**CSE 231 Fall 2022**

**Computer Project #06**

This assignment focuses on the design, implementation, and testing of a Python program that uses lists and tuples.

It is worth 50 points (5% of course grade) and must be completed no later than **11:59 PM on Sunday 10/23, 2022.**

Note that there will be zero penalties for assignments handed in on the following two days: October 24 & 25. No submissions will be accepted after October 25. If you submit your project by Sunday 10/23 at 11:59PM EST, you will get 2 extra credit points (note that you have to click on the submit to count as submitted).

**Assignment Overview**

In this assignment, you will practice with lists of lists and tuples and write a program to answer the questions described below.

**Assignment Background**

In this assignment, you will practice with book data from a website called Goodreads. Goodreads has thousands of books uploaded to its website, allowing a user to save books to virtual bookshelves to track what they’ve read. When a user adds books to a bookshelf or leaves a review, Goodreads recommends related books. For this assignment, you will read in a user’s criteria and provide book recommendations to them.

The data is provided in a file:

1. books.csv: Each line has the five attributes of a character, comma-separated

isbn13, isbn10, title, subtitle, authors, categories, thumbnail, description, published\_year, average\_rating, num\_pages, ratings\_count

You will create a list of tuples with only these attributes:

(isbn13, title, authors, categories, description, published\_year, average\_rating, num\_pages

)

**Assignment Specifications**

You will develop a Python program that has the following functions

**open\_file () 🡪 file pointer fp:**

1. This function prompts the user to input a file name to open and keeps prompting until a valid name is entered. Return the file pointer.
2. Parameters: none
3. Returns: a file pointer
4. Display: prompts and error messages

**read\_file (fp) 🡪 list of tuples:**

1. This function reads the comma-separated value (csv) file using file pointer fp. The file has one header line. Create a list of tuples. Each tuple represents a character and has the following format:

(isbn13, title, authors, categories, description, year, rating, num\_pages, rating\_count)

The type of each element in the tuple:

(string, string, string, list(strings), string, string, float, int, int)   
If any conversion fails, skip that line of data.

Hint: wrap the variable assignment in a try-except

Return the list of tuples.

1. Parameter: file pointer
2. Returns: list of tuples
3. Displays: nothing

**def ﻿get\_books\_on\_criterion (list of tuples, criteria, value) 🡪 list/tuple**

1. Given a list of character tuples, retrieve the characters that match a certain criteria. If there is a problem with a value or criteriaparameter, don’t add the character to the return list—see note below

The criteria parameter is an int that represents the index of a criteria in a character tuple. For example, if filtering by *TITLE*, criteriashould be 1; if filtering by *year,* criteriashould be 5, etc (*Hint:* use provided constants for the parameter criteria*)*.

Note:

* 1. If you are searching per TITLE, only return the tuple of the book with that title. Do not put it in a list.
  2. For CATEGORY and YEAR, value must be a string and variations in case are accepted, e.g. 'Sword', 'SWORD', 'SwOrD' and similar will match. If not, do not add the book to the return list.
  3. For RATING, value should be a float number. The returned books should have rating greater than or equal to the given value.
  4. For PAGES, value should be an integer. Books included should have a page number within 50 pages of this number. For example, if the value is 137, books included will have page numbers between 87 and 187, including those numbers.

1. parameter: list of tuples, int, int/string
2. Returns: list of tuples, or one tuple (TITLE)
3. Display: nothing

**def get\_books\_by\_criteria (master\_list, element, weapon, rarity)🡪 list :**

This function looks similar to the get\_books\_on\_criterion function; the difference is that this function calls get\_books\_on\_criterion *three* times, one for each of category, rating, and page number specified to select books based on all three criteria. The three call effectively filter for each by passing the returned list of one function as an argument to the next call. Note that the parameters in this function for category, rating, and page number become the value arguments for the three respective calls to get\_characters\_by\_criterion---the criteriaargument is determined by this parameter’s name. (*Hint:* use provided constants for the parameter criteria*).*

1. Parameter: list of tuples, string, string, int
2. Returns: list of tuples
3. Display: nothing

**def get\_books\_by\_keyword(master\_list, keywords) 🡪 list:**

1. Given the master list of character tuples, retrieve all books whose description contains a keywords value. Make sure to look in every description for every keyword in the list of keywords provided. If one keyword is found, add the book to the return list and move to the next book to avoid double counting a book.
2. Paremeters: list of tuples, list of strings
3. Returns: list of tuples
4. Display: nothing

