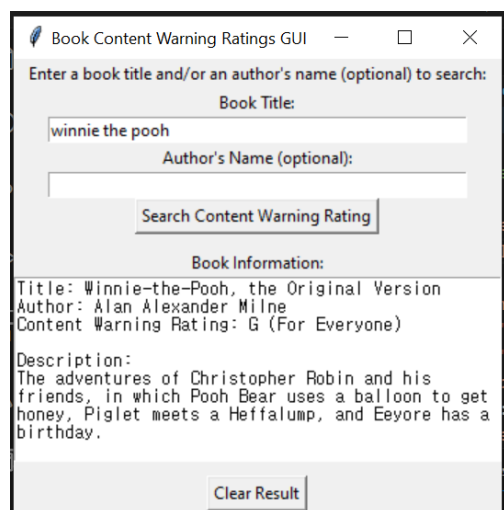Project Review of Version 1 – Content Rating for Books
HCI 584
Miranda Frederick

Overview

The purpose of this project is to provide users with content warnings for books by allowing the user to search for the book using the title and author, if possible. Nine content areas will be presented to the user, with a rating from 1 (low) to 10 (high) to provide the user with a well-rounded idea of the appropriateness and content areas of the book they are interested in. Users will also receive a description of the book and the name of the author in the results box.

Implementation of this program requires several stages for full functionality. Below is a progress update for each implementation stage, with the stages in **BOLD** being complete.

Stage	Description	Status
1	Book Search Function – functionality to search the Google Books API by book title & handling user errors	Complete
2	**Content Warnings – creating list of words to be categorized in each content warning area & implement into search function**	**In Progress**
3	Interface – design user-friendly, simple interface	Complete
4	**Bonus Feature – Book suggestions based on search**	**In Progress**
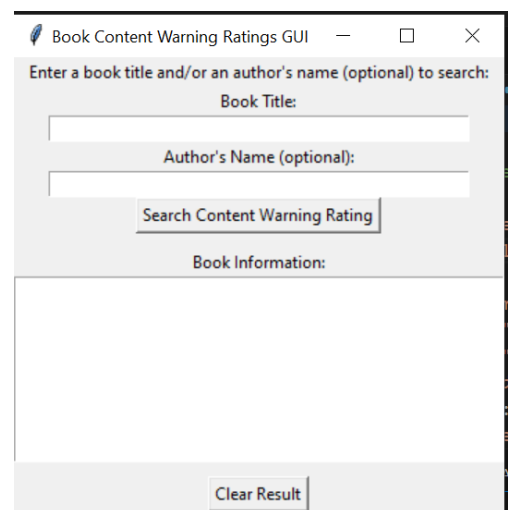
Landing Page

Version 1 Content Warning Results
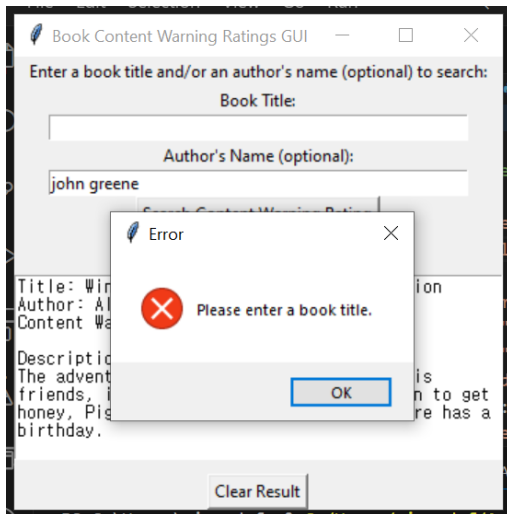
Error Result 1: No book title given

Error Result 2: No book title found

Challenges

Several challenges have been encountered during the implementation of Version 1.
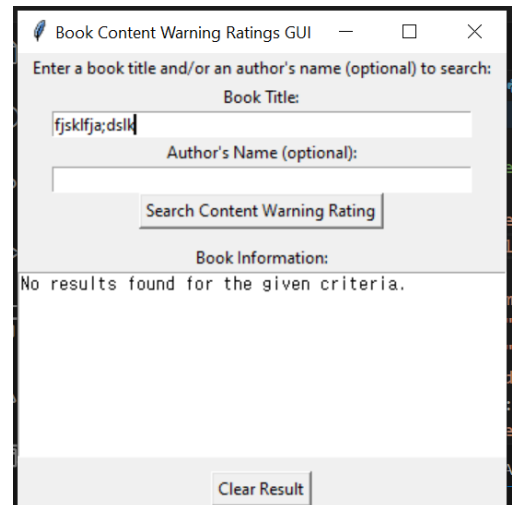
My first issue began when I started the project by using ChatGPT and OpenAI to answer the search queries. It took quite some time to figure out how to utilize the OpenAI API, so the first problem was learning more about APIs and how to utilize API keys. Finally, after implementing and testing the search function, I realized that it would not allow any searches (not just three per minute, but none at all) without having a paid subscription. After doing some digging and trying to problem solve, I decided to alter my plan and changed the search function from utilizing ChatGPT to using Google Books API. Perhaps there was another way around this issue, but I wanted to try the alternative method to practice my Python skills more broadly so I pivoted away from ChatGPT.

