1. Introduction

The objective of this assignment is to analyse a real digital system (such as a website, application, or online platform) from the perspective of personal data protection, considering principles and rights discussed in class. The proposal aims to identify critical aspects or opportunities for improvement related to the user's interaction with this system regarding the protection of their data, using the User Privacy Communication Guidelines Catalogue (UPC Catalogue)[1] as support.

Group identification.
(Insert here the names and student IDs of the group members.)

2. Description of the system selected for analysis

The system chosen was YouTube (`https://www.youtube.com/`), Google's popular video platform, where users can watch videos, comment on watched videos, share, create channels for themselves, and upload videos, among other activities. It is available as both a web platform and a mobile application, and its privacy policy is available at `https://www.youtube.com/howyoutubeworks/our-policies/`. In addition, users can manage their profiles at `https://www.youtube.com/account`.

3. Application of the guidelines – Case 1

3.1. Guideline identification

Enable exploration of data exports – `https://upc-review.github.io/upc_html/GD24.html`

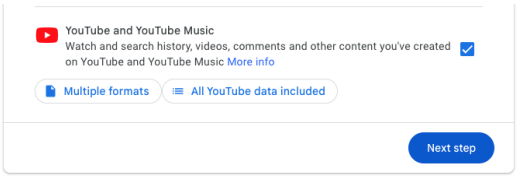
3.2. Presentation of the identified problem

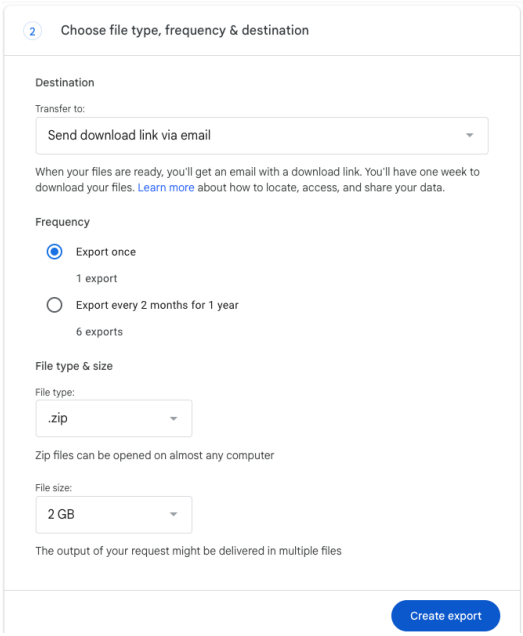
When navigating the profile management section, the system shows that the YouTube login uses the Google account, which is common across different Google services. When clicking to view or manage your Google account settings, the system redirects to `https://myaccount.google.com`, a dashboard that includes a menu offering the option "Data & privacy". By clicking this menu option, among others, it is possible to "Download or delete your data":

When clicking "Download your data", the user can select from the list of presented services to download data from YouTube and YouTube Music and proceed with the request,

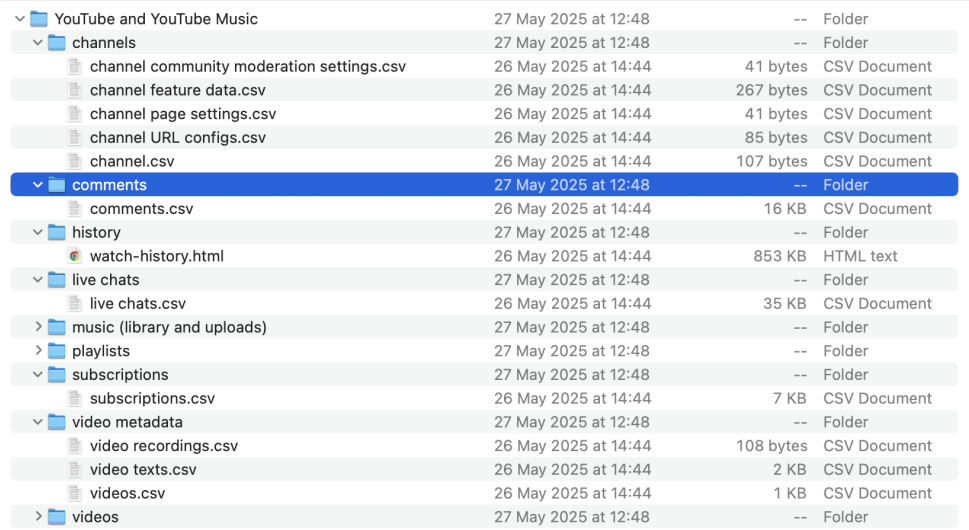
[1] `https://upc-review.github.io/upc_html/`

choosing additional options (e.g., delivery by email, one-time export, etc.) and clicking "Create export":



