GEDT019 Final Assignment

Article management system

- You will create an article management system.
- Your program will first ask the user to enter a filename.

```
Enter an input file (or q to quit):
```

- This file will be the input file for your program.
- Your program will quit if the user enter "q".
- If the filename the user entered does not exist, the following error message will be displayed, and then ask the user to enter the filename again:

```
Input file not found.
Please check the file name or the location of your input file.
Enter an input file (or q to quit):
```

- If the user enter a filename containing the data, the main menu will be displayed:

```
Enter an input file (or q to quit): sample.txt
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Quit.
Enter:
```

- Data format of the file is described in the next few slides

- 2 sample data files were supplied to you

- **Your program should be working with any input file with the data format (i.e. not just these 2 files)**

Data format of the file

- The data file is in ASCII format
- One entry consist of information of one article
- One entry consists of multiple lines
- Each entry starts with an entry number
- Each entry ends with an empty line

Example data file with 3 entries

1st entry

```
PMID- 1234556
TI  - Screening for SARS-CoV-2 infection in pediatric oncology patients during the epidemic peak in Italy.
DP  - 2020 Jun 15
AU  - Cesaro S
AU  - Compagno F
AU  - Zama D
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter
```

Each entry starts with the entry number

Each entry is separated by one empty line

2nd entry

```
PMID- 32539221
TI  - COVID-19 in a child with severe aplastic anemia.
DP  - 2020 Jun 15
AU  - Akcabelen YM
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter
```

Each entry is separated by one empty line

3rd entry

```
PMID- 32539199
TI  - How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in Italy: New approaches.
LID - 10.1002/pon.5444 [doi]
DP  - 2020 Jun 15
JT  - Psycho-oncology
AU  - Zucchetti G
AU  - Bertolotti M
LA  - eng
PT  - Journal Article
```

Fields

First 4 letters are field name

Field name:
PMID: Entry number
TI: Article Title
LID: ID number
DP: Date
AU: Author
JT: Book Title
LA: Language
PT: Type

```
PMID- 1234556
TI  - Screening for SARS-CoV-2 infection in pediatric oncology patients during the epidemic peak in Italy
DP  - 2020 Jun 15
AU  - Cesaro S
AU  - Compagno F
AU  - Zama D
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter

PMID- 32539221
TI  - COVID-19 in a child with severe aplastic anemia.
DP  - 2020 Jun 15
AU  - Akcabelen YM
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter

PMID- 32539199
TI  - How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in Italy: New approaches.
LID - 10.1002/pon.5444 [doi]
DP  - 2020 Jun 15
JT  - Psycho-oncology
AU  - Zucchetti G
AU  - Bertolotti M
LA  - eng
PT  - Journal Article
```

There could be multiple authors

Fields may not be in same order

Field may not always present in each entry

Main Menu

- If the user enter a filename containing the data, the main menu will be displayed:

```
Enter an input file (or q to quit): sample.txt

1. Display summary

2. Search by Entry Number (PMID).

3. Search by Book Title (JT).

4. Add a record.

5. Export the data in csv format.

6. Quit.

Enter:
```

1. Display summary

- If the user enter 1 in the main menu, your program will read the input file, and summary information of the input file will be displayed, and then the main menu will be displayed again asking for user input:

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 1
=====*****======
Input file: sample.txt
Number of entry = 3
Number of English articles = 3
Number of Journal articles = 1
Number of English Journal articles = 1
=====*****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

- You may assume that the input file is always in the correct file format.

2. Search by Entry Number (PMID)

- If the user enter 2 in the main menu, your program will ask for the PMID, read the input file, search the input file according to the PMID, display the result, and then the main menu will be displayed again asking for user input:

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 2
Enter the PMID: 32539221
=====****======
Input file: sample.txt
PMID = 32539221
Title = COVID-19 in a child with severe aplastic anemia.
Book Title = Pediatric blood & cancer
Type = Letter
Language = eng
=====****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

2. Search by Entry Number (PMID)

• If the Entry Number (PMID) is not found, display the message, and then the main menu will be displayed again asking for user input:

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 2
Enter the PMID: 32500000
=====*****======
Input file: sample.txt
PMID = 32500000
Entry not found in the input file.
=====*****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

3. Search by Book Title (JT)

- If the user enter 3 in the main menu, your program will ask for the Book Title (JT), read the input file, search the input file according to the Book Title (JT), display the result, and then the main menu will be displayed again asking for user input:

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 3
Enter the Book Title: Psycho-oncology
=====****======
Input file: sample.txt
PMID = 32539199
Title = How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in
Italy: New approaches.
Book Title = Psycho-oncology
Type = Journal Article
Language = eng
=====****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

- If the input file contains multiple entries with the Book Title, then all the entries will be displayed (refer to the example on the upcoming page).

3. Search by Book Title (JT)

- If the Book Title (JT) is not found, display the message, and then the main menu will be displayed again asking for user input:

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 3
Enter the Book Title: Psychooncology
=====*****======
```

Input file: sample.txt

```
JT = Psychooncology
Entry not found in the input file.
=====*****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

4. Add a record

- If the user enter 4 in the main menu, your program will ask the user to enter all the information, write the entry to the input file, and then the main menu will be displayed again asking for user input:

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 4
=====*****======
Add new entry to the input file: sample.txt
PMID: 32531111
Title: Testing entry
Book Title: Psycho-oncology
Type: Journal Article
Language: kor
Entry is written to the input file
=====*****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

sample.txt - Notepad

File Edit Format View Help

```
PMID- 1234556
TI  - Screening for SARS-CoV-2 infection in pediatric oncology patients during the
epidemic peak in Italy.
DP  - 2020 Jun 15
AU  - Cesaro S
AU  - Compagno F
AU  - Zama D
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter

PMID- 32539221
TI  - COVID-19 in a child with severe aplastic anemia.
DP  - 2020 Jun 15
AU  - Akcabelen YM
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter

PMID- 32539199
TI  - How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in
Italy: New approaches.
LID - 10.1002/pon.5444 [doi]
DP  - 2020 Jun 15
JT  - Psycho-oncology
AU  - Zucchetti G
AU  - Bertolotti M
LA  - eng
PT  - Journal Article
```

