Show Random Pages or Questions, Basic Solution

Scripting Solutions

Additional scripting solutions will be added in the future. Please reach out to Alchemer with comments and suggestions on solutions you'd like to see via the link here.

Goal

Show a limited number of random pages (or questions).

See also: Show Random Pages or Questions

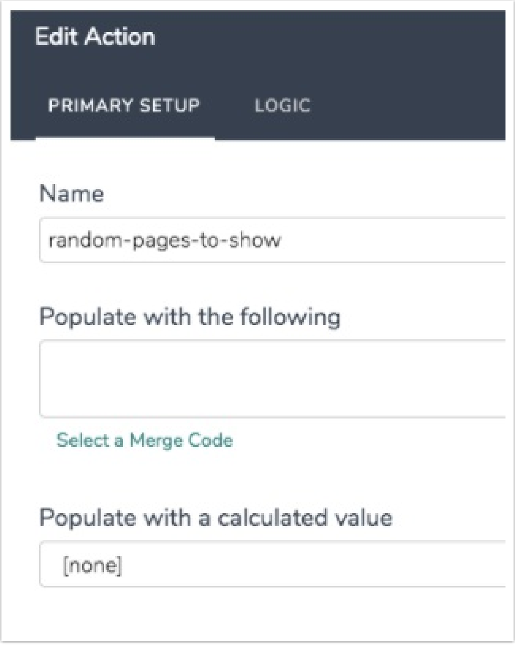
Effort: ✓ ✓ ✓

Solution

This solution fills a Hidden Value Action with a list of random values users define. Later pages or questions use this list to determine if they should be shown or hidden based on whether it contains a specific value or not.

Step 1: Add a Hidden Value Action

Add a Hidden Value Action with a title such as random-pages-to-show. Leave the Populate with fields empty.



Edit Action

PRIMARY SETUP LOGIC

Name: random-pages-to-show

Populate with the following:

Select a Merge Code

Populate with a calculated value: [none]

Step 2: Add a Javascript Action

(1) Add a Javascript Action to the same page below the Hidden Value Action.

(2) Copy and paste the code at the end of this article into the Javascript Action.

(3) Set the highlighted values in the script.

(a) Create your own values in the highlighted VALUES section. For example: you can change "Concept A" to "Nike". The script will randomly save one or more of these **Values** to the Hidden Value Action added in Step 1.

```
// The values to choose from
const VALUES = [
 "Concept A",
 "Concept B",
 "Concept C",
 "Concept D",
]
```

(b) Set the number of random pages (or questions) you would like to show. In this example it is set to show 2:

```
NUMBER_TO_SHOW = 2
```

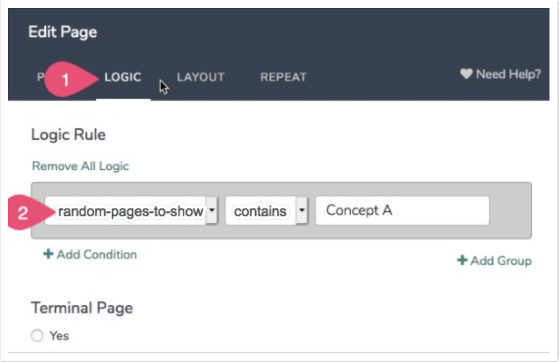
(c) Locate the ID number our system generated for your Hidden Value Action and enter it where the number 18 is:

```
SAVE_VALUES_TO_QID = 18
```

Step 3: Add random pages (or questions)

Add the pages (or questions) to be randomly shown.

Set the Display Logic for each to only show if the random-pages-to-show **Hidden Value Action** added in Step 1 *contains* one of the VALUES you added in Step 2. The text must match exactly, including case. For example the follow up page below will only be displayed if the Hidden Value Action from Step 1 contains Concept A.



Logic Rule

random-pages-to-show contains Concept A

Terminal Page

○ Yes

Javascript code:

```
/* Alchemer v01

  Setup for Page, Page Group, or Question Randomization
*/

document.addEventListener("DOMContentLoaded", function() {

 // The values to choose from
 const VALUES = [
  "Concept A",
  "Concept B",
  "Concept C",
  "Concept D",
 ]

 // how many random values to choose
 const NUMBER_TO_SHOW = 2

 // The Hidden Value Action question ID to save the randomly chosen values which
 //   in list separated by vertical bars
 const SAVE_VALUES_TO_QID = 18

 // * * * * * * * * * * * * * *
 // * no changes needed below *
 // * * * * * * * * * * * * * *

 const LOG = true

 /***
  * Test boolean value, alert() and throw Error if it's false
  *
  * bool {t/f} value to test
  * msg {string} message to alert and throw in new Error
  */
 const assert = (bool, msg) => {
  if (!bool) {
   console.error(msg)
   alert(msg)
   throw new Error(msg)
   }
 }

 /***
  * Get an element based on its Question ID
  *
  * qid {integer/string} question ID
 * section = "element" {string} the final section of the element id
 * return {element} looks for id's in the form: "sgE-1234567-12-123-element"
 */
const getElemByQid = (qid, section = "element") => {
  const id = "sgE-" + SGAPI.survey.surveyObject.id + "-" + SGAPI.survey.pageId + "-" + qid + "-" + section
  const elem = document.getElementById(id)
  assert(elem, "Javascript: can't find element with id = " + id + ", section = " + section)
  return elem
}

/***
 * Check if random values have already been saved when page was previously shown
 *
 * return {t/f}
 */
const haveValuesBeenSaved = () => {
  savedValues = getElemByQid(SAVE_VALUES_TO_QID).value
  return savedValues && savedValues !== 'not-set'
}

/**
 * Shuffle / randomize an array in place
 *
 * array {array} - array is mutated
 * return {array} - shuffled array
 */
function shuffle(array) {

  // Knuth shuffle (https://stackoverflow.com/questions/2450954/how-to-randomize-shuffle-a-javascript-array)

  var currentIndex = array.length, temporaryValue, randomIndex;

  // While there remain elements to shuffle...
  while (0 !== currentIndex) {

    // Pick a remaining element...
    randomIndex = Math.floor(Math.random() * currentIndex);
    currentIndex -= 1;

    // And swap it with the current element.
    temporaryValue = array[currentIndex];
    array[currentIndex] = array[randomIndex];
    array[randomIndex] = temporaryValue;
  }

  return array;
}

/***
 * Get random values
 *
 * values {array of string} the values to select from
 * numberToShow {int} how many values to randomly choose
 * return {array of string} array of the randomly chosen values
 */
const getRandomValues = (values, numberToShow) => {
  values = shuffle(values)
  const retVal = []
  for (let i = 0; i < numberToShow && i < values.length; i++)
    retVal.push(values[i])
  return retVal
}

/***
 * Save randomized values
```

```
   *
   * qid {int} question id
   * values {array of string} the values to save
   */
  const saveValues = (qid, values) => {
    getElemByQid(qid).value =
      values.sort((a, b) =>
        a.localeCompare(b))
        .join('|')
    if (LOG) console.log("saving values to show = ", getElemByQid(qid).value)
  }

  /**
   * main()
   */

  if (!haveValuesBeenSaved()) {
    const values = getRandomValues(VALUES, NUMBER_TO_SHOW)
    saveValues(SAVE_VALUES_TO_QID, values)
  } else {
    if (LOG) console.log("random values already saved = ", getElemByQid(SAVE_VALUES_TO_QID).value)
  }
})
```

Related Articles