Plio Report

This document aims to explain how you can use the downloaded report. Before we talk about the `.csv` files that are present in this report, we first need to understand how the data for each plio is stored.

Plio Data Organization

First, we'll clarify the meaning of a few terms that appear in this document.

`plio`: an interactive video - in this case, the one for which you have downloaded the report.

`item`: every interaction that you have added is considered an `item`. Each `item` has a `type` associated with it. Currently, the only `type` that we support for `item`s is `question`. Each `question` can further have its own type (`mcq`, `subjective`, etc.).

`session`: every time a user opens a plio, a new session is created. The same user can have multiple sessions for each plio. This is necessary because users can have interruptions due to intermittent network and might have to come back to the plio several times. For each new session, we resume the user from where they left off in the last session. Hence, if a user has already answered a question, it will be shown as answered in their next session for the same plio.

`session_answer`: one `session_answer` refers to the response that a user has given to one of the interactions in a particular session. The interaction that a `session_answer` belongs to can be found using the `item_id` attribute of each `session_answer`. If a `session_answer` is empty, it means that the user has not given any response. By default, a `session_answer` is created for all the interactions (`items`) that you have added to the plio. So, for example, if your plio has 3 multiple-choice questions and 2 subjective questions, 5 `session_answer`s are created by default for every session. As the user answers these questions, the `session_answer`s get updated.

`event`: we save various events that take place while a user is watching a plio. For example, playing a video, pausing a video, skipping a video, answering a question etc. There is a time associated with each event and for each user, the events should be present in a sequential manner in time so that you can get a complete picture of how each user is interacting with your video. For the full list of event types and their meanings, refer to [Events](#).

Folder Organization

This section will clarify what each of the `.csv` files in the folder contains:

- `plio-meta-details.csv`: this file contains the meta information for the plio. The meaning of each column is given below:
    - `id`: the unique identifier for the plio
    - `name`: the name of the plio as set by you
    - `video`: the link of the YouTube video used to create the plio

    Example:

id	name	video
ash1lasnan	Introduction to Circles	https://www.youtube.com/watch?v=m9dpeG2rKdY

- `plio-interaction-details.csv` : contains the details of each interaction (referred to as `item` as explained above) added to the plio. The columns represent the following:

  - `item_id` : the unique identifier for the interaction item
  - `item_type` : the type of the interaction (e.g. `question`)
  - `item_time` : the time in the video when the interaction would appear

  If the `item_type` is `question` , the following columns are also present:

  - `question_type` : the type of question (e.g. `mcq`)

  - `question_text` : the text of the question itself

  - `question_options` : the options for the question

  - `question_correct_answer` : the correct answer for the given question. For `question_type = mcq` , this represents the index of the correct answer among the `question_options` . In this case, `question_correct_answer = 1` indicates that the first option has been marked as the correct answer.

    For `question_type = checkbox` , it contains a list of indices corresponding to the options which are correct. In this case, `question_correct_answer = [2,3]` indicates that the second and third options have been marked as the correct answers.

  Example:

item_id	item_type	item_time	question_type	question_text	question_options	question_correct_answer
2783	question	10	Subjective	What is the difference between hips and glutes?		
2788	question	20	Mcc	NaOH + HCl → ?	["A) NaOHHCl ", "B) Na + OH + H + Cl ", "C) NaCl + H20 ", "D) NaOH2Cl"]	3

- `responses.csv` : contains the responses to each interaction by every user in every session. The columns represent the following:

  - `session_id` : the unique identifier for the session

  - `user_identifier` : the unique identifier for the user associated with this session. To preserve user privacy, this field would not contain any Personally Identifiable Information (PII) and would instead be a hashed value. However, the same user will have the same hashed value across different plios. So, you can still safely identify user trends across plios without harming user privacy.

  - `answer` : the user's actual answer to the interaction. For `question_type = mcq` , it represents the index of the option selected by the user. In this case, `answer = 1` indicates that the first option has been submitted as the answer.

    For `question_type = checkbox` , it contains a list of indices corresponding to the options selected by the user. In this case, `answer = [2, 3]` indicates that the second and third options have been submitted as the answers.

- ◦ `question_type` : the type of question (e.g. `mcq`)
- ◦ `item_id` : the unique identifier of the interaction that this answer belongs to. You can compare this value with the `id` column in `plio-interaction-details.csv` to identify which item did this answer belong to.

Example:

session_id	user_identifier	answer	item_id	question_type
902	a532400ed62e772b9dc0b86f46e583ff	1	2781	mcq
902	a532400ed62e772b9dc0b86f46e583ff	abcd	2782	subjective
1131	fae0b27c451c728867a567e8c1bb4e53	[2, 3]	2781	Checkbox

- ● `sessions.csv` : contains the details of each session of every user. The columns represent the following:

  - ◦ `session_id` : the unique identifier for the session
  - ◦ `user_identifier` : the unique identifier for the user associated with this session
  - ◦ `watch_time` : the amount of time the user has watched the video (in seconds) - the most recent session of any user includes the total time across all previous sessions by that user.
  - ◦ `retention` : the retention array over the video for the given user. The length of the array is the number of seconds of the video and each value represents how many times the user has visited that particular second of the video while watching the plio.

    For example, if your video is 4 minutes long, each row of this column will have 240 values (one for each second). If a user did not reach the end of the video, the values towards the end would be 0. If a user has rewatched the first 10 seconds 5 times, the first 10 values would be 5. Ignore this field if it contains something like `NaN, NaN, ...` .

Example:

session_id	retention	watch_time	user_identifier
1951	1,1,1,10,1,2,...,0,0,0,0,0,1,1,1,1,0,0,0,0	50	addfa9b7e234254d26e9c7f2af1005cb

- ● `events.csv` : contains the details of each event in each session of every user. The columns represent the following:

  - ◦ `session_id` : the unique identifier for the session
  - ◦ `user_identifier` : the unique identifier for the user associated with this session
  - ◦ `event_type` : the type of the event (e.g. `played` , `paused` , etc.). The full list of event types and their meanings can be found in the [Events](#) section.
  - ◦ `event_player_time` : the current time in the video when the event was triggered (in seconds)
  - ◦ `event_details` : further details for the event based on the event type (e.g. question number for events related to questions, etc.)
    Note: The indexes present in the event details, like `itemIndex` and `optionIndex` are [0-indexed](#), i.e. `itemIndex: 1` would mean the second item and so on.
  - ◦ `event_global_time` : the global time when the event took place to help you track the order in which the events took place.

Example:

session_id	user_identifier	event_type	event_player_time	event_details
770	d64a340bcb633f536d56e51874281454	option_selected	2.5	{"itemIndex": 1, "optionIndex": 1}
770	d64a340bcb633f536d56e51874281454	video_seeked	0.08	{"currentTime": 0.08}
3844	4b0250793549726d5c1ea3906726ebfe	paused	122	{}

Events

The full list of event types and their meanings can be found below:

Event Type	Meaning of the event type
ready	The video was loaded
played	The video was played
paused	The video was paused
enter_fullscreen	User entered the fullscreen mode of the video
exit_fullscreen	User exited the fullscreen mode of the video
item_opened	One item (interaction) has popped up for the user
option_selected	The user has selected an option in a question
question_skipped	The user has skipped a question
question_answered	The user has submitted the answer to a question
question_proceed	The user has proceeded after submitting the answer to a question
question_revised	The user clicked on "revise" when the question popped up
video_seeking	The user is dragging the seek bar of the video (skipping some part of the video)
video_seeked	The user has completed dragging the seek bar of the video
watching	The user is watching the plio at the current moment