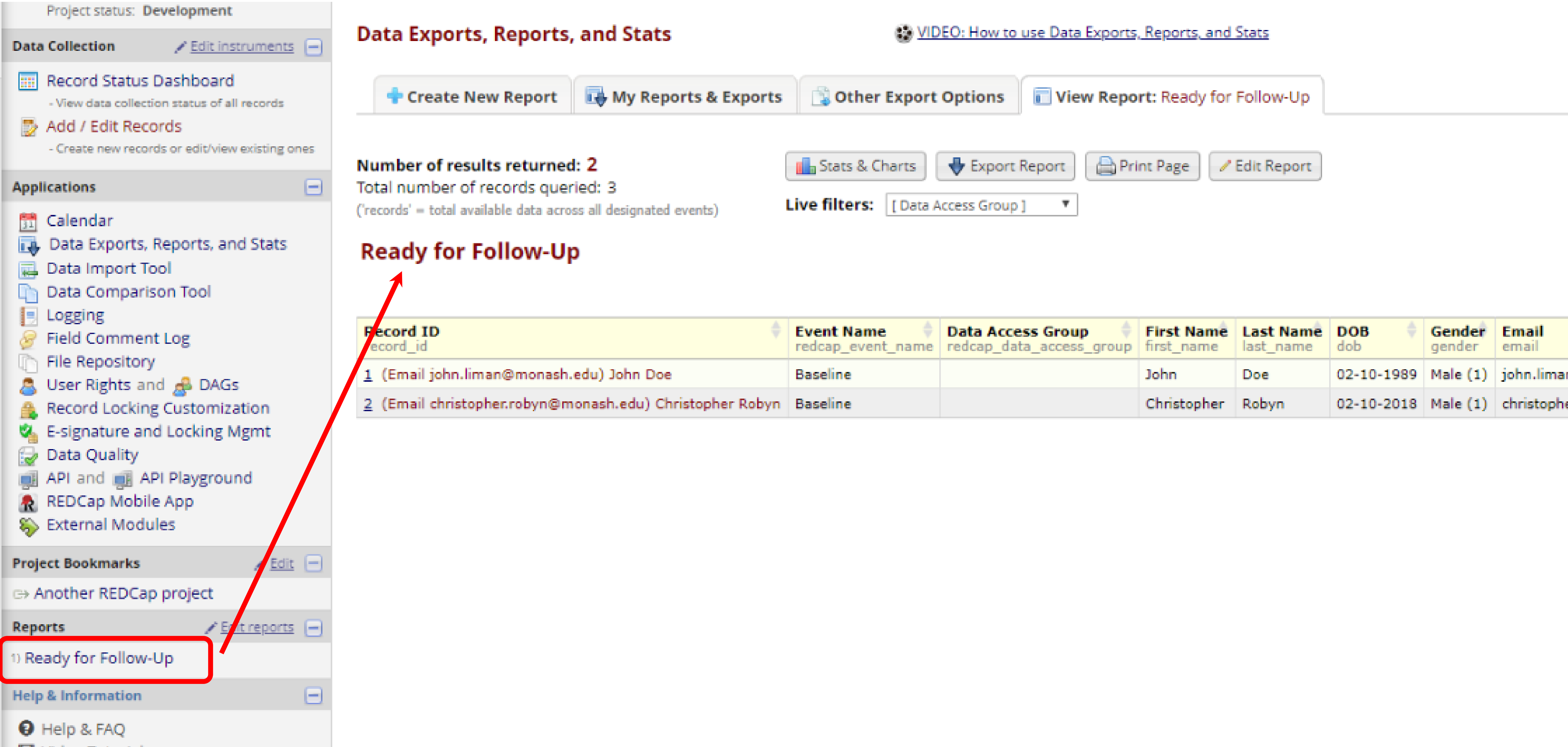
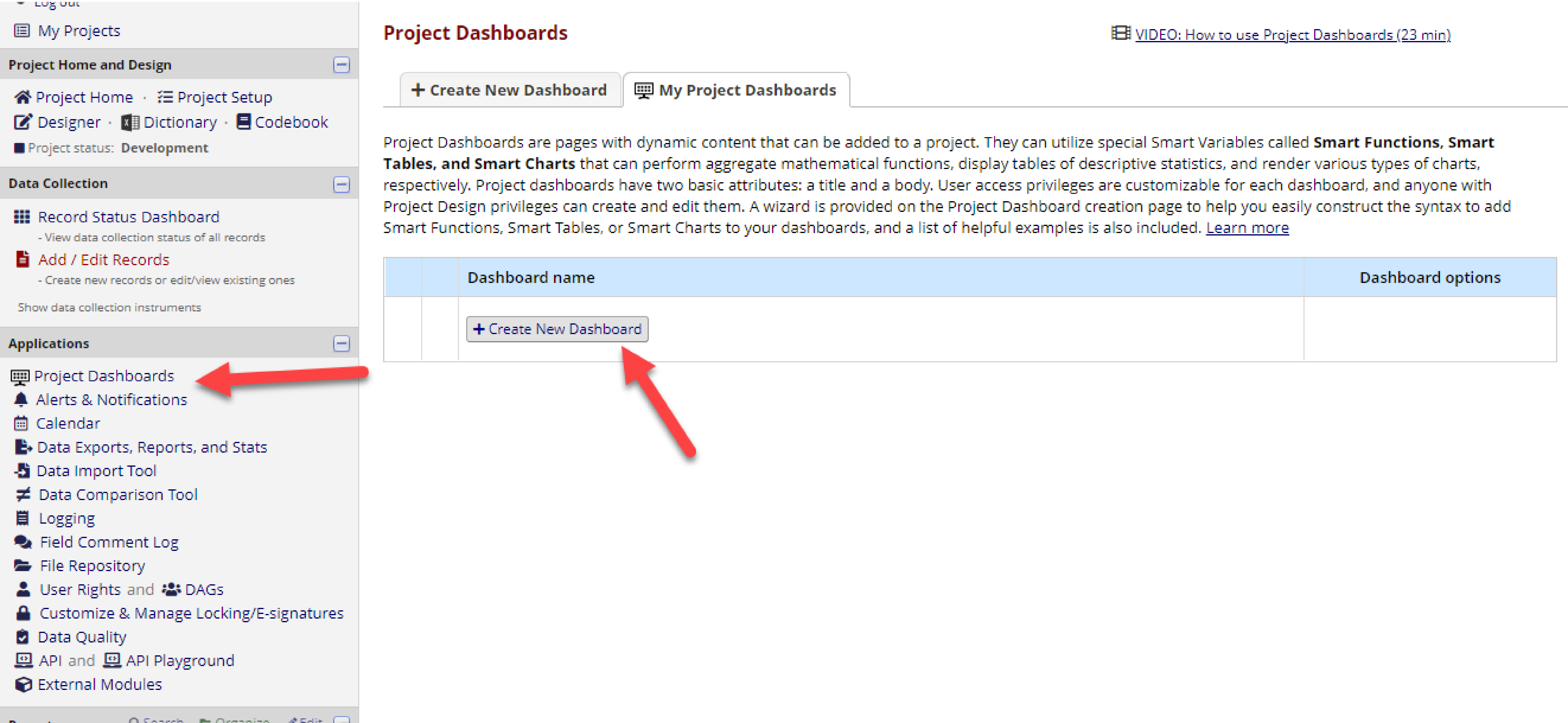
Create New Reports



