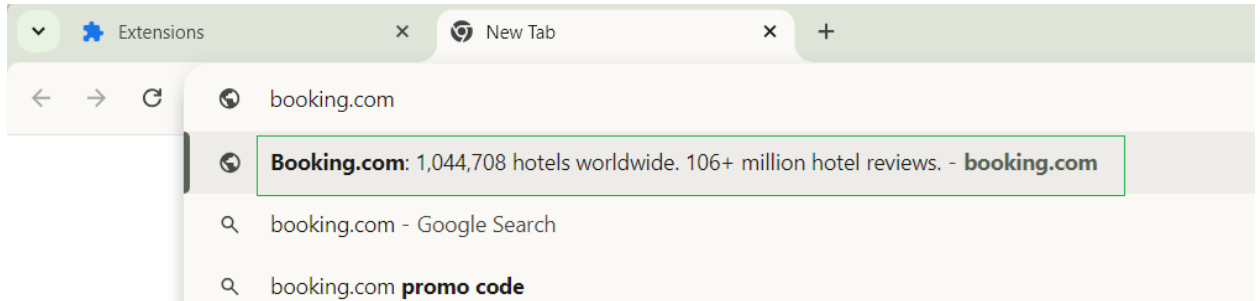
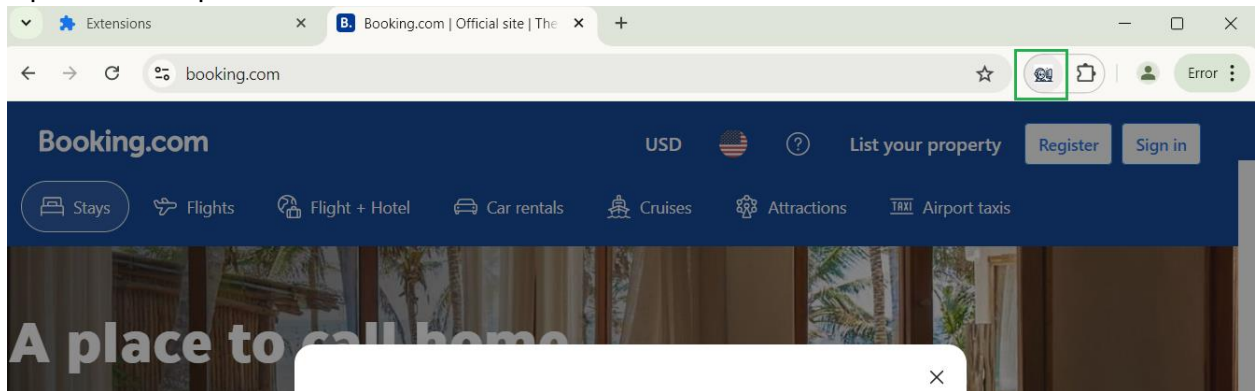