**def sort\_authors (list\_of\_tuples, a\_z) 🡪 list:**

1. Given a list of books, create a new list where the books are sorted by author name. The a\_z boolean value determines if you should return the books in descending or ascending order based on author name. a\_z should default to True.
2. Parameters: list of tuples, boolean
3. Return : sorted list of tuples
4. Display: nothing

**def display\_books (list\_of\_tuples) 🡪 none:**

1. Given a list of book tuples, display the books along with their information, using the formats provided as constants in strings.txt.

If list\_of\_tuples is empty, print 'Nothing to print. '

1. Parameters: list of tuples
2. Return: nothing
3. Display: booksattributes

**def get\_option ()** 🡪 **int:**

1. Display a menu of options and prompt for input. Make sure the input is 1-4. Ask for the input in the function, this function does not take parameters.
2. Parameters: nothing
3. Return: int
4. Display: menu and error message

**main():**

1. Call open\_file() to open a CSV file for reading and get a file pointer for the input file.
2. Call read\_file() to read the data and store it in a list of lists.
3. Call get\_option() to prompt the user for input.
4. Loop until the user chooses 4.
5. Based on the input option
   1. If option is 1, call a function to get a book by book title
      1. Display the book. (Hint: throw the title in a list before calling display())
   2. If option is 2
      1. Prompt first for a *criteria;* then for a *value*;  
         if criteria is RATING or PAGES, convert value to an float(RATING) or int (PAGES); re-prompt if it cannot be converted.
      2. Call get\_books\_on\_criterionto filter characters by a certain *criteria* with a *value*.
      3. Sort books using sort\_authors
      4. Display the first 30 books using display\_characters
   3. If option is 3
      1. Prompt in this order for *category*, *rating, and page number;*reprompt if RATING is not a float or if PAGES is not an int.
      2. Ask for a\_z input.It should be False if a\_z == 1, True for any other input.
      3. Ask for a list of keywords, separated by a space.
      4. Call recommend\_booksto filter books by above criteria.
      5. Display books using display\_books
   4. If option is 4
      1. Quit the program

**Assignment Notes and Hints**

1. The coding standard for CSE 231 is posted on the course website:

<http://www.cse.msu.edu/~cse231/General/coding.standard.html>

Items 1-9 of the Coding Standard will be enforced for this project.

2. By default, sorted (or sort) will sort on the first item in a list or tuple. To sort on other indices use itemgetter . First, remember to include the following at the top of your program:  
﻿from operator import itemgetter

Then you use the key argument in sorted (or sort). The following sorts list L on index 3:  
﻿ L = sorted(L, **key=itemgetter(3)**)

3. The program will produce reasonable and readable output, with appropriate labels for all values displayed.

4. We provide a proj06.py program for you to start with.

5. If you “hard code” answers, you will receive a grade of zero for the whole project. An example of hard coding is to simply print the approximate value of e rather than calculating it and then printing the calculated average.

6. In the test cases below, the output would not fit all on one line without shrinking the text further. You do not need to shrink the text, and the header should be one line, not two. Check the test cases in coding rooms if the ones below are confusing.

**Assignment Deliverable**

The deliverable for this assignment is the following file:

proj06.py – the source code for your Python program

Be sure to use the specified file name and to submit it for grading before the project deadline.

**Test 1**

Enter file name: books.csv

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 4

**Test 2**

Enter file name: books.csv

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 1

Input a book title: A Tale of Two Cities

Book Details:

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780141439600 A Tale of Two Cities Charles Dickens 2003 3.83 489 693045

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 4

**Test 3**

Enter file name: books.csv

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 2

Choose the following criteria

(3) Category

(5) Year Published

(6) Average Rating (or higher)

(7) Page Number (within 50 pages)

Enter criteria number: 3

Enter value: Fiction

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780007127740 The illustrated man Ray Bradbury 2002 4.14 186 56781