Project Dashboard



Project Dashboard

Request for Monash REDCap™ Project Space PID 274

Project Dashboards

VIDEO: How to use Project Dashboards (23 min)

+ Create New Dashboard | My Project Dashboards | Edit existing dashboard

Project Dashboards ar pages with dynamic content that can be added to a project. They can utilize special Smart Variables called **Smart Functions, Smart Tables, and Smart Ch rts** that can perform aggregate mathematical functions, display tables of descriptive statistics, and render various types of charts, respectively. Project da hboards have two basic attributes: a title and a body. User access privileges are customizable for each dashboard, and anyone with Project Design privileg s can create and edit them. A wizard is provided on the Project Dashboard creation page to help you easily construct the syntax to add Smart Functions, Smar Tables, or Smart Charts to your dashboards, and a list of helpful examples is also included. Learn more

Dashboard title: REDCap Project Request

User access: Choose who sees this dashboard on their left-hand project menu

(Note: Users with Setup/Design privileges can still access all dashboards via the Project Dashboards page.)

○ **All users** – OR – ● **Custom user access** (Users in ANY groups selected below will have access)

Selected users:
- aran0029 (Avi Rana)
- arunting (Andrew Runting)
- ewil0014 (Eloise Leemann)
- johnl (John Liman)

Selected user roles:
- Administrator
- Finance
- Project coordinator

View a list of users who will have access to this dashboard based on the selections above: View user access list

Set as "public": Enabling this feature below will auto-generate a public link for viewing the dashboard without needing to log in to REDCap.

Dashboard is publicly viewable

Dashboard content: Add any static or dynamic text to be displayed, including Smart Functions, Smart Tables, and Smart Charts.

Dashboard help

Use the Wizard

Paragraph

	2019	2020	2021
Total number of projects created	[aggregate-count:record_id:R-759MF79WW8]	[aggregate-count:record_id:R-747N9MY8CA]	[aggregate-count:record_id:R-3234KE8EE3]

Project Request Type	Project Purpose
[pie-chart:request_type:R-229NFFKDFJ]	[pie-chart:project_purpose:R-229NFFKDFJ]
Research Type	P.I. School's
[bar-chart:project_research_type:R-229NFFKDFJ]	[bar-chart:pi_school:R-229NFFKDFJ]