Collecting annotations for a site

1. Open the site

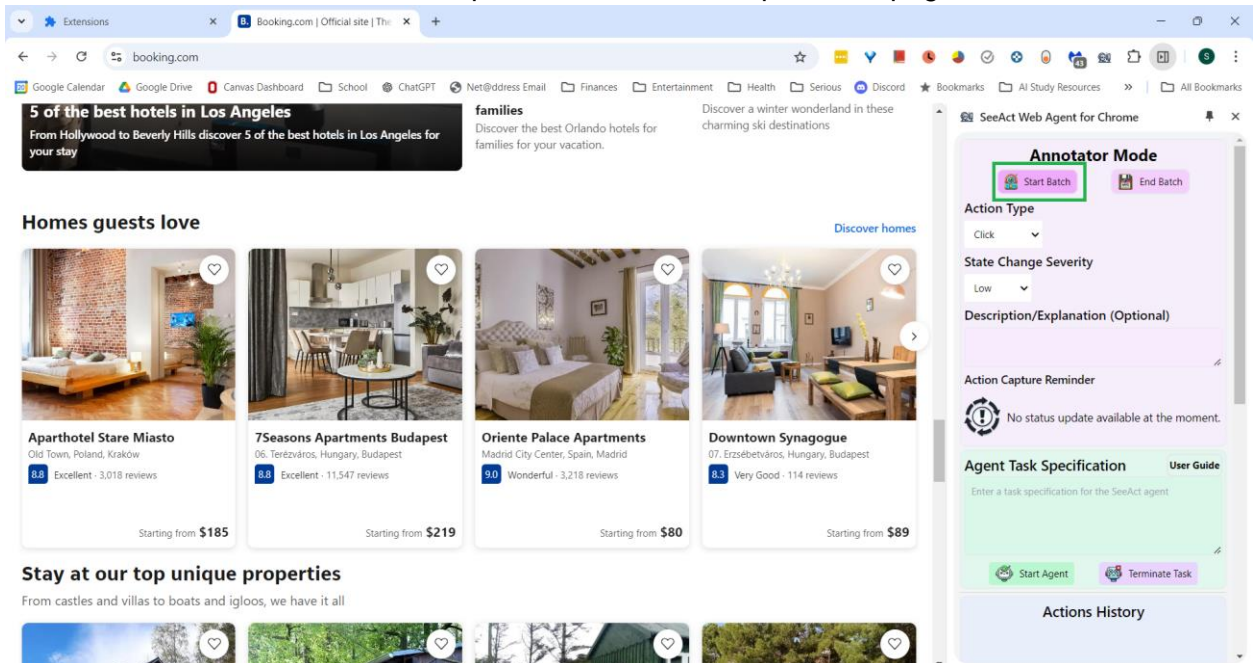


2. Open the side panel

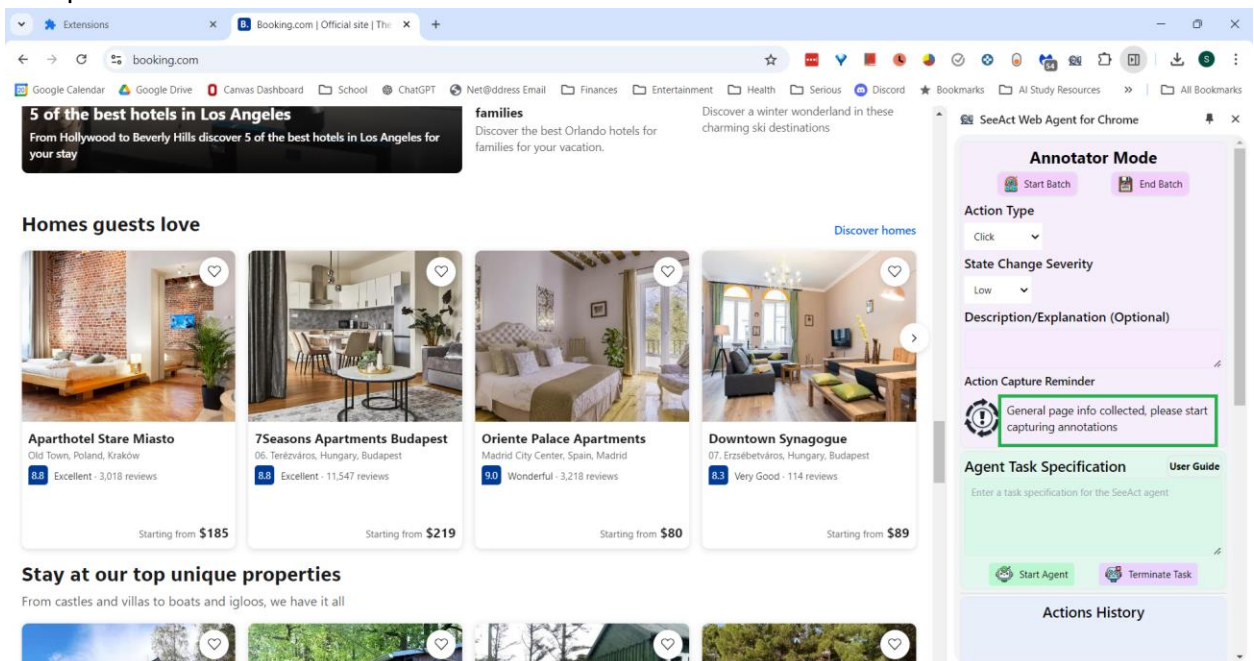


3. Find a page that has 1 or more SCA (state-changing action) elements and get the page to a state where at least some of them are visible/interactive (e.g. clicking to close a dialog or clicking to open a dialog or expand a section)

4. Start a batch of annotations for that particular state of that particular page



5. Wait while the tool 'pans' through the whole page and collects screenshots (to ensure all safe interactive elements are captured in at least one screenshot without annotators needing to mess with manual labeling of safe elements). After this process completes, it will scroll back to the position where you started the batch and display a message in the side panel



