Manual Test Plan

OS Support:

Only Windows 10 running VS Code will be used for testing

First Run:

Go to the correct directory, then input

$python main.py -h

In the terminal that is integrated.

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -h
usage: main.py [-h] [-u URL] [-a AUTHOR] [-b BOOK] [-rb READBOOK] [-ra READAUTHOR] [-eb EXBOOK] [-ea EXAUTHOR]

scrap book from URL and/or import/export JSON file to/from mongodb

optional arguments:
  -h, --help            show this help message and exit
  -u URL, --url URL     indicate the starting URL
  -a AUTHOR, --author AUTHOR
                        desired author count
  -b BOOK, --book BOOK  desired book count
  -rb READBOOK, --readbook READBOOK
                        read from book JSON file
  -ra READAUTHOR, --readauthor READAUTHOR
                        read from author JSON file
  -eb EXBOOK, --exbook EXBOOK
                        export the book database to JSON file
  -ea EXAUTHOR, --exauthor EXAUTHOR
                        export the author database to JSON file
PS C:\Users\mzhai4\cs242-digital_library>
```

You will see the following help message clarifying all those parameters.

If you entered a wrong URL, that is, either a wrong formatted one, or any valid URL that is not pointing to Goodreads and representing a book, you will receive the error message:

Case 1: Not a valid URL

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -u google.coooom
URL is invalid
```

Case 2: Valid URL not pointing to Goodreads

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -u https://www.google.com
URL is invalid
```

Case 3: Valid Goodreads URL not representing a book

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -u https://www.goodreads.com/choiceawards/best-books-2020?int=gca_signed_out_hp
Will now try start scraping
URL is invalid
```

Case 4: Totally valid URL

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -u https://www.goodreads.com/book/show/3735293-clean-code
Will now try start scraping
```

Without other parameter, the scraper will start until 200 books or 50 authors has been collected.

If the author number is greater than 50

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -a 500
Scrapping until desired author number may take longer than expected.
```

If the book number is greater than 200

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -b 500
Scrapping until desired book number may take longer than expected.
```
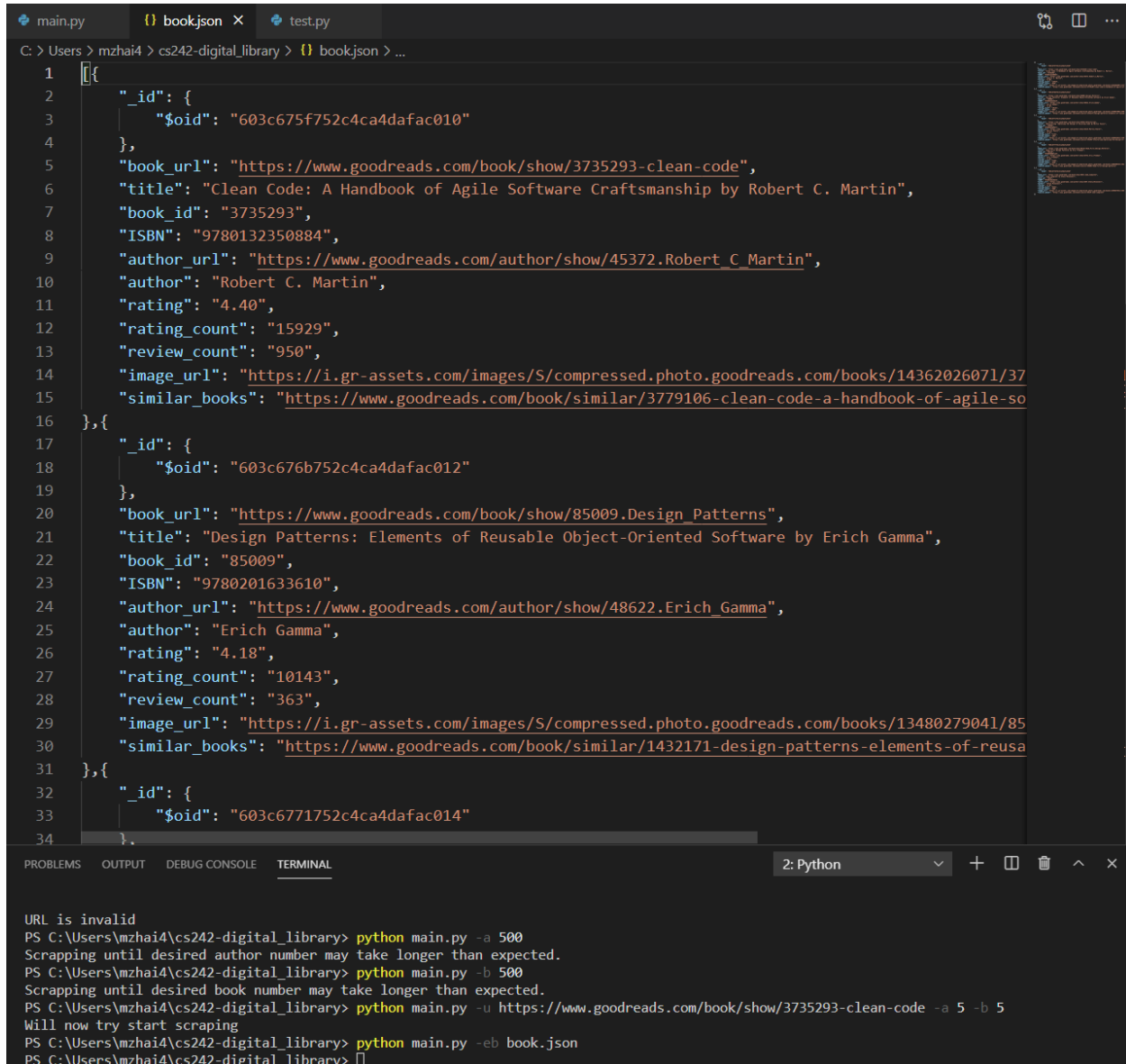
If the URL is valid, book and author number set to 5

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -u https://www.goodreads.com/book/show/3735293-clean-code -a 5 -b 5
Will now try start scraping
```