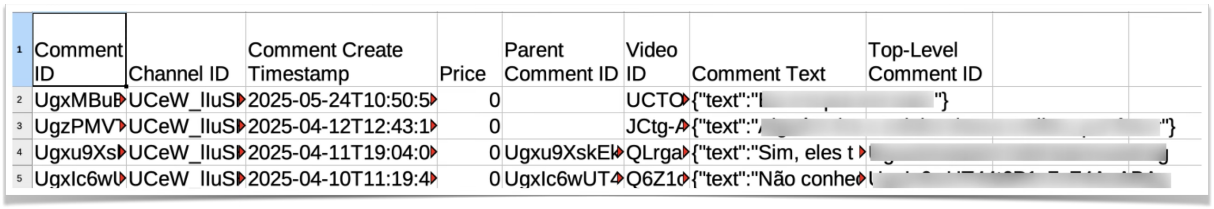


When the user receives a copy of their data, this copy is compressed, and when unpacking the archive, there is a directory structure with the characteristics shown in the screenshot. Most files are in CSV format, and the watch history is in HTML format.



YouTube and YouTube Music	27 May 2025 at 12:48	--	Folder
channels	27 May 2025 at 12:48	--	Folder
channel community moderation settings.csv	26 May 2025 at 14:44	41 bytes	CSV Document
channel feature data.csv	26 May 2025 at 14:44	267 bytes	CSV Document
channel page settings.csv	26 May 2025 at 14:44	41 bytes	CSV Document
channel URL configs.csv	26 May 2025 at 14:44	85 bytes	CSV Document
channel.csv	26 May 2025 at 14:44	107 bytes	CSV Document
comments	27 May 2025 at 12:48	--	Folder
comments.csv	26 May 2025 at 14:44	16 KB	CSV Document
history	27 May 2025 at 12:48	--	Folder
watch-history.html	26 May 2025 at 14:44	853 KB	HTML text
live chats	27 May 2025 at 12:48	--	Folder
live chats.csv	26 May 2025 at 14:44	35 KB	CSV Document
music (library and uploads)	27 May 2025 at 12:48	--	Folder
playlists	27 May 2025 at 12:48	--	Folder
subscriptions	27 May 2025 at 12:48	--	Folder
subscriptions.csv	26 May 2025 at 14:44	7 KB	CSV Document
video metadata	27 May 2025 at 12:48	--	Folder
video recordings.csv	26 May 2025 at 14:44	108 bytes	CSV Document
video texts.csv	26 May 2025 at 14:44	2 KB	CSV Document
videos.csv	26 May 2025 at 14:44	1 KB	CSV Document
videos	27 May 2025 at 12:48	--	Folder

Considering only the case of the comments data, when opening the corresponding CSV file, the user encounters rather "cryptic" content, because there are several identifiers (comment ID, channel ID, parent ID, video ID, etc.) that they need to know how to interpret.



	Comment ID	Channel ID	Comment Create Timestamp	Price	Parent Comment ID	Video ID	Comment Text	Top-Level Comment ID
2	UgxMBuP	UCeW_IluS	2025-05-24T10:50:5	0		UCTO	{"text":"I	"}
3	UgzPMV	UCeW_IluS	2025-04-12T12:43:1	0		JCtg-A	{"text":"	"}
4	Ugxu9Xs	UCeW_IluS	2025-04-11T19:04:0	0	Ugxu9XskEI	QLrga	{"text":"Sim, eles t	
5	Ugxlc6wU	UCeW_IluS	2025-04-10T11:19:4	0	UgxIc6wUT	Q6Z1o	{"text":"Não conhe	

In other words, the user can download their data, but the data does not easily help them understand their activity and "digital footprint" in terms of comments on YouTube.

3.3. Justification

3.3.1. Why is the guideline appropriate for the identified problem?

The data download functionality offered by YouTube seeks to comply with the right of access and obtaining copies of personal data, provided for both in the LGPD and the GDPR. However, the way these data are made available, usually in technical formats such as CSV files, does not ensure that users effectively understand the information that concerns them.

The selected guideline, "Enable exploration of data exports", directly addresses the challenge users face when interpreting exports provided by platforms. For example, a file containing only technical identifiers, such as channel ID or video ID, demands additional

knowledge to understand which channels or videos are involved. This undermines the user's ability to be aware of the use and disclosure of their data and to exercise real control over them.