9780141184890 The Subterraneans Jack Kerouac 2001 3.68 192 416

9780333187623 Ragtime E. L. Doctorow 1975 3.88 270 57

9780345253590 The best of Philip K. Dick Philip K. Dick 1977 4.22 450 614

9780345340443 The Belgariad Boxed Set David Eddings 1986 4.27 1635 13225

9780373033102 Lawful Possession Catherine George 1994 3.25 192 1

9780373033669 P.S. I Love You Valerie Parv 1995 2.79 192 22

9780373062324 The Boy in White Tessa Kay 1987 2.33 157 2

9780373194865 Sky's Pride and Joy Sandra Steffen 2000 3.00 192 2

9780373195602 If You Don't Know by Now Teresa Southwick 2001 3.06 192 6

9780373246830 Lori's Little Secret Christine Rimmer 2005 3.73 248 98

9780373288564 The Gunslinger Mary McBride 1995 4.12 304 15

9780373289806 Lady of the Lake Elizabeth Mayne 1997 3.26 304 69

9780373513284 Double-Cross Meredith Fletcher 2004 3.72 304 38

9780373692286 Her Last Temptation Leslie Kelly 2005 3.59 207 110

9780373712489 Her Little Secret Anna Adams 2005 3.30 304 9

9780373713448 The Other Woman Brenda Novak 2006 4.11 299 528

9780373764198 Tallchief Cait London 2002 4.12 192 47

9780373764211 Dr. Desirable Kristi Gold 2002 3.24 192 19

9780380017799 Chaining the Lady Piers Anthony 1978 3.64 342 986

9780425144305 Paws Before Dying Susan Conant 1991 3.89 197 424

9780440700241 Charlotte sometimes Penelope Farmer;Eleanor Cameron 1987 4.09 174 34

9780441505326 Madouc Jack Vance 1991 4.15 426 1766

9780515136173 Laurell K. Hamilton Set Laurell K. Hamilton 2003 4.51 1256 3276

9780517618875 The Portable James Joyce James Joyce 1947 4.16 762 18

9780553173871 All Fall Down John Saul 1991 3.92 329 561

9780671455279 Sweet and Low Emma Lathen 1982 3.82 189 73

9780671820121 End zone Don DeLillo 1973 3.64 200 2099

9780688023720 Karate is a Thing of the Spirit Harry Crews 1983 3.84 218 230

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 2

Choose the following criteria

(3) Category

(5) Year Published

(6) Average Rating (or higher)

(7) Page Number (within 50 pages)

Enter criteria number: 6

Enter value: 4.50

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780394749136 The Civil War, a Narrative Shelby Foote 1986 4.53 2965 213

9780515136173 Laurell K. Hamilton Set Laurell K. Hamilton 2003 4.51 1256 3276

9780517118290 Jane Austen : the Complete Novels Jane Austen 1981 4.55 1103 264

9780563388548 THE GOON SHOW VÁRIOS AUTORES 2005 4.50 2 0

9780929524351 History - Thucydides 1989 4.50 34 2

9781883011697 Novels 1957-1962 William Faulkner 1999 4.54 1020 72

9780307290465 The Civil War Shelby Foote 4.53 2934 6406

9780310929550 Zondervan NIV Study Bible Kenneth L. Barker;Donald W. Burdick 2002 4.70 2198 4092

9780851621814 The Complete Theory Fun Factory Katie Elliott;Ian Martin 1996 5.00 96 1

9780761554912 Lego Star Wars Michael Littlefield;Prima Games 2006 4.62 128 27

9780751504835 Something Under the Bed is Drooling Bill Watterson 1988 4.70 127 137

9781563890352 Season of Mists Neil Gaiman;Kelley Jones 1992 4.54 217 49151

9780143039501 The Complete Novels Jane Austen 2006 4.55 1278 417

9780517147689 The Complete Novels Jane Austen 1981 4.55 1103 298

9780842386883 Reunion Karen Kingsbury;Gary Smalley 2004 4.50 400 12171

9781421500492 The Art of Howl's Moving Castle Hayao Miyazaki 2005 4.51 256 2762

9780618391028 JRR Tolkien Companion & Guide Christina Scull;Wayne G. Hammond 2006 4.53 1002 37

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 2

Choose the following criteria

(3) Category

(5) Year Published

(6) Average Rating (or higher)

(7) Page Number (within 50 pages)

Enter criteria number: 5

Enter value: 2001

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780141184890 The Subterraneans Jack Kerouac 2001 3.68 192 416