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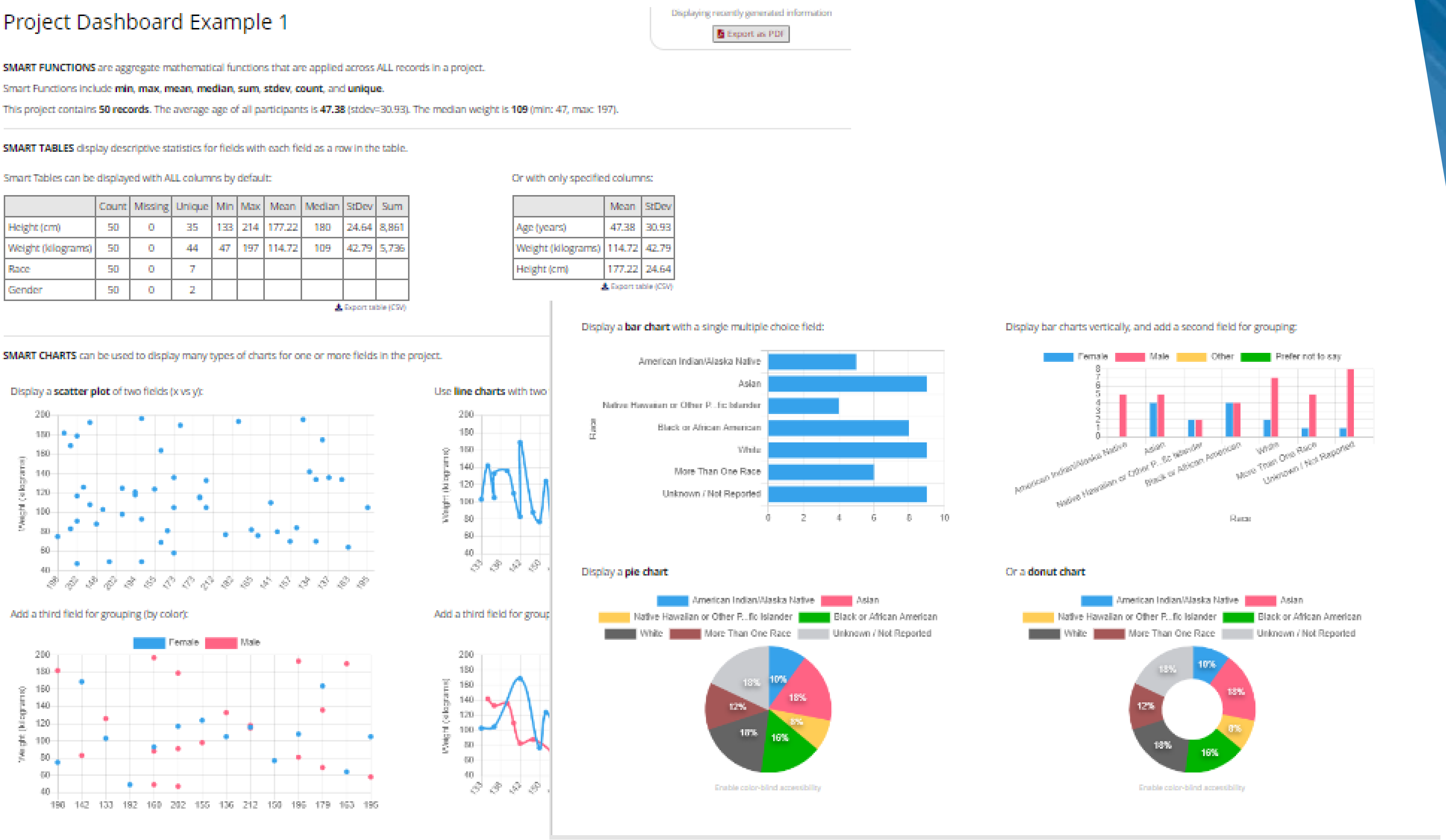
Project Dashboard Examples


Project Dashboard Example 1

Displaying recently generated information

Export as PDF

SMART FUNCTIONS are aggregate mathematical functions that are applied across ALL records in a project.

Smart Functions include **min**, **max**, **mean**, **median**, **sum**, **stdev**, **count**, and **unique**.

This project contains **50 records**. The average age of all participants is **47.38** (stdev=30.93). The median weight is **109** (min: 47, max: 197).

SMART TABLES display descriptive statistics for fields with each field as a row in the table.

Smart Tables can be displayed with ALL columns by default:

	Count	Missing	Unique	Min	Max	Mean	Median	StDev	Sum
Height (cm)	50	0	35	133	214	177.22	180	24.64	8,861
Weight (kilograms)	50	0	44	47	197	114.72	109	42.79	5,736
Race	50	0	7						
Gender	50	0	2						

Export table (CSV)

Or with only specified columns:

	Mean	StDev
Age (years)	47.38	30.93
Weight (kilograms)	114.72	42.79
Height (cm)	177.22	24.64

Export table (CSV)

SMART CHARTS can be used to display many types of charts for one or more fields in the project.

Display a **scatter plot** of two fields (x vs y):

Use **line charts** with two

Add a third field for grouping (by color):

Add a third field for group

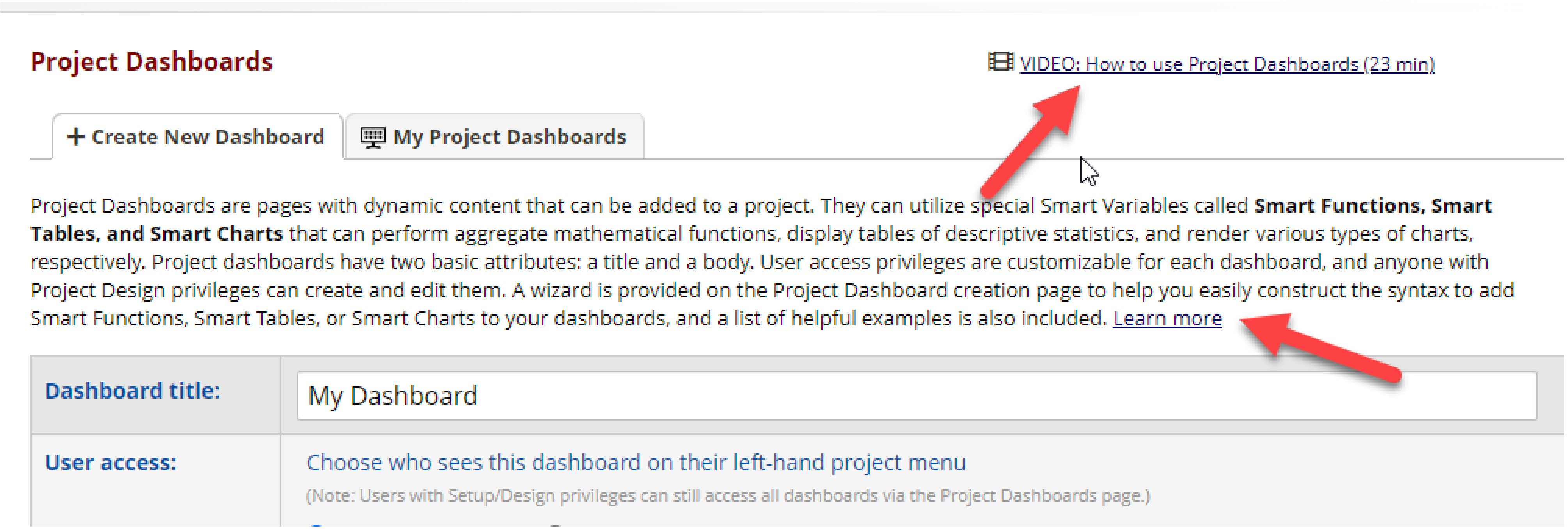
Display a **bar chart** with a single multiple choice field:

Display bar charts vertically, and add a second field for grouping:

Display a **pie chart**

Or a **donut chart**

Project Dashboard (Self Study)

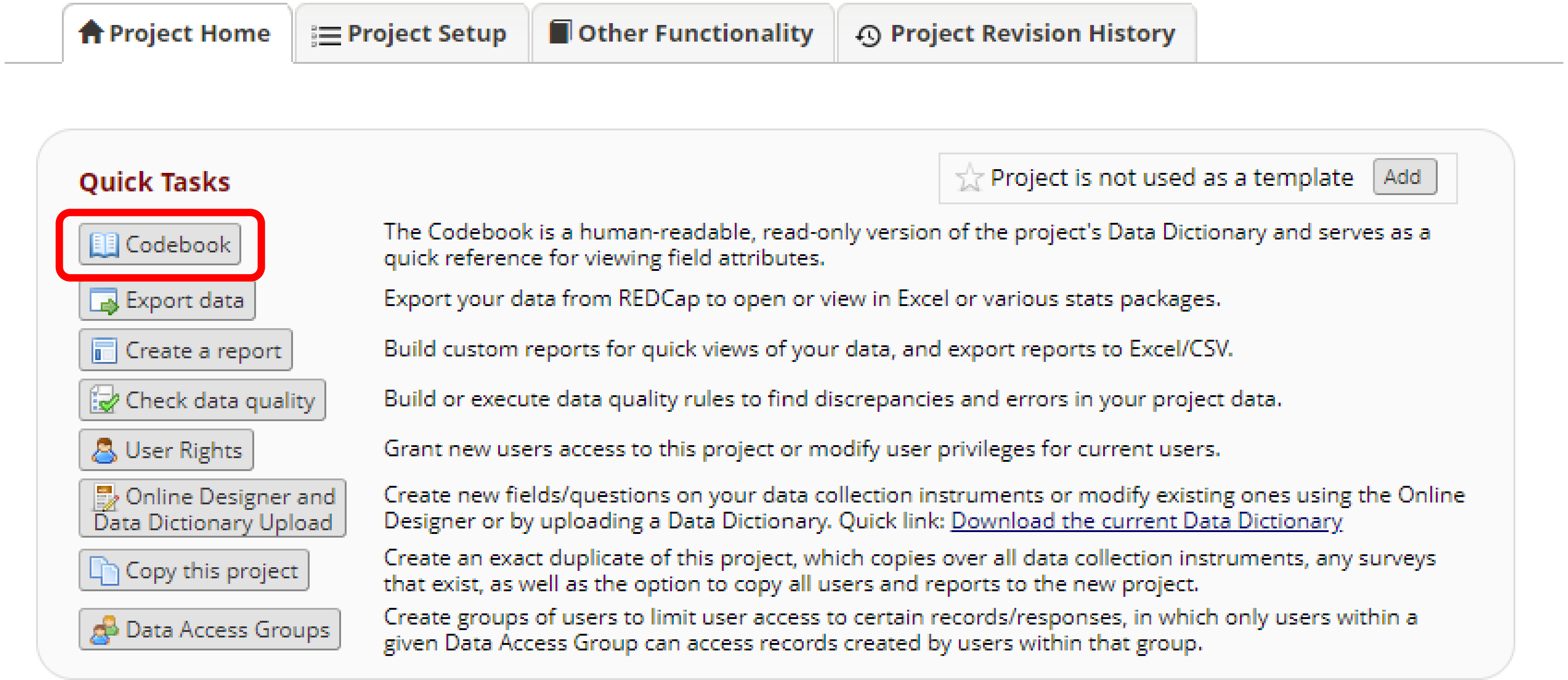


Breakout Room

10 mins

Reports

Data Dictionary Codebook



Data Dictionary Codebook

Project Home | Project Setup | Codebook

The Codebook is a human-readable, read-only version of the project's Data Dictionary and serves as a quick reference for viewing the attributes of any given field in the project without having to download and interpret the Data Dictionary. Note: Checkbox fields have their coded values displayed both in the format defined by users in the Online Designer/Data Dictionary as well as in the extended format seen in data imports and exports (i.e., field___code).