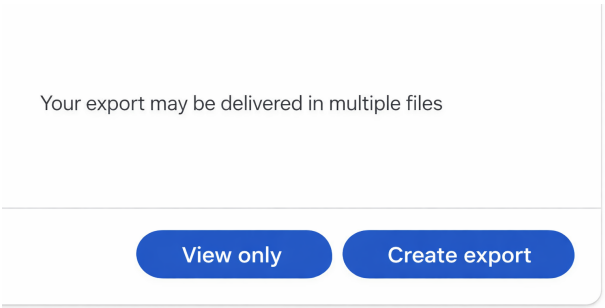
3.3.2. How can the guideline help solve the problem?

By considering how to enable users to explore data downloaded from services more effectively and proposing solutions that support visual and interactive exploration of these data, the guideline provides elements that, when applied to a concrete case, can address these issues. It aims to provide the user with a clear view of the downloaded data, rather than merely technical data in a format that requires technical expertise.

3.4. Improvement proposal based on the selected guideline

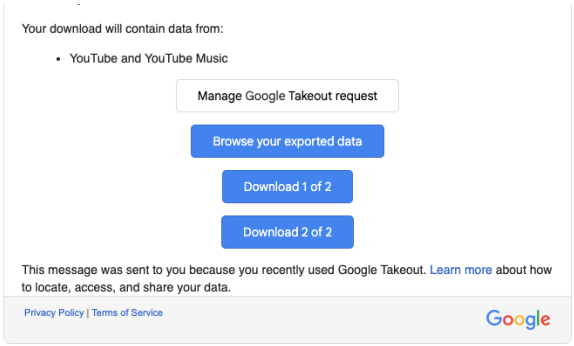
For the improvement proposal based on the guideline, a mockup was created using HTML and CSS. In addition to the option to download the data in CSV format (which is important for other use cases), Google could offer users the option to browse the data.

For example, on the export creation screen, there could be a button with the option "View only":



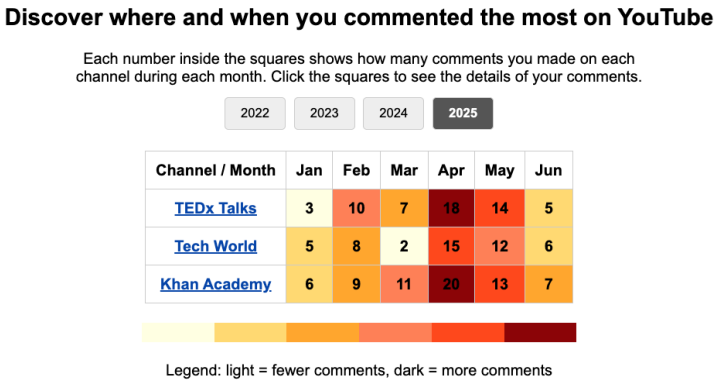
Another option, considering that generating a data export can be time-consuming (because there may be many data to export, requiring an asynchronous process, in which

the user requests and only later receives the export), would be that the notification email sent to the user, informing that the export is complete, contains an option "Browse your exported data":



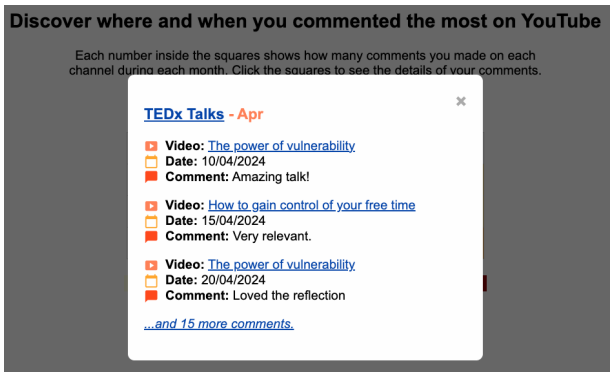
The user could then be redirected to a screen that presents the data in a more aggregated form, allowing them to explore and obtain a more comprehensive view of their activity on YouTube, particularly regarding video comments.

In the example presented in the mockup, the user would see their comment data organised by channel, month, and number of comments per channel, in the form of a heat map.



This map would represent the intensity and frequency of personal data sharing ac-

tivities in the form of comments. The user could click on a number of comments (for instance, the number 15 in April for the channel "Tech World") and view more detailed information on those comments:



Thus, instead of receiving video IDs, channel IDs, and other technical information, the user would have access to understandable information in a more effective way to grasp how their comments are present in the service and eventually request deletion, thereby controlling their exposure.