9780373195602 If You Don't Know by Now Teresa Southwick 2001 3.06 192 6

9780735711020 Homepage Usability Jakob Nielsen;Marie Tahir 2001 3.72 336 333

9780859653237 Blink-182 Anne Hoppus 2001 4.41 112 61

9781582791807 Agnes Grey Anne Brontë 2001 3.68 190 37

9781883011932 Collected Stories Edith Wharton 2001 4.30 928 51

9781891885266 Eureka Mill Ron Rash 2001 4.22 64 152

9781892284891 Guilty But Insane Poppy Z. Brite 2001 3.97 185 118

9783425040844 In the Country of Last Things Paul Auster 2001 3.91 188 6230

9780312266059 The Illustrated Story Of O Pauline Reage 2001 4.00 160 25

9781842122914 Never Call Retreat Bruce Catton;Everette Beach Long 2001 4.33 558 1485

9780785265436 The Blood of the Moon George Grant 2001 3.69 224 70

9780740720123 Another Day in Paradise Jim Toomey 2001 4.34 130 65

9780425182383 Stardust of Yesterday Lynn Kurland 2001 4.09 368 3663

9781886968059 Unspeakable Truths Priscilla B. Hayner 2001 4.18 226 11

9781565846715 On the Edge of the New Century Eric J. Hobsbawm;Antonio Polito 2001 3.72 192 80

9780816638635 Christopher and His Kind Christopher Isherwood 2001 4.12 352 2182

9780330371247 Hot Six Janet Evanovich 2001 4.19 324 300

9780007105045 Tree and Leaf John Ronald Reuel Tolkien 2001 4.09 176 2245

9780964326194 The Eye of the I David R. Hawkins 2001 4.38 432 707

9780520231511 Undertaker of the Mind Jonathan Andrews;Andrew T. Scull 2001 3.42 386 12

9780141182582 The Collected Dorothy Parker Dorothy Parker 2001 4.29 604 1057

9780141311401 Boy Roald Dahl 2001 4.10 176 42784

9780743422000 God Bless You, Dr. Kevorkian Kurt Vonnegut 2001 3.84 80 12423

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 2

Choose the following criteria

(3) Category

(5) Year Published

(6) Average Rating (or higher)

(7) Page Number (within 50 pages)

Enter criteria number: 7

Enter value: 87

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780023513206 Reason in History Georg Wilhelm Friedrich Hegel 1953 3.64 95 430

9780231085076 Discovering Plato Alexandre Koyre 1960 3.26 118 7

9780500130377 Jean-Jacques Rousseau and His World Sir Gavin De Beer 1972 3.20 128 0

9780553142167 The Greatest Salesman in the World Og Mandino 1974 4.20 111 6

9780573605734 Breakfast of Champions 1984 4.00 106 15

9780573612251 Medea Robinson Jeffers 1976 4.20 130 99

9780590326292 Trapped! Arthur Roth 1983 3.71 119 86

9780751363784 The Three Musketeers 2000 4.07 64 56

9780806501901 The Broken Wings Kahlil Gibran 1989 3.92 132 6175

9780806509020 Existentialism and Human Emotions Jean-Paul Sartre 1985 3.84 96 4090

9780859653237 Blink-182 Anne Hoppus 2001 4.41 112 61

9780895591326 Billy Budd Herman Melville 1978 3.11 106 64

9780910457385 The Alienist Machado de Assis 1998 4.05 58 10

9780940244566 Isle of Darksmoke Larry DiTillio 1984 2.00 55 1

9780962247729 PS I Love You Baby Collection Lynda Milligan;Nancy Smith 1990 4.33 79 6

9780974559308 Creating Contagious Leadership John Hersey 2003 3.00 128 2

9781401359294 Leadership through the ages Rudolph W. Giuliani 2003 3.95 115 14

9781406503432 Flatland Edwin Abbott Abbott 2006 3.82 100 10

9781406914832 A Doll's House Henrik Ibsen 2007 3.71 122 80050

9781559362108 A Tempest Aimé Césaire;Richard Miller 2002 3.55 69 1309

9781587670138 Cast in Dark Waters Edward Gorman;Tom Piccirilli 2002 3.31 100 26

9781588467980 Monte Cooks Years Best D20 04 Monte Cook 2005 4.20 96 5

9781887953795 Legend of the Five Rings Aeg 2003 3.68 96 44

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 4

**Test 4**

Enter file name: books.csv

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 3

Enter the desired category: fiction

Enter the desired rating: 2.00

Enter the desired page number: 200

Enter 1 for A-Z sorting, and 2 for Z-A sorting: 1

Enter keywords (space separated): happy life

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780060887964 The Alchemist - Gift Edition Paulo Coelho 2006 3.85 192 814