Print page

Data Dictionary Codebook

	#	Variable / Field Name	Field Label *Field Note*	Field Attributes (Field Type, Validation, Choices, Calcula
Instrument: **Demographics** (demographics)				
	1	record_id	Record ID	text
	2	first_name	First Name	text, Required, Identifier
	3	last_name	Last Name	text, Required, Identifier
	4	dob	DOB	text (date_dmy), Required, Identifier
	5	gender	Gender	radio, Required, Identifier 1 Male 0 Female
	6	email	Email	text (email), Required, Identifier

Data Quality

REDCap™

Logged in as johnl | Log out

My Projects or Control Center
Project Home or Project Setup
REDCap Messenger

Project status: Development

Data Collection Edit instruments

- Record Status Dashboard
  - View data collection status of all records
- Add / Edit Records
  - Create new records or edit/view existing ones

Applications

- Calendar
- Data Exports, Reports, and Stats
- Data Import Tool
- Data Comparison Tool
- Logging
- Field Comment Log
- File Repository
- User Rights and DAGs
- Record Locking Customization
- E-signature and Locking Mgmt
- Data Quality
- API and API Playground
- REDCap Mobile App
- External Modules

Project Bookmarks Edit

Data Quality

This module will allow you to execute data quality rules upon your project data to check for discrepancies in your data. Listed below are some pre-defined data rules that you may utilize and run. You may also create your own rules or edit, delete, or reorder the rules you have already created. To find discrepancies for a given rule, simply click the Execute button next to it, or click the Execute All Rules button to fire all the rules at once. It will provide you with a total number of discrepancies found for each rule and will allow you to view the details of those discrepancies by clicking the View link next to each. Read more detailed instructions.

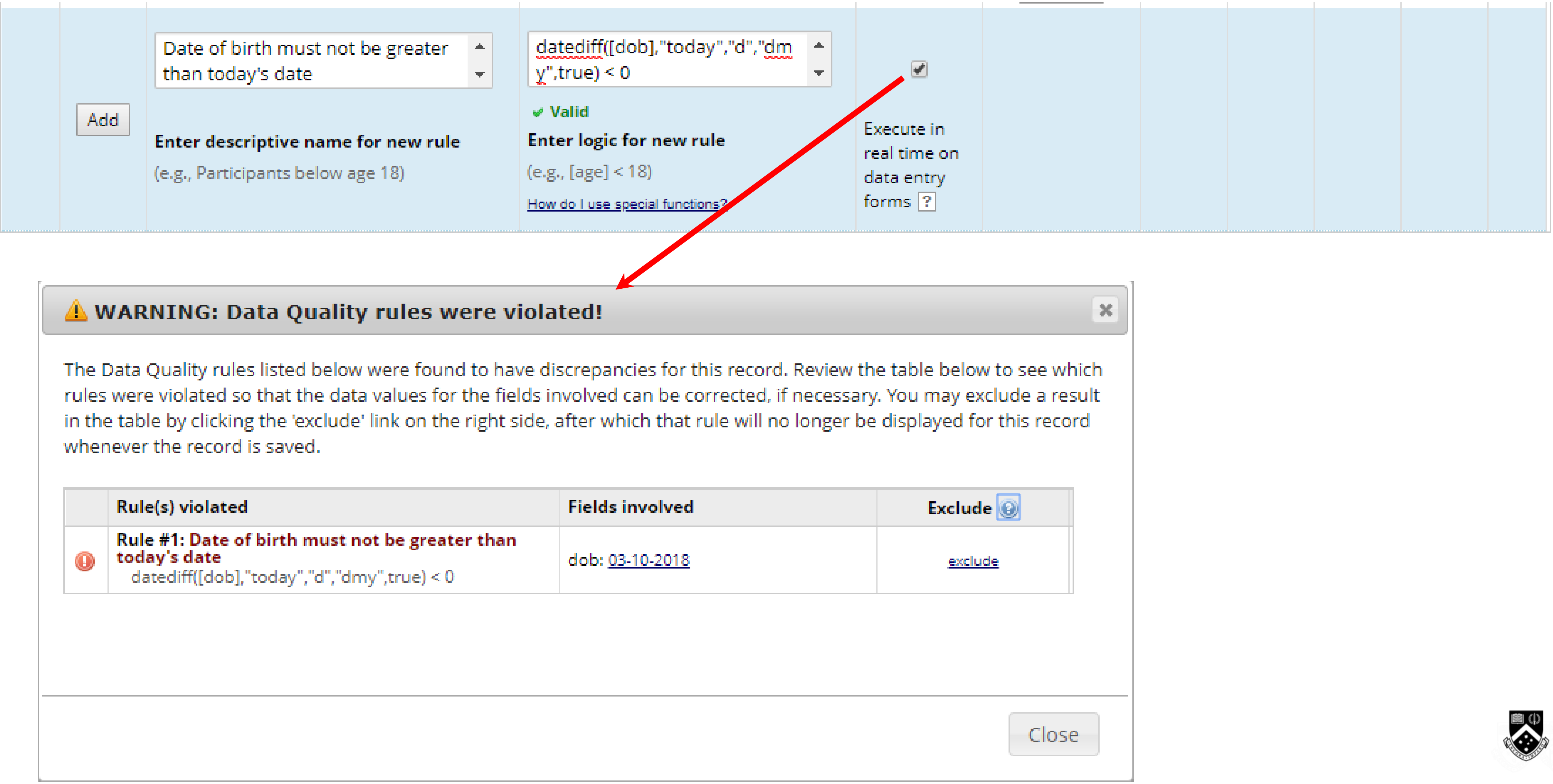
Data Quality Rules

Execute rules: All | All except A&B | Clear

Apply to: -- All records --

Rule #	Rule Name	Rule Logic (Show discrepancy only if...)	Real-time execution ?	Total Discrepancies	Alfred Hospital	Cabrini Hospital	Roya Melbo ne Hospi
A	Missing values*	-		Execute			
B	Missing values* (required fields only)	-		Execute			
C	Field validation errors (incorrect data type)	-		Execute			
D	Field validation errors (out of range)	-		Execute			
E	Outliers for numerical fields (numbers, integers, sliders, calc fields)**	-		Execute			
F	Hidden fields that contain values***	-		Execute			
G	Multiple choice fields with invalid values	-		Execute			
H	Incorrect values for calculated fields	-		Execute			
Add			Execute in				

