Repeat Recipes and Tips

> See also
>
> Repeating questions describes repeat basics.

Referencing repeated questions from inside the repeat

Within a repeat, you can reference other questions **in that same repeat instance** in the usual manner.

XLSForm

survey

type	name	label
note	child_questions_note	Please provide the following details about each child in your household.
begin_repeat	child_details	Children in household
text	child_first_name	Name
text	child_age	Age of ${child_first_name}
end_repeat		

To reference a question from a different repeat instance, or from outside the repeat, use `indexed-repeat()` and `position()`.

Referencing repeated questions from outside the repeat

A question in a repeat can be referenced from outside the repeat with `indexed-repeat(${question-name}, ${repeat-name}, index)`.

Counting repeats and answers

Counting the total number of repeat instances

Use *count(${name-of-repeat})* to get the number of repeat instances.

Counting the number of times a particular answer was given

To count the number of times a specific response is given, add a calculate field inside the repeat which evaluates to `1` or `0` depending on the answer. Then, outside the repeat, calculate the `sum()` of the calculate field.

XLSForm

survey

type	name	label	calculation
begin_repeat	guest_details	Guest details	
text	guest_name	Guest name	
select_one meal_options	meal_preference	Meal preference	
calculate	chkn		if(${meal_preference} = 'chicken', 1, 0)
calculate	fsh		if(${meal_preference} = 'fish', 1, 0)
calculate	veg		if(${meal_preference} = 'vegetarian', 1, 0)
end_repeat			
calculate	chkn_count		sum(${chkn})
calculate	fsh_count		sum(${fsh})
calculate	veg_count		sum(${veg})

choices

list_name	name	label
meal_options	chicken	Chicken
meal_options	fish	Fish
meal_options	vegetarian	Vegetarian

Using additional repeats to follow up on repeated questions

Sometimes it is convenient to gather an initial set of responses, and then ask more detailed question after you have collected the whole set.

For example:

> - collecting the names of all the people in a household, and then asking questions about each person
> - collecting the names of each type of crop being grown, and then asking questions about each crop

This can be done by using *count()* and *position(..)*. *count()* is used to guarantee that the second repeat has the same number of instances as the original repeat. *position(..)* provides the index of the repeat instance it was called from. This is used to refer to questions from the first repeat in the follow-up repeat.

XLSForm

type	name	label	repeat_count	calculation
note	person_list_note	Please list the names of the people in your household.		
begin_repeat	person	Member of household		
text	name	Name		
end_repeat				
begin_repeat	person_details	Details	count(${person})	
calculate	current_name			indexed-repeat(${name}, ${person}, position(..))
date	member_bday	Birthday of ${current_name}		
end_repeat				

Setting a max limit on repetitions

If you want the user to decide how many times to repeat, but you also want to limit the maximum number of repetitions, you have a few options.

Using a constraint to limit repetitions

If the user knows how many repetitions they will complete, you can ask them this in a question before the repeat group and set a constraint on that question.

XLSForm

survey

type	name	label	constraint	repeat_count
integer	number_in_party	How many guests are in your party?	. <= 8	
note	party_names_note	Please provide details for each guest.		
begin_repeat	guest_details	Guest details		${number_in_party}
text	guest_name	Guest's name		
text	guest_dietary	Does this guest have any dietary restrictions?		
end_repeat				

> Note
>
> If the count is decreased by a user, no groups will be deleted. This avoids accidental data loss: a user who accidentally sets the count too low can set it to a higher number and still have the repetitions that were previously created.

A recommended way to handle this case is using relevance to hide any extra values:

survey

type	name	label	constraint	repeat_count	relevant
integer	number_in_party	How many guests are in your party?	. <= 8		
note	party_names_note	Please provide details for each guest.			
begin_repeat	guest_details	Guest details		${number_in_party}	
begin_group	guest_details_gr				position(..) <= ${number_in_party}
text	guest_name	Guest's name			
text	guest_dietary	Does this guest have any dietary restrictions?			
end_group					
end_repeat					

Using relevants to limit repetitions

If asking the user ahead of time doesn't make sense, another strategy is to manually repeat the question in the form and use the `relevant` column to skip repetitions if the previous question is left blank. This sets a maximum number of responses: the number of times you included the question in the form.

To check if the previous question has a response, reference the question in the `relevant` column.

XLSForm

survey

type	name	label	relevant
note	images_note	Take up to five pictures.	
image	image_1	Image 1	
image	image_2	Image 2	${image_1}
image	image_3	Image 3	${image_2}
image	image_4	Image 4	${image_3}
image	image_5	Image 5	${image_4}

This pattern can be combined with required responses to enforce a minimum number of responses.

XLSForm

survey

type	name	label	required	relevant
note	images_note	Take 3-5 pictures.		
image	image_1	Image 1	yes	
image	image_2	Image 2	yes	
image	image_3	Image 3	yes	
image	image_4	Image 4		${image_3}
image	image_5	Image 5		${image_4}