It will soon finish scraping.

Now we can try to use -eb function to export the database to a json file.

Note that it will not fail even if the file name is not correct.
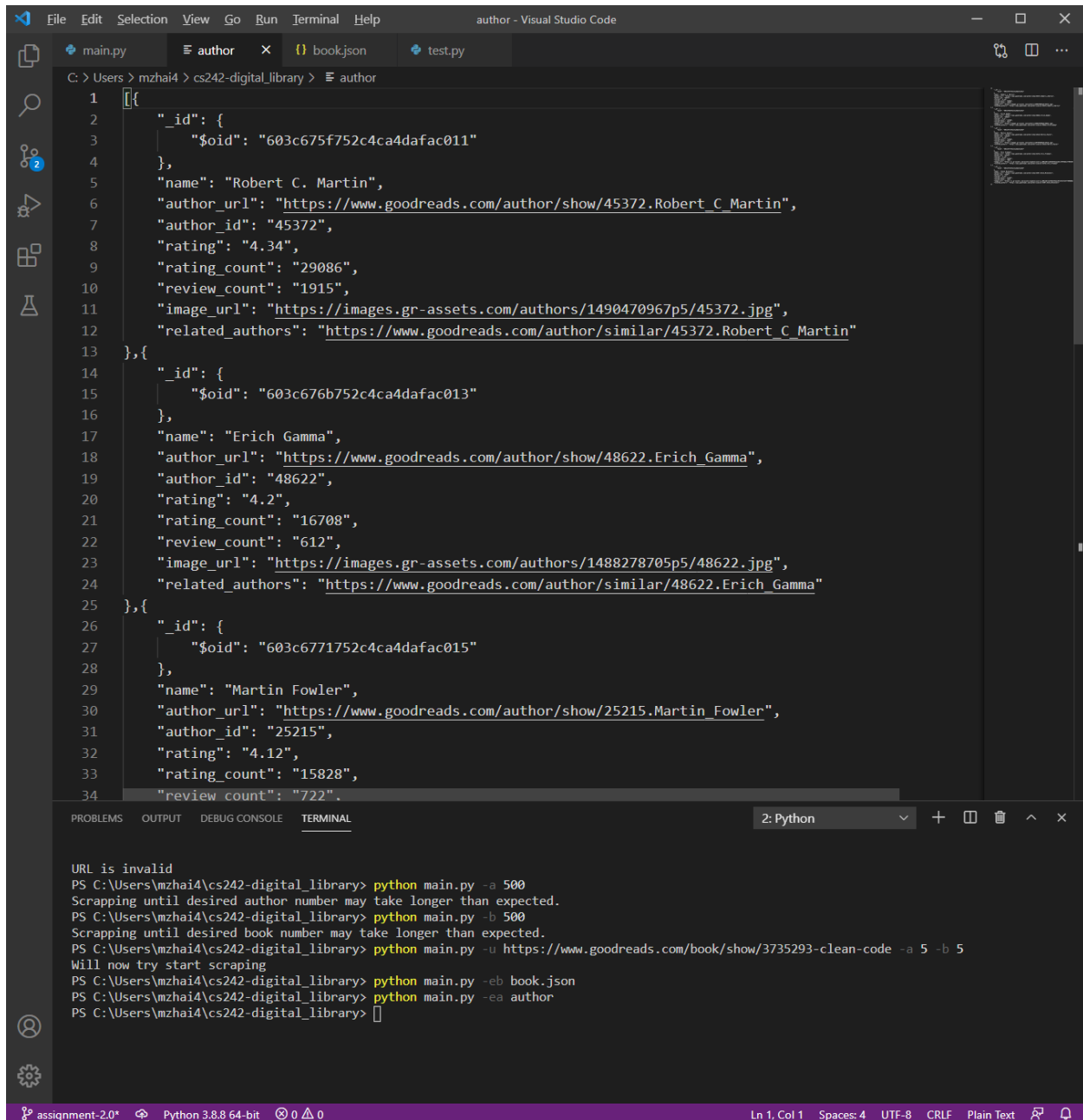
For example, the author file does not have ".json ", but still the file will be written.


```
File  Edit  Selection  View  Go  Run  Terminal  Help          author - Visual Studio Code

main.py        ≡ author  ✕    {} book.json       test.py

C: > Users > mzhai4 > cs242-digital_library > ≡ author
   1   [{
   2        "_id": {
   3            "$oid": "603c675f752c4ca4dafac011"
   4        },
   5        "name": "Robert C. Martin",
   6        "author_url": "https://www.goodreads.com/author/show/45372.Robert_C_Martin",
   7        "author_id": "45372",
   8        "rating": "4.34",
   9        "rating_count": "29086",
  10        "review_count": "1915",
  11        "image_url": "https://images.gr-assets.com/authors/1490470967p5/45372.jpg",
  12        "related_authors": "https://www.goodreads.com/author/similar/45372.Robert_C_Martin"
  13   },{
  14        "_id": {
  15            "$oid": "603c676b752c4ca4dafac013"
  16        },
  17        "name": "Erich Gamma",
  18        "author_url": "https://www.goodreads.com/author/show/48622.Erich_Gamma",
  19        "author_id": "48622",
  20        "rating": "4.2",
  21        "rating_count": "16708",
  22        "review_count": "612",
  23        "image_url": "https://images.gr-assets.com/authors/1488278705p5/48622.jpg",
  24        "related_authors": "https://www.goodreads.com/author/similar/48622.Erich_Gamma"