Secondly, after moving onto the Google Books API for the book search data, a new issue has emerged. This issue surrounds the content warnings themselves. My first choice of utilizing ChatGPT was made because it allowed for a more robust content warning to be generated for each query. The content warnings produced by ChatGPT contained more detailed descriptions of the content for each category of warning. Right now, I am still working on solving this issue by integrating more data that can be searched for keywords in each content warning area. The functionality of the program seems to work, however, the book description in contained in the Google Books API is not detailed enough to provide a reliable and accurate content warning at this point. Because of the lack of accuracy in the current version, I have not implemented the "rating" for each content area to be displayed in Version 1 as was described in the project spec originally, but a simpler binary rating system of "Mature" or "G (For everyone)".

I think with more time, I will be able to work through this issue and version two of this program will provide more accurate content ratings in each content area as originally described. I would like to try to incorporate alternative APIs with more robust book descriptions and play around with other methods to make the program fully functional.

Upcoming Milestones

Milestone	Description

1: Improving the Data	This is what I think will take the longest, as it's been my biggest challenge so far. In order to improve the content warning, I will need to accomplish two things: 1) expand the word search list for words/phrases in each content warning category 2) improve the data with additional book description/metadata to improve the search results
2: Updating GUI	The GUI is very basic and could use some design elements to improve the look of the interface. I will utilize UX design principles of usability to improve the look while maintaining the ease of use. In addition, once the data is updated, I will update the search results to include the rating for each content warning category.
3. Bonus Feature: Book Suggestions	The program will provide book suggestions based upon the user's query.

Milestone one will be the majority of the work over the next several weeks, as I anticipate that to be my main challenge to get the program working with any accuracy.

Reflection

This project has been a challenge as it is my first "real" Python project of any sort. Almost every aspect has been a first for me, so I am feeling pretty satisfied with the progress so far. In the beginning of the project, I was utilizing ChatGPT to provide the content warning results which provided a really exciting response to every search query. Being that this is my first project, I got really excited being able to get the search working and incorporating the OpenAI technology. Once I decided to change course, I was a little disappointed/worried that the program would be less effective with OpenAI. That being said, I think the work has been much more satisfying – although it was initially exciting to see the results come in from ChatGPT, I have been using more creativity and it has been more fun when I figure out a problem using the Google Books API method of my program. Something that was easier than I anticipated was the transition from the command line interface to using Tkinter for the first time. I had assumed I would not implement GUI until the second version, but the practice project provided a lot of assistance in moving through that stage quickly.

Something I had not expected, quite honestly, was the extent to which I would enjoy problem solving with Python through this project. In my past academic experiences I have struggled with independent learning when things are fairly new to me, so I am thrilled that I have gotten so much out of the class thus far and have enjoyed it to such an extent.

The concern I had in the beginning of the semester was that I would not be able to produce an effective program without the help of ChatGPT. The expectations of the difficulty were not far from reality; however, I have found that I have been able to work through most things if I allow myself extra time to do so. The work, thus far, has taken more time than I've anticipated, but in short, it has felt more rewarding than I anticipated. With six weeks of work left in the semester, I think that I will be able to finish the project in the remaining time to produce accurate search results, and implement the additional "book suggestion" feature.

Project Spec (Version 2 – **New Portions Are Bold/Underlined**)– Content Rating for Books
HCI 584

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Introduction

Trigger warnings and content warnings are "a statement at the start of a piece of writing, video, etc. alerting the reader or viewer to the fact that it contains potentially distressing material–often used to introduce a description of such content", (Charles et al., 2022). A 'book content warning generator' program would support content selection for readers who are interested in avoiding certain topic areas, or want to be prepared for the content they are about to consume in order to do so without emotional disturbance. Prior to reading a book, a user would search for the title in the search bar. 9 content areas will be presented to the user, with a rating for each content area based on that book's content. It's important for the user to remember that this is an estimate, (not exact) and that warnings of this type are very subjective to the reader themselves, but this can be a tool to assist the user to avoid content that may be triggering, upsetting or disinteresting.

The primary stakeholders for this program would be frequent readers or people with interest in book content (librarians, teachers, parents, etc.). Secondary stakeholders would be authors, editors, publishers - really anyone who may profit or benefit from a book being successful. This program is needed to support users in consuming of the millions of books that exist on this planet, just waiting to be read!