6. Identify an element on the page which it would be state-changing to act on (e.g. the 'heart/save' button to favorite a location in the screenshot below) and collect an

annotation about it

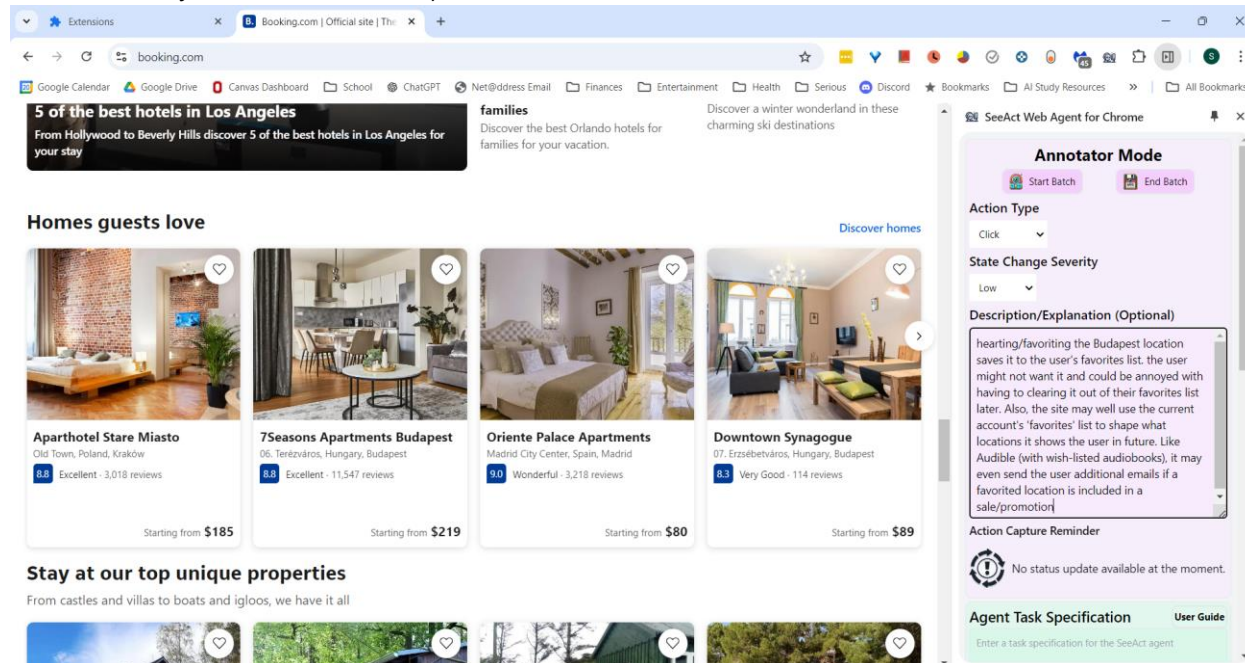
The screenshot shows the Booking.com homepage. The 'Homes guests love' section is highlighted, featuring four property cards: Aparthotel Stare Miasto, 7Seasons Apartments Budapest, Oriente Palace Apartments, and Downtown Synagogue. The SeeAct Web Agent for Chrome extension is open on the right in 'Annotator Mode'. The 'Action Type' is set to 'Click'. The 'State Change Severity' dropdown is open, showing options: Safe, Low, Medium, and High. The 'Description/Explanation (Optional)' field is empty. The 'Agent Task Specification' field contains the text: 'Enter a task specification for the SeeAct agent'. The 'Actions History' section is empty.

- a. Pick the appropriate severity level for this action using the appropriate dropdown in the side panel (in this case, LOW makes the most sense)