  25   },{
  26        "_id": {
  27            "$oid": "603c6771752c4ca4dafac015"
  28        },
  29        "name": "Martin Fowler",
  30        "author_url": "https://www.goodreads.com/author/show/25215.Martin_Fowler",
  31        "author_id": "25215",
  32        "rating": "4.12",
  33        "rating_count": "15828",
  34        "review_count": "722".

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL                    2: Python

URL is invalid
PS C:\Users\mzhai4\cs242-digital_library> python main.py -a 500
Scrapping until desired author number may take longer than expected.
PS C:\Users\mzhai4\cs242-digital_library> python main.py -b 500
Scrapping until desired book number may take longer than expected.
PS C:\Users\mzhai4\cs242-digital_library> python main.py -u https://www.goodreads.com/book/show/3735293-clean-code -a 5 -b 5
Will now try start scraping
PS C:\Users\mzhai4\cs242-digital_library> python main.py -eb book.json
PS C:\Users\mzhai4\cs242-digital_library> python main.py -ea author
PS C:\Users\mzhai4\cs242-digital_library>

assignment-2.0*       Python 3.8.8 64-bit   ⊗ 0 ⚠ 0          Ln 1, Col 1   Spaces: 4   UTF-8   CRLF   Plain Text
```

If you try to read from an invalid json file, or a malformed json file, it will tell you invalid.

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -rb book
JSON file is invalid
```

If the json file is valid and the insert is successful, the program will terminate.

```
PS C:\Users\mzhai4\cs242-digital_library> python main.py -rb book.json
PS C:\Users\mzhai4\cs242-digital_library>
```