Ln 27, Col 22   100%   Windows (CRLF)   UTF-8

Before adding the entry

---

sample.txt - Notepad

File Edit Format View Help

```
PMID- 1234556
TI  - Screening for SARS-CoV-2 infection in pediatric oncology patients during the
epidemic peak in Italy.
DP  - 2020 Jun 15
AU  - Cesaro S
AU  - Compagno F
AU  - Zama D
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter

PMID- 32539221
TI  - COVID-19 in a child with severe aplastic anemia.
DP  - 2020 Jun 15
AU  - Akcabelen YM
JT  - Pediatric blood & cancer
LA  - eng
PT  - Letter

PMID- 32539199
TI  - How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in
Italy: New approaches.
LID - 10.1002/pon.5444 [doi]
DP  - 2020 Jun 15
JT  - Psycho-oncology
AU  - Zucchetti G
AU  - Bertolotti M
LA  - eng
PT  - Journal Article

PMID- 32531111
TI  - Testing entry
JT  - Psycho-oncology
PT  - Journal Article
LA  - kor
```

Ln 33, Col 10   100%   Windows (CRLF)   UTF-8

After adding the entry

Search by Entry Number again

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 2
Enter the PMID: 32531111
=====*****======
Input file: sample.txt
PMID = 32531111
Title = Testing entry.
Book Title = Psycho-oncology
Type = Journal Article
Language = kor
=====*****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

Search by Book Title again

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 3
Enter the Book Title: Psycho-oncology
=====****======
Input file: sample.txt
PMID = 32539199
Title = How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in
Italy: New approaches.
Book Title = Psycho-oncology
Type = Journal Article
Language = eng

PMID = 32531111
Title = Testing entry.
Book Title = Psycho-oncology
Type = Journal Article
Language = kor
=====****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```

5. Export the data in csv format

- If the user enter 5 in the main menu, your program will export 5 fields (PMID, TI, JT, PT, LA) of all entries in csv format, and then the main menu will be displayed again asking for user input:

```
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter: 5
Enter the export filename: output.csv
=====*****======
Input file: sample.txt
Output file: output.csv
4 entries were exported.
=====*****======
1. Display summary
2. Search by Entry Number (PMID).
3. Search by Book Title (JT).
4. Add a record.
5. Export the data in csv format.
6. Quit.
Enter:
```
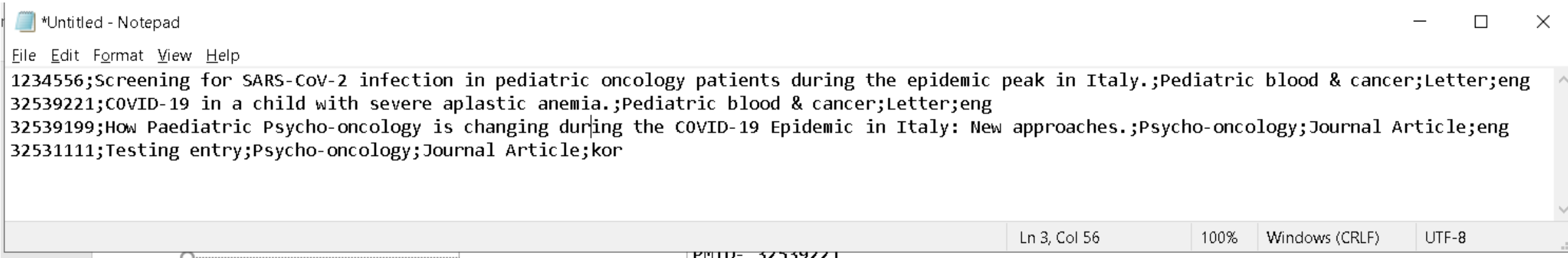
Sample file output


```
*Untitled - Notepad
File  Edit  Format  View  Help
1234556;Screening for SARS-CoV-2 infection in pediatric oncology patients during the epidemic peak in Italy.;Pediatric blood & cancer;Letter;eng
32539221;COVID-19 in a child with severe aplastic anemia.;Pediatric blood & cancer;Letter;eng
32539199;How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in Italy: New approaches.;Psycho-oncology;Journal Article;eng
32531111;Testing entry;Psycho-oncology;Journal Article;kor

                                                    Ln 3, Col 56        100%   Windows (CRLF)        UTF-8
```

If you import the csv file in Excel, it'll look like the following:

	A	B	C	D	E
1	1234556	Screening for SARS-CoV-2 infection in pediatric oncology patients during the epidemic peak in Italy.	Pediatric blood & cancer	Letter	eng
2	32539221	COVID-19 in a child with severe aplastic anemia.	Pediatric blood & cancer	Letter	eng
3	32539199	How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in Italy: New approaches.	Psycho-oncology	Journal Article	eng
4	32531111	Testing entry	Psycho-oncology	Journal Article	kor
5					

- Submit your source code to iCampus before Friday 3 June 2022 23:59 pm

- You may submit multiple version, and only the latest version will be graded

- Late submission will not be graded and a zero score will be given

- In case of technical difficulties for iCampus server, you may submit it as email attachment before the deadline (atang@skku.edu)

- You should make back up to your work, just in case of accident.

- You should double check your submission. Wrong submission will not be an excuse for late submission.