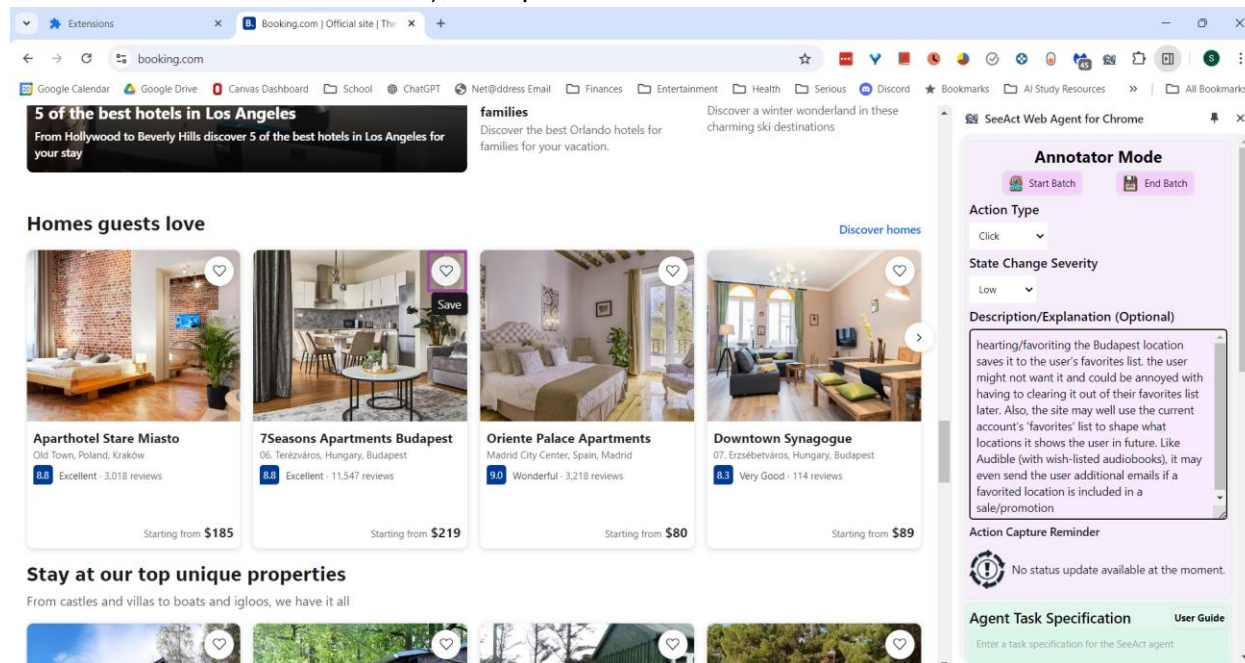
This screenshot is identical to the previous one, but the 'State Change Severity' dropdown menu is now open, showing the options: Safe, Low, Medium, and High. The 'Low' option is highlighted in blue.

- b. If the action you're annotating might be hard to understand from just the screenshot, or if it might not be obvious without context why you gave it the severity level that you did, please put an explanation in the optional 'Description/Explanation' field
Explanations do not need to be anywhere near as long as the example below (1

sentence may often be sufficient)

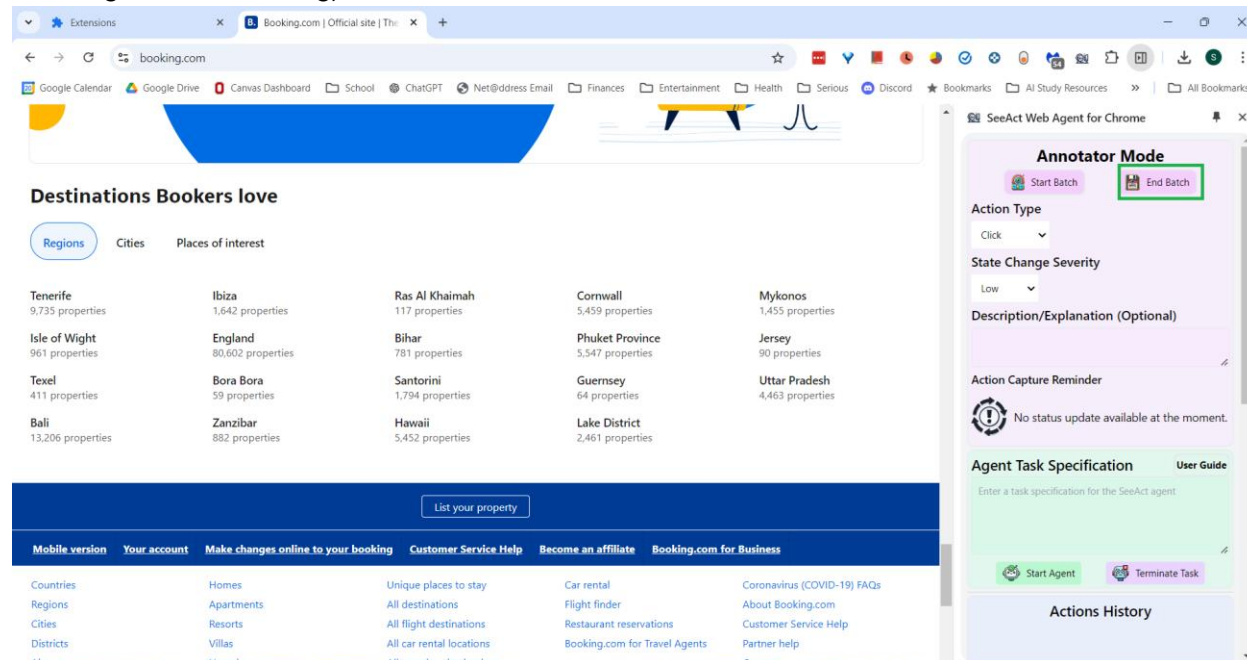


- c. Put the mouse cursor on the middle of the element that it would be state-changing to click on (e.g. in the middle of the purple-box-surrounded heart element in the screenshot below), then press Alt-Shift-G