Data Quality



Breakout Room

6 mins

Data Quality

Feedback

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Help and Resources

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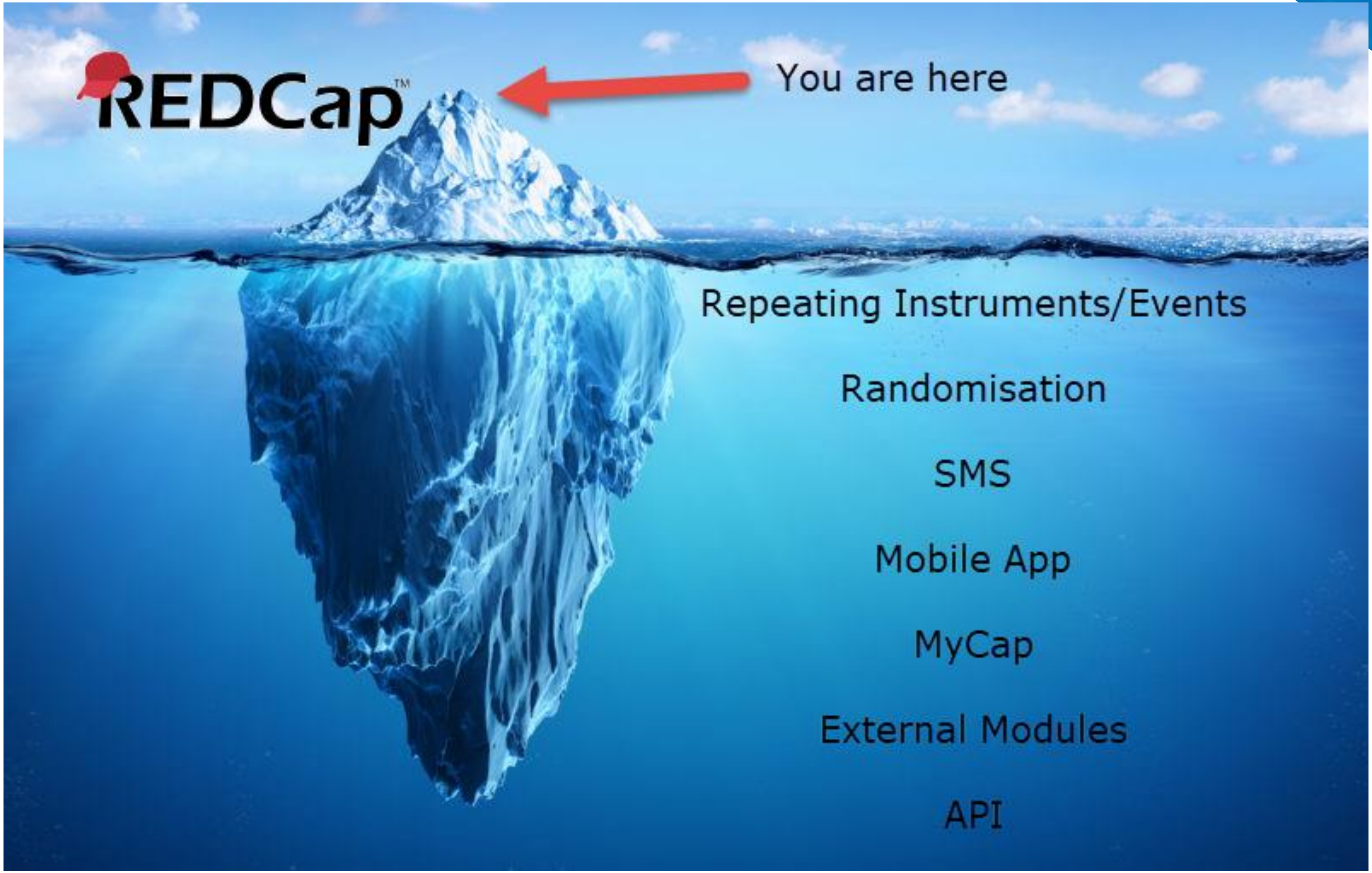

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REDCap®

https://redcap.helix.monash.edu/index.php?action=training

Log In

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Please log in with your user name and password. If you are having trouble logging in, please contact Helix.

Username:

Password:

Log In

Forgot your password?

REDCap Training Videos

Just Getting Started?

Explore these overviews of fundamental concepts and features.