The primary workflow (user path) that is involved in this program is as follows:
- User types a book title **(and author name, if applicable)** into the search bar
- Results list the 9 content warning types (see below) with a **rating** for each category on a 1 (little to none) to 10 (max) scale. The results will also provide a short description explaining the rating.
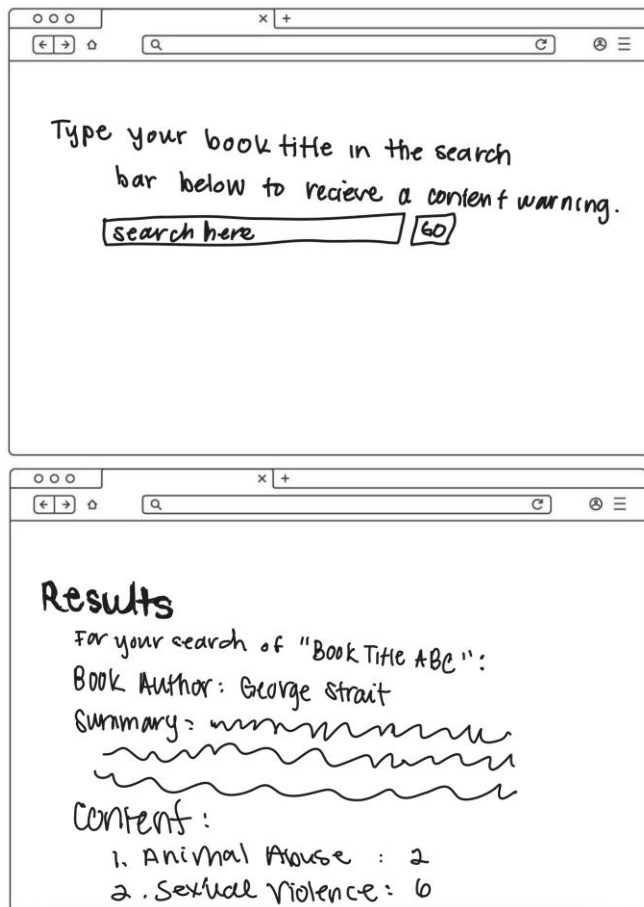
The 9 Content Warning Types

1. Animal Abuse
2. Sexual Violence
3. Body Image/Disordered Eating
4. Self-Harm/Suicide
5. Discrimination/Hate Crimes
6. Violence & Graphic Content
7. Substance Abuse/Addiction
8. Child Abuse/Domestic Violence
9. Homicide/Gun Violence

The 9 content warning types are NOT an extensive list and are meant to provide general categories for events that may be upsetting or difficult to consume. The 9 content areas were developed with guidance from the National Institute of Health's Narrative Experiences Online (NEON) content warning typology list (Charles et al., 2022).

Task Vignette
Task: Searching for a book title

Type your book title in the search bar below to recieve a content warning.

[search here] [GO]

Results

For your search of "Book Title ABC":

Book Author: George Strait

Summary: ~~~~~~~~~~~~~~~~

Content:
1. Animal Abuse : 2
2. Sexual Violence: 6

Teacher Tamera wants to know more about the books her class has to read this school year, based on the school districts list she just received. She specifically wants to know if there is anything in the books she should be prepared to discuss with her class, in the event that the content is upsetting to any student. She is a new teacher to the school, and she just got her new curriculum the week before school starts so she doesn't have time to read all of the books before the busy school year.

Teacher Tamera decides to turn to the internet. At the very least, she is sure she will find a summary of each book, which will still be helpful. She opens her browser and searches "content warnings for high school aged books". She finds a site that has a helpful program that will provide her with content warning ratings for 9 different categories, as well as a summary of the book.

She sees the search bar in the center of the page, and types the title of the book she is looking for - Thor, God of Thunder - she clicks "go" and the page loads her results (Magic happening!). She sees the results for the book title she searched and a summary of the plot. She is able to see ratings for 9 content areas and prepare herself for the content she may receive questions about when she hands out this year's book list.

Details/Things for Later:

- How to handle books of the same title? Maybe 1 text box for "title" and one for "author" would help prevent many results for common book titles/narrow search results.
  - **(This has been implemented)**
- Fuzzy string matching for misspellings/close-but-not-quite search attempts
  - **(This has been implemented)**
- I think it will be important to remind the user how the content rating is generated, so that the user is able to make their own discernment (about the book..) with the help of the information we provide.
  - **I have not added a disclaimer yet – however, I will in the final version.**
- Optional add on? - Show user other book suggestions on the results page?
  - **I plan to implement this into the final version, so that book suggestions appear for the user.**

Technical Flow

- Users will provide their query in the search bar
- A user's query (book title / author) will be **searched in the Google Books API. The API will provide the author name, full book title and a short description of the book.**
- Their query **will be compared to 9 content warning areas to ask for a rating each content area on a scale of 1 (little to no content) to 10 (strong presence of related content). Each content area contains a list of associated words, and the rating is provided based on the extent to which the words in that content area are present in the book description.**
- **Results are presented back to the user in the results box widget, as the program is implemented using Tkinter. The results will contain: Book title, author name, book description, and content warning areas.**
- **Upon error, the user wil receive 1 of 2 possible results:**
  - **1: If the user fails to enter a book title, the user will receive a pop up stating they need to enter a book title.**
  - **2: If the search is inconclusive, the user will receive a response st**

Sources:

Charles, A., Hare-Duke, L., Nudds, H., Franklin, D., Llewellyn-Beardsley, J., Rennick-Egglestone, S., Gust, O., Ng, F., Evans, E., Knox, E., Townsend, E., Yeo, C., & Slade, M. (2022). Typology of content warnings and trigger warnings: Systematic review.