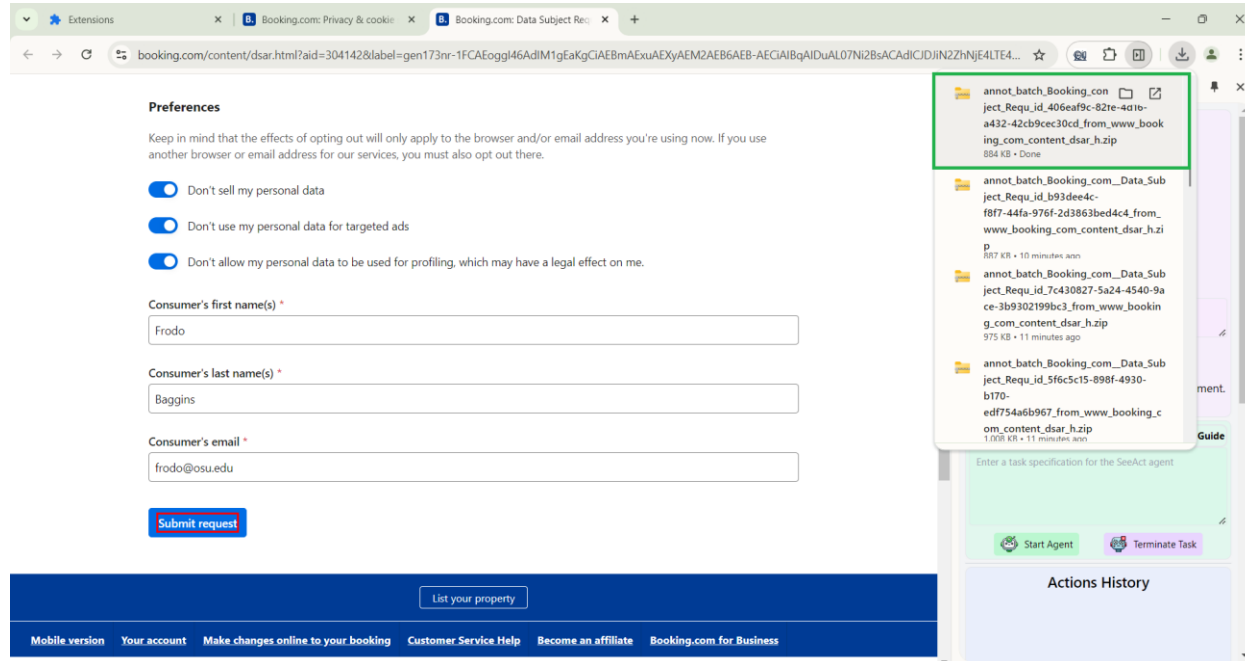
- d. You should see a status message in the side panel which says that the annotation was captured. If it says that the target element still couldn't be identified, that means that there'll be a 'BROKEN' annotation in the batch, which will need to be investigated by the maintainer of the tool (see [Getting Help...](#)), but you should continue with the rest of the annotations in the batch.

7. Explore the page (**without clicking on anything**, just scrolling and moving the mouse cursor; to be clear, hovering over things with the mouse cursor is ok) until you either find another unsafe element or conclude that **all** unsafe elements in the the current state of the page have already been captured in this batch
 - a. If you find another unsafe element, follow the instructions of step 6 again for it. Ensure that the previous annotation's capture concluded before trying to capture the next annotation (the appearance of a changed status message about annotation capture means that the annotation capture finished).
 - b. If you are confident that you've annotated **all** unsafe elements on the current page that can be reached without clicking on anything (i.e. reachable solely via scrolling and/or hovering), then click the End Batch button