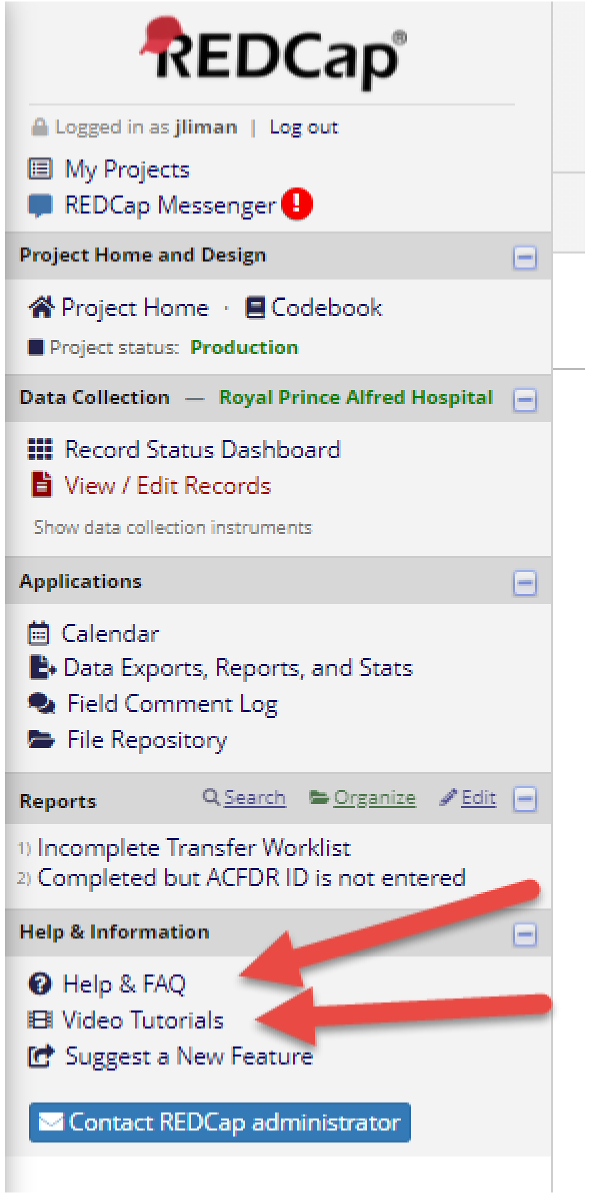
Title	Description	Watch Video
Brief Overview	A quick summary of what REDCap is and what it can do.	4 minutes
Detailed Overview	This video provides an overview of basic functions and features within a REDCap project. It will serve as a starting point for learning about the basic concepts of REDCap, what REDCap projects are, how to create them, and how to use them.	14 minutes
Data Entry Overview	A focused exploration of basic data entry workflow. Suitable for training data entry staff.	19 minutes

Building a Project

Learn how to build and modify data collection instruments.

Title	Description	Watch Video
Introduction to	An introduction to the Online Designer and Data Dictionary methods of instrument	

Help Resources



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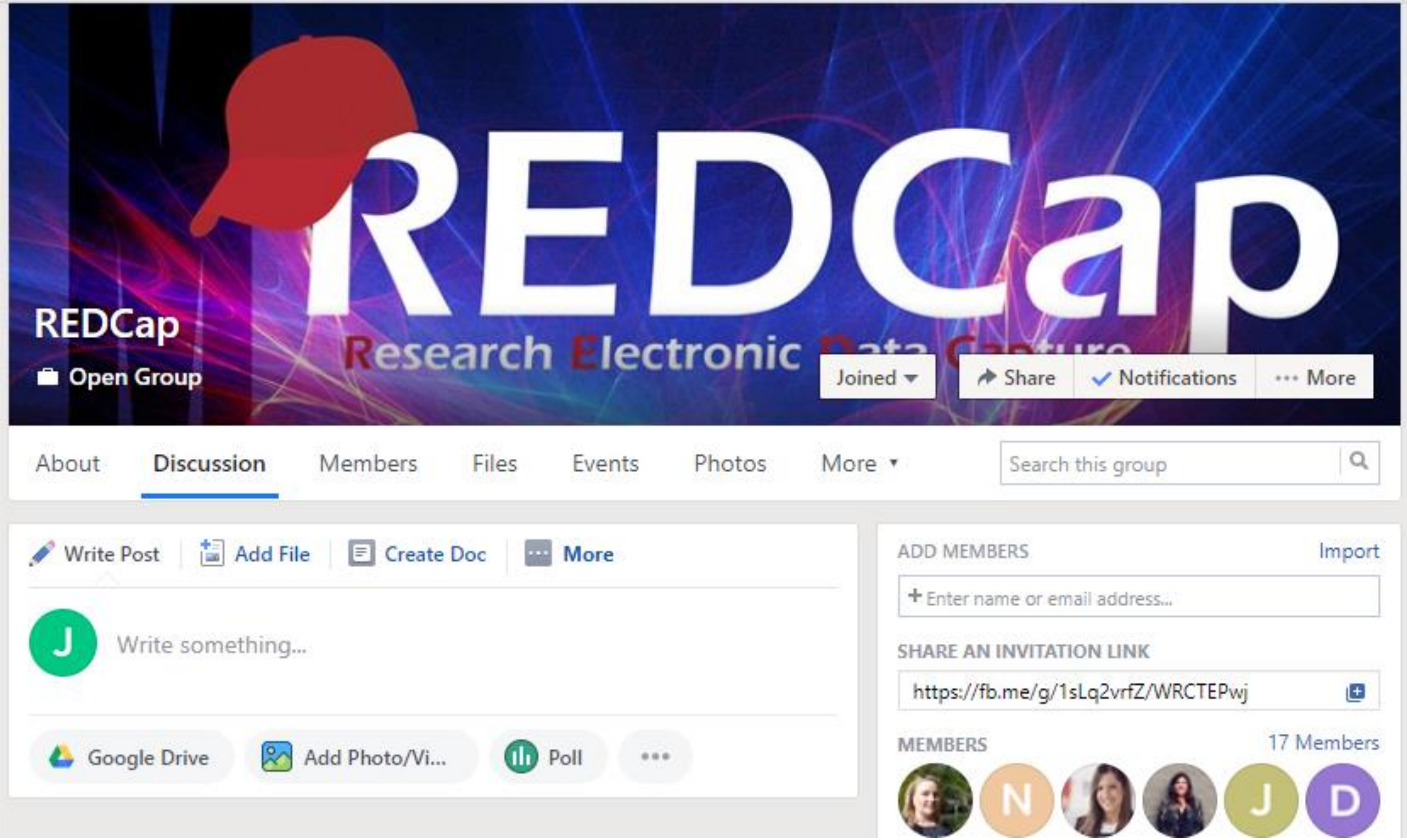