9780061122415 The Alchemist Paulo Coelho 2006 3.85 197 1592632

9781852426743 Of Tender Sin David Goodis 1952 3.69 181 143

9780062513342 The Valkyries Paulo Coelho 1996 3.31 212 696

9780002005883 Gilead Marilynne Robinson 2004 3.85 247 361

9780374500528 Gimpel the Fool and Other Stories Isaac Bashevis Singer 1988 4.16 205 36

9780679744474 Written on the Body Jeanette Winterson 1994 4.07 192 20182

9780060527990 The Devil and Miss Prym Paulo Coelho 2006 3.60 205 46113

9780765351548 Debt of Bones Terry Goodkind 2004 3.86 160 25701

9780375726514 The Box Man Kōbō Abe 2001 3.65 178 3293

9780618710508 The Diezmo Rick Bass 2006 3.46 224 11

9780156628709 Mrs. Dalloway Virginia Woolf 1981 3.79 197 7971

9780151009985 Mrs. Dalloway Virginia Woolf 2002 3.79 194 167000

9780374529949 Play It As It Lays Joan Didion 2005 3.87 231 21868

9781400034291 The Dew Breaker Edwidge Danticat 2005 3.79 244 5664

9780440362050 My Name is Aram William Saroyan 1966 4.15 151 975

9780486424545 Howards End E. M. Forster 2002 3.96 246 54709

9781557424297 The Picture of Dorian Gray Oscar Wilde 2005 4.07 187 329

9780684856476 The Rum Diary Hunter S. Thompson 1999 3.82 224 43921

9780312321208 P.S. Your Cat Is Dead James Kirkwood 2003 3.75 218 1291

9780373792733 The Perfect Score Julie Kenner 2006 3.25 240 108

9781932234299 Birthday Kōji Suzuki;Glynne Walley 2006 3.68 216 837

9780020360759 Heart Songs and Other Stories Annie Proulx 1995 3.93 203 1822

9781599982939 Naughty Little Secret Shelley Bradley 2006 3.73 212 2270

9780671001957 Pieces Stephen Chbosky 2000 3.52 155 1087

9780060598853 Back to the Bedroom Janet Evanovich 2005 3.67 234 9839

9780060598846 Love Overboard Janet Evanovich 2005 3.65 244 11223

9780020199854 The Love of the Last Tycoon F. Scott Fitzgerald 1994 3.65 169 6836

9781590171943 The Strangers in the House Georges Simenon 2006 3.76 194 633

9781840681123 Divine Filth Georges Bataille 2004 3.93 160 74

9780099742005 Total Recall Piers Anthony 1990 3.93 224 7932

9781555837235 Stir-fry Emma Donoghue 1994 3.58 240 1521

9781582344720 Soldiers of Salamis Javier Cercas;Anne McLean 2005 3.79 213 398

9781551666723 The Thrill of Victory Sandra Brown 2003 3.60 240 1051

9780060594527 Lost Horizon James Hilton 2004 3.92 241 11794

9780345468031 The Franklin Affair Jim Lehrer 2006 3.12 208 141

9781400097029 The Sea John Banville 2006 3.51 195 18513

9780385721912 Man Walks Into a Room Nicole Krauss 2003 3.33 248 5322

9780446609197 A Highland Christmas M. C. Beaton 2002 3.86 160 3455

9780060777333 The Cat's Pajamas Ray Bradbury 2005 3.73 234 1316

9780843943993 Mountain Madness David Thompson 1998 4.48 170 21

9780312422738 A Feather on the Breath of God Sigrid Nunez 2005 3.87 192 447

9781567921588 W, Or, The Memory of Childhood Georges Perec 2003 3.88 176 1395

9780671019099 The Tenth Man Graham Greene 1998 3.72 160 2769

9780060598891 The Rocky Road to Romance Janet Evanovich 2004 3.67 249 9470