3.5. Connections with data protection legislation (LGPD and GDPR)

Which data subject rights are potentially better fulfilled with the proposed changes? Justify your answer. The guideline "Enable exploration of data exports" and the proposed solution are directly aligned with rights provided for in both the LGPD and the GDPR, namely:

- **Access to data (LGPD and GDPR).** Clear and interactive visualisation of the shared data allows the data subject to understand more effectively the existence of processing and which data are being processed, going beyond mere technical delivery in formats such as CSV. The heat-map visualisation not only offers this consultation in an accessible and comprehensible way (without requiring technical knowledge), but also adds semantic context (e.g., channel, date, video), allowing the user to better understand the nature and volume of their processed data.
- **Data portability (LGPD and GDPR).** Although delivery in a structured format is important for portability, the proposal reinforces that understanding the content of the data should precede its transfer, enhancing the data subject's effective control.
- **Confirmation of processing (LGPD).** By allowing the user to visualise the channels, months, and contents in which their data was processed (in this case, published

comments), the system clearly and accessibly confirms that there is processing of their personal data in the platform.

- **Information and transparency (GDPR).**The interface facilitates the data subject's understanding of how their data is processed, providing a clear and accessible view of the interactions (comments) carried out on the platform.

In summary, the legislation does not merely require the delivery of data, but rather that this delivery be comprehensible and meaningful to the data subject. By proposing visual and interactive representations, the guideline promotes this understanding, enabling the data subject to make more informed decisions about their own data, such as deleting, correcting, or even choosing not to transfer it to another service.

Are there legal principles (e.g., transparency, necessity, security, minimisation) directly reflected in the selected guideline? Justify your answer. Common principles in LGPD and GDPR include:

- **Transparency.** The guideline and the proposed solution contribute to ensuring that information about data processing is provided in a concise, transparent, intelligible, and easily accessible form.
- **Accountability.** The solutions supported by the guideline demonstrate the system's commitment to accountability by providing a feature that facilitates access to and understanding of data processing.
- **Free access (LGPD).** The guideline supports a friendlier and more practical implementation of the principle of free access, allowing the user to better understand the nature and volume of their processed data.

4. Application of the guidelines – Case 2

4.1. Guideline identification

(Complete here with the second guideline, its title, and URL.)

4.2. Presentation of the identified problem

(Describe the problem identified for case 2.)

4.3. Justification

(Explain why the guideline is appropriate and how it helps solve the problem in case 2.)

4.4. Improvement proposal based on the selected guideline

(Describe the mockup/prototype and the proposed solution for case 2.)

4.5. Connections with data protection legislation (LGPD and GDPR)

(Discuss rights and principles related to case 2.)

5. Application of the guidelines – Case 3

5.1. Guideline identification

(Complete here with the third guideline, its title, and URL.)

5.2. Presentation of the identified problem

(Describe the problem identified for case 3.)

5.3. Justification

(Explain why the guideline is appropriate and how it helps solve the problem in case 3.)

5.4. Improvement proposal based on the selected guideline

(Describe the mockup/prototype and the proposed solution for case 3.)

5.5. Connections with data protection legislation (LGPD and GDPR)

(Discuss rights and principles related to case 3.)

6. Conclusions

(Insert here the group's final conclusions about data protection in the scope of the selected system, what was learned during the assignment, whether the guidelines supported the proposal of alternatives and/or solutions, the feasibility of the proposals, and whether they contribute to more adequate processing of personal data.)

7. Authorization for use of assignment results

Each group member is invited to voluntarily authorise the use of the proposals developed in this assignment using the UPC Catalogue. If you choose to authorise, you may use the *<hidden for review purposes>* system to sign the statement below.

Authorisation for use of production

You are invited to authorise the use of your production, in the form of a mockup, prototype, or other visual artefact, as an example of a solution developed in the context of this research. This production may be used for academic and scientific dissemination purposes, such as in articles and in theses or dissertations, always in an anonymous way.

The production may also be used in presentations or in guidelines and best-practice catalogues, which may eventually be made publicly available.

You may choose to:

- Authorise the use of your production as an anonymous example; and, in the case of incorporating the proposed solution as an example in the UPC catalogue, request that your name be cited.
- Not authorise the use of the assignment for exemplification or dissemination purposes.

Authorization declaration

I, the undersigned, declare that:

- I have read and understood the information above.
- I have been informed that my participation is voluntary.
- I am aware that I may refuse this authorisation without any prejudice to my course evaluation.

Authorization

Full name: _____

Date and signature: _____

☐ I AUTHORISE the use of the content of this assignment in an anonymous way.
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☐ I DO NOT AUTHORISE the use of the assignment for exemplification or dissemination purposes.