REDCap Group Workplace

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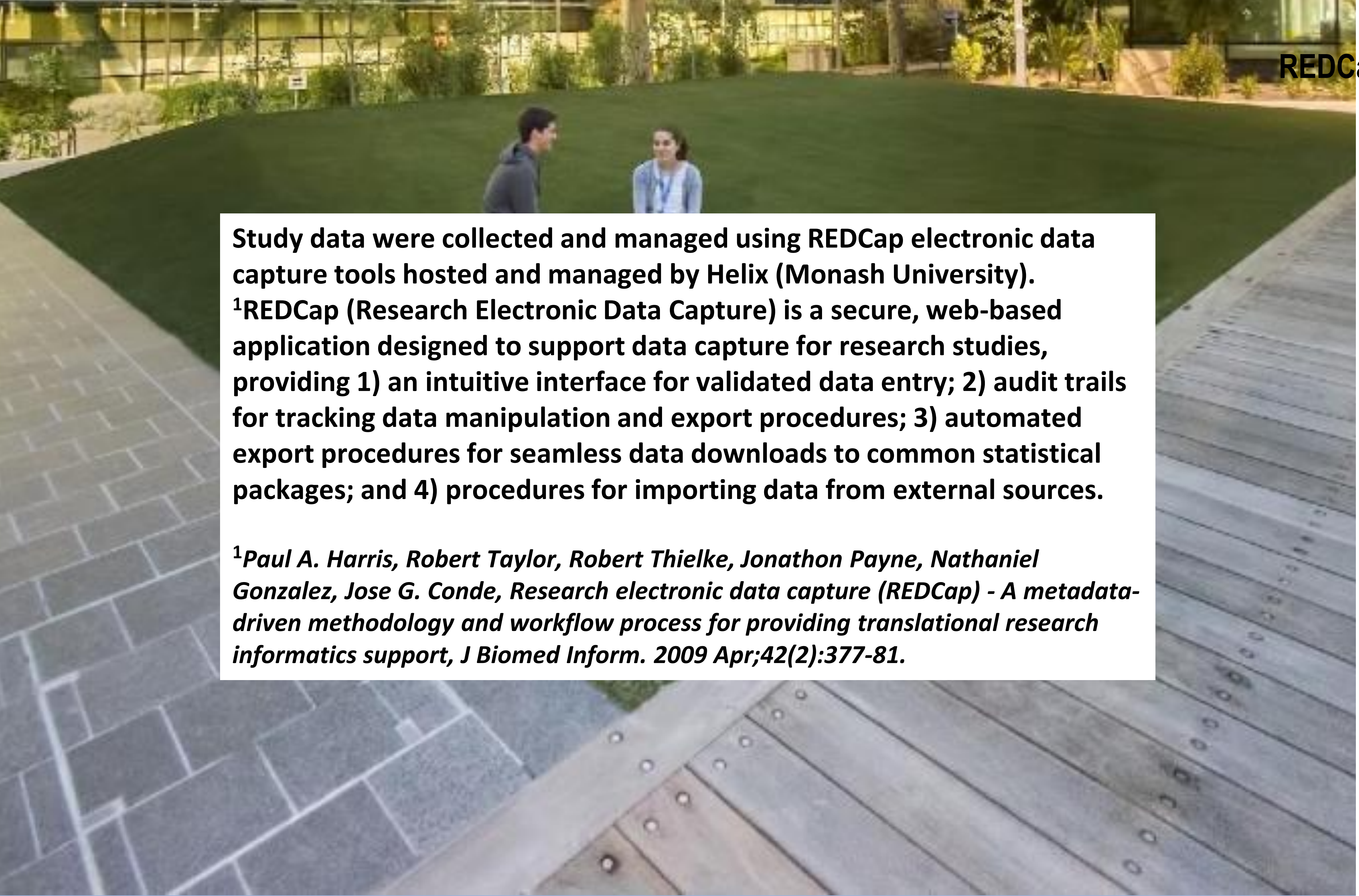
REDCap Citation



Study data were collected and managed using REDCap electronic data capture tools hosted and managed by Helix (Monash University). [1]REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies, providing 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for importing data from external sources.

[1]***Paul A. Harris, Robert Taylor, Robert Thielke, Jonathon Payne, Nathaniel Gonzalez, Jose G. Conde, Research electronic data capture (REDCap) - A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009 Apr;42(2):377-81.***

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Final thoughts ...

Become a REDCap Mentor!

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REDCap is widely used in Australia

REDCap
Research Electronic Data Capture

Institutions	Countries	Projects	Users	Articles
5503	143	1.3M	1.9M	16.3k

Search by any of the following:

- Continent
- Country/territory (two-letter abbreviation or whole word in country name)
- Institution

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