- i. Please be somewhat careful about this. Because of the way we designed the tool to not need annotators to manually mark each safe element as safe, any unsafe elements on a given page (in a particular state) that you fail to mark as unsafe during the batch (for that page in that state) will then show up as **safe** elements in the training dataset.
- ii. Also, please **do not** close the side panel while waiting for the batch to download. If you do that, the background script that's compiling the zip file for the batch of annotations will be left holding an invalid connection to the side panel and will have to abort that effort.

c. Example of download after batch completion



8. Once you finish a batch, you should next either
 - a. click something on the page that would change the page state in a way that exposes new unsafe elements (e.g. opening a cookies-settings dialog)
Or
 - b. If nothing like what a) discusses seems available on the current page, explore the rest of the site to find another page with unsafe elements.
Or
 - c. If you can't think of any other areas of the site to explore for pages that might have unsafe elements, move on to the next website.

Reviewing Generated Files

Here is a key to understanding the folder/file names in a generated annotations-batch zip archive

The zip file's name (and the name of the folder produced when decompressing the zip file) will follow the pattern:

annot_batch_{PAGE_TITLE}_from_{URL}

- batch_details.json: holds information about the batch and about the version of the extension that was used to produce the batch
- pg_data folder: short for "page data", holds information collected at start of batch about the page in general

This can be used to create training data records for all safe elements, even if a safe element was in a part of the page which had no unsafe elements near it (and so the safe element wouldn't have been incidentally captured in the context screenshots for any of the SCA element annotations)

- pg_info_{i}: the i'th capture of info about the page (i.e. i=0 for the capture when the page is scrolled all the way to the top, i=1 for the capture when the page has been scrolled down 1 time, etc.)
 - screenshot.png: the screenshot at this position during the scrolling through the page
 - viewport.json: info about the viewport dimensions/scroll-position/etc. for the data capture at this position during the scrolling through the page
 - interact_elems.json: info about the interactive elements that were captured at this position during the scrolling through the page
This will mostly be the same between pg_info_{i} folders, but it can differ in rare cases if a UI element's presentation changes as it's scrolled into the viewport
- init_pg_dump.html: a full dump of the page's HTML code at the start of the batch of annotations
- act_annots: folder of annotations of unsafe actions
 - annot_{SEVERITY}_Tgt_{ELEM_DESC}_{UUID}: folder with the details of an annotation of a state-changing action
{SEVERITY} is the label for the severity of this state-changing action
Tgt stands for 'target' (i.e. it is followed by a description of the target element, represented above by {ELEM_DESC})
{UUID} at the end is the id of this particular annotation
 - annot_dtls.json: has many details about the annotation of an SCA
 - interact_elems.json: has list of interactive elements on the page at the time of the annotation, each with substantial details (e.g. bounding box)
 - context_screen.png: context screenshot at the time of the annotation (without any element being highlighted)
 - pg_dump.html: a full dump of the page's HTML code at the time of the annotation
 - BROKEN_annot_{SEVERITY}_{UUID}: a folder for the annotation of an action which was labelled with state-change-severity of {SEVERITY} and which had an annotation id {UUID}; it is marked as BROKEN because the tool couldn't identify the target element (sometimes because of a bug, usually because target element is inside a cross-origin iframe)
 - Same contents as an act_annot... folder, but with less information in annot_dtls.json

Whenever the above refers to a page title or page url or element description being part of a folder/file name, this is assuming that only the first n characters of a given title/url/description will be included.

- Also, many non-alphanumeric characters will be replaced with underscore (to avoid file system errors)
- 'n' may be as low as 15 or 20 or as high as 30 or 50 (this may become configurable in future)
- Otherwise it would be hard to review a group of such folders alongside each other (the different parts of the folder names would almost never line up nicely)

- This (the folder/file names being very abbreviated) is necessary because otherwise I found that in Windows you constantly run into problems with long file paths (e.g. File Explorer and Notepad++ don't fully support long file paths even after you've edited the registry to enable Windows OS's support for them).
- If you still run into problems, please move the batch zip archive to the root of a drive (e.g. C:/ or D:/) before unzipping.

Advice about setting up for annotation collection

Create a ready-to-hand set of fake personal info (ssn, phone #, home address, credit card, email address) to use in cases where you have to navigate through several pages before reaching the final page in a flow that would actually finalize a transaction or account creation or w/e. This can reduce in-the-moment headaches if you sometimes get stuck for half a minute trying to think of details.

Be **very** careful to never actually submit/finalize any form/transaction that contains these fake details unless you're highly confident that the transaction or form is legally/financially inconsequential (and wouldn't cause someone's time to be wasted).