9780142002001 Youth J. M. Coetzee 2003 3.79 176 4722

9780446390576 Bare Bones Stephen King;Tim Underwood 1989 4.16 224 3050

9780385316576 Follow Your Heart Susanna Tamaro 1995 3.57 208 3170

9780156631402 Mrs. Miniver Jan Struther 1990 3.96 162 1040

9780844667508 Child of God Cormac McCarthy 1994 3.86 197 57

9781933110455 Carly's Sound Ali Vali 2006 4.21 212 441

9780451205551 Trauma Graham Masterton 2002 3.54 224 333

9780446614160 Words of Silk Sandra Brown 2005 3.55 224 2600

9780394743042 The Ravishing of Lol Stein Marguerite Duras 1986 3.67 181 1939

9780060928414 Slowness Milan Kundera 1997 3.66 156 9454

9780876851388 Mockingbird Wish Me Luck Charles Bukowski 2002 4.13 160 1769

9781400043330 The General in His Labyrinth Gabriel García Márquez 2004 3.68 248 11460

9780679732549 Shoot the Piano Player David Goodis 1990 4.02 158 2691

9780061131271 Factotum tie-in Charles Bukowski 2006 3.96 208 395

9780061120060 Their Eyes Were Watching God Zora Neale Hurston 2006 3.90 219 209110

9780374530303 Martin and John Dale Peck 2006 3.73 248 694

9781891620416 White Widow Jim Lehrer 2000 3.01 224 174

9780571207992 The Wars Timothy Findley 2001 3.87 218 6229

9780375704437 For the relief of unbearable urges Nathan Englander 2000 3.94 205 2344

9781426423703 The Adventures of Sally P. G. Wodehouse 2007 3.78 232 10

9780226204192 Bengal Nights Mircea Eliade 1995 3.93 184 245

9780684804422 The Pat Hobby Stories F. Scott Fitzgerald 1995 3.58 192 889

9780312288013 Serious Girls Maxine Swann 2004 3.19 240 202

9780156030489 Kiffe Kiffe Tomorrow Faïza Guène;Sarah Adams 2006 3.38 179 1026

9780316769488 The Catcher in the Rye J.D. Salinger 1991 3.80 234 18849

9781400078479 Love 2005 3.73 224 7095

9780812972580 The Ox-Bow Incident Walter Van Tilburg Clark 2004 3.82 247 4116

9780312890216 The Starry Rift James Tiptree 1994 3.82 250 220

9780679723691 Cathedral Raymond Carver 1989 4.29 230 21140

9780061124266 Veronika Decides to Die Paulo Coelho 2006 3.70 210 126224

9780743281591 Diary of a Mistress Miasha 2006 4.35 182 2449

9780553409680 Death of a Snob M. C. Beaton 1996 3.78 192 17

9780553297836 A Whole New Light Sandra Brown 1992 3.55 227 2817

9780446607131 Death of a Gossip M. C. Beaton 1999 3.72 179 9244

9780879239480 Broken Vessels Andre Dubus 1992 4.32 195 348

9780446518628 The Celestine Prophecy James Redfield 1994 3.63 247 1280

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 4

**Test 5**

Enter file name: book.csv

Error opening file. Please try again.

Enter file name: books.csv

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 2

Choose the following criteria

(3) Category

(5) Year Published

(6) Average Rating (or higher)

(7) Page Number (within 50 pages)

Enter criteria number: 6

Enter value: five

Invalid input

Enter value: 4.67

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780310929550 Zondervan NIV Study Bible Kenneth L. Barker;Donald W. Burdick 2002 4.70 2198 4092

