

# Project 3: GUI for Book Recommendations

CS 1410

## Background

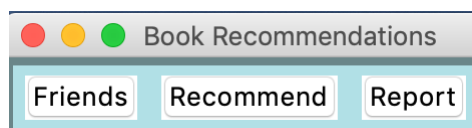
The purpose of this project is to get experience with event-driven programming with Graphical User Interfaces (GUIs). You will use the **breezypythongui** module, which is based on Python's **tkinter** module, to design interactive windows for the Book Recommendation System from Project 1. You will also add functionality to the system.

## Requirements

Provide the following options to users, available to the user through simple buttons in a small main window. The corresponding windows/dialogs appear and disappear independently from the main window.

- **Friends.** This option displays a dialog box prompting for a reader name and a number of friends (`nfr iends`, the readers with the highest similarity scores to the user of interest; display 2 as the default value in the number field), and displays the `nfr iends` friends, one per line, in a message box. This calls your **friends** function from Project 1.
- **Recommend.** This displays a dialog box prompting for a reader name and number of friends, and then displays recommendations for that user in a message box, using the number of top friends requested. Validate that the reader exists in the system. This calls your **recommend** function from Project 1.
- **Report.** This option displays the same output from `bookrecs.main()` as you did in Project 1, but in a message box. For this option, just use the default of `nfr iends=2`. This calls your **report** function (see Implementation Notes below).

Here is a sample display, using “powder blue” (“#B0E0E6”) as the background color:



You can different background color codes at [https://www.rapidtables.com/web/color/RGB\\_Color.html](https://www.rapidtables.com/web/color/RGB_Color.html).

Here are some sample screens:

Friends

Reader:

# of Friends:

OK Cancel

Recommendations for reuven

F. Scott Fitzgerald, The Great Gatsby  
 William Goldman, The Princess Bride  
 Will Hobbs, Far North  
 Jodi Picoult, My Sister's Keeper  
 Neil Shusterman, The Shadow Club  
 Jeff Smith, Bone Series

OK

Error

No such reader.

OK

Error

# of Friends must be positive.

OK

Friends of reuven

ben  
 cust10  
 tiffany

OK

Report

```

albus dumbledore: ['joshua', 'tiffany']
('Douglas Adams', 'The Hitchhiker's Guide To The Galaxy')
('Dan Brown', 'The Da Vinci Code')
('F. Scott Fitzgerald', 'The Great Gatsby')
('Cornelia Funke', 'Inkheart')
('William Goldman', 'The Princess Bride')
('C S Lewis', 'The Lion the Witch and the Wardrobe')
('Gary Paulsen', 'Hatchet')
('Jodi Picoult', 'My Sister's Keeper')
('Philip Pullman', 'The Golden Compass')
('Louis Sachar', 'Holes')
('J R R Tolkien', 'The Hobbit')
('J R R Tolkien', 'The Lord of the Rings')
('Eric Walters', 'Shattered')
('H G Wells', 'The War Of The Worlds')
('John Wyndham', 'The Chrysalids')

alexandra: ['roflol', 'shannon']
('Douglas Adams', 'The Hitchhiker's Guide To The Galaxy')
('Dan Brown', 'The Da Vinci Code')
('Orson Scott Card', 'Ender's Game')
('Cornelia Funke', 'Inkheart')
('William Goldman', 'The Princess Bride')
('Masashi Kishimoto', 'Naruto')
('Robert Ludlum', 'The Bourne Series')
('Stephenie Meyer', 'Twilight Series')
('Christopher Paolini', 'Eragon')
('Gary Paulsen', 'Hatchet')
('Jodi Picoult', 'My Sister's Keeper')
('J.K. Rowling', 'Harry Potter Series')
('Louis Sachar', 'Holes')
('Jeff Smith', 'Bone Series')
('J R R Tolkien', 'The Hobbit')
('J R R Tolkien', 'The Lord of the Rings')
('H G Wells', 'The War Of The Worlds')

andrew: ['mike', 'moose']
('Cornelia Funke', 'Inkheart')
('Guy Gavriel Kay', 'The Summer Tree')

anna-carol: ['cust8', 'roflol']
('Douglas Adams', 'The Hitchhiker's Guide To The Galaxy')
('Laurie Halse Anderson', 'Speak')
('Dan Brown', 'The Da Vinci Code')
('Meg Cabot', 'The Princess Diaries')
('Orson Scott Card', 'Ender's Game')
('Cornelia Funke', 'Inkheart')
('William Golding', 'Lord of the Flies')
('William Goldman', 'The Princess Bride')
('Masashi Kishimoto', 'Naruto')
  
```

OK

Note that entries are sorted by the same criteria as in Project 1.

## Implementation Notes

Use `breezypythongui.py` to implement your GUI.

You will need to modify the code in your *bookrecs.py* from Project 1 so that the computation of the similarities is done *upon import*, so that calls to **friends** and **recommend** will just work. This means that you must read the data from *booklist.txt* and *ratings.txt* and compute the similarities at the module/global level before **friends** or **recommend** are ever called. You should also write a function named **report** in your *bookrecs.py* that computes the full report that you output in Program 1, by calling **friends** and **recommend** for each reader. Your **main** from Program 1 will *not* be executed, since your GUI module *imports* your *bookrecs.py*.