9780851621814 The Complete Theory Fun Factory Katie Elliott;Ian Martin 1996 5.00 96 1

9780751504835 Something Under the Bed is Drooling Bill Watterson 1988 4.70 127 137

9781556434952 Empire 2.0 Régis Debray 2004 4.75 144 4

9780740748479 The Complete Calvin and Hobbes Bill Watterson 2005 4.82 1456 31249

9780567044716 Colossians and Philemon Robert McL Wilson 2005 5.00 512 1

9780905712604 The Shining Stephen King 1987 4.67 991 1838

9781932206081 Insights Frederick Lenz 2003 5.00 304 1

9781411665309 Existential Meditation Simon Cleveland 2005 4.91 100 11

9780446578271 The Everyday Life Bible Joyce Meyer 2006 4.70 2208 1715

9780809166589 Love You Until... Lisa McCourt 1999 4.67 32 3

9780738539560 Lake Orion James E. Ingram;Lori Grove 2006 5.00 128 0

9780739844328 Bill Gates Sara Barton-Wood 2001 5.00 48 0

9781931082884 Novels, 1901-1902 Henry James;Leo Bersani 2006 4.68 713 25

9780738511672 Middlesex Borough 2003 5.00 128 2

9780836217698 Homicidal Psycho Jungle Cat Bill Watterson 1994 4.72 176 14952

9780310249870 Fanning the Flame Christopher J. H. Wright 2003 5.00 336 1

9781890995522 The Diamond Color Meditation John Diamond 2006 5.00 74 5

9780836221367 It's a Magical World Bill Watterson 1996 4.76 176 23336

9780439682589 Harry Potter J. K. Rowling 2004 4.78 2690 38872

9780439827607 The Harry Potter Collection J. K. Rowling 2005 4.73 3342 27410

9781551052700 Ecuador Nature Guide Christopher D. Jiggins 2000 5.00 96 1

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 2

Choose the following criteria

(3) Category

(5) Year Published

(6) Average Rating (or higher)

(7) Page Number (within 50 pages)

Enter criteria number: 7

Enter value: one

Invalid input

Enter value: 1

ISBN-13 Title Authors Year Rating Number Pages Number Ratings

9780563388548 THE GOON SHOW VÁRIOS AUTORES 2005 4.50 2 0

9780590598873 Babysitters Club Ann M. Martin 1995 3.85 0 5241

9780723258056 A Journal Beatrix Potter (Illustratorin) 2006 4.34 32 341

9780764127311 The Seasons: Summer Núria Roca 2004 4.10 36 6

9780929524351 History - Thucydides 1989 4.50 34 2

9780486275505 The Road Not Taken, and Other Poems Robert Frost 1993 4.27 49 33004

9780140568196 The Giraffe and the Pelly and Me Roald Dahl;Quentin Blake 2001 3.81 32 16265

9781563054426 Barnyard Dance! Sandra Boynton 1993 4.25 24 20885

9780152049676 Winter is the Warmest Season Lauren Stringer 2006 3.91 40 360

9780761316800 It's Winter! Linda Glaser 2002 3.63 32 80

9781888297010 Edward Lear's Book of Nonsense Edward Lear 1995 3.66 46 66

9780439420068 Eat! Roberta Grobel Intrater 2002 3.95 10 54

9780061125935 Goodnight Moon 123 Margaret Wise Brown;Clement Hurd 2007 3.59 32 189

9780807588970 When I Feel Angry Cornelia Maude Spelman 2000 3.99 24 108

9780618611690 The Polar Express Chris Van Allsburg 2005 4.30 32 83

9780064441766 Captain Cat Syd Hoff 1994 3.66 48 107

9780805059335 Clown Quentin Blake 1998 3.97 32 369

9780500277591 The Rainbow Goblins Ul De Rico 1994 4.42 32 1383

9780843121315 Little Miss Birthday Roger Hargreaves 2007 4.00 32 188

9780679832690 P.J. Funnybunny Camps Out Marilyn Sadler 1993 3.86 32 159

9780380620005 Boy Who Turned Into a TV Set Stephen Manes 1983 4.00 10 8

9780060004507 An Old-Fashioned Thanksgiving Louisa May Alcott;James Bernardin 2005 3.70 32 599

Welcome to the Book Recommendation Engine

Choose one of below options:

1. Find a book with a title

2. Filter books by a certain criteria

3. Recommend a book

4. Quit the program

Enter option: 4

**Grading Rubric**

Computer Project #06 Scoring Summary

General Requirements:

( 4 pts) Coding Standard 1-9

(descriptive comments, function headers, mnemonic identifiers, format, etc...)

Implementation:

( 3 pts) open\_file function (manual grading)

( 4 pts) read\_file function

( 4 pts) get\_books\_on\_criterion function

( 4 pts) get\_books\_by\_criteria function

( 4 pts) recommend\_books function

( 4 pts) sort\_books function

( 4 pts) display\_books function

( 3 pts) get\_option function (manual grading)

( 3 pts) Test 1

( 3 pts) Test 2

( 4 pts) Test 3

( 3 pts) Test 4

( 3 pts) Test 5

Note: hard coding an answer earns zero points for the whole project

-10 points for not using main()