# PLS DOCUMENTATION

BY:

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# Requirements – Public Library System

By Sharoek Mahboeb 1018492

## Functional Requirements

A user must be able to search a book in the catalog
A user must be able to register
A user must be able to login
A user must be able to see if a book is available
A user must be able to get information about the book

A subscriber must be able to login
A subscriber must be able to loan a book
A subscriber must be able to return a book
A subscriber must be able to see a list of borrowed books

A publishing company must be able to login
A publishing company must be able to loan a book
A publishing company must be able to return a book
A publishing company must be able to see a list of borrowed books

A librarian must be able to add a customer
A librarian must be able to add new books
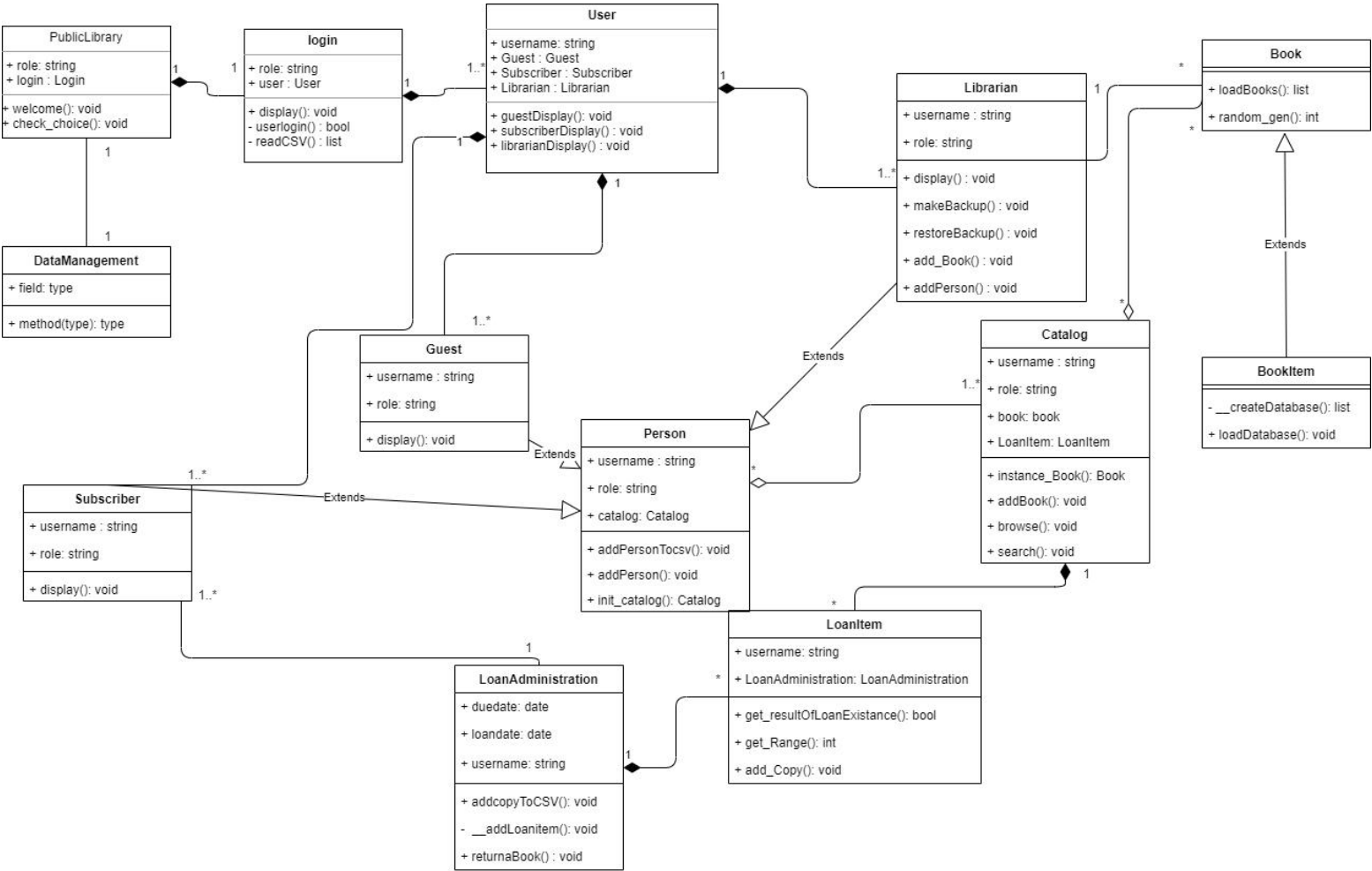A librarian must be able to back up the library system
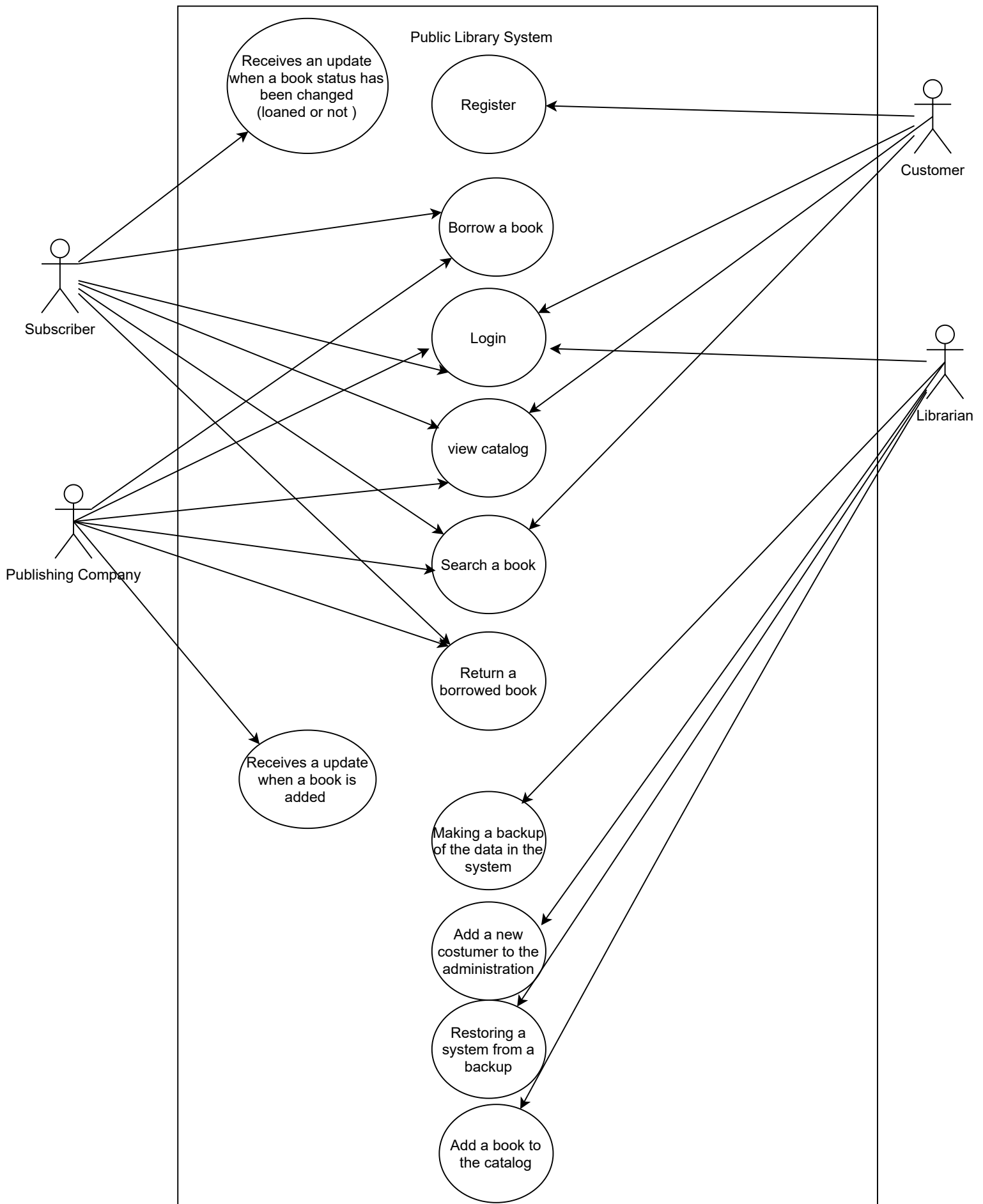A librarian must be able to restore the library system

The system must be built only in Python 3 using only modules in the standard library of Python 3

## Non-Functional Requirements

A book can be searched up by using various keys or combination of keywords

The system must be able to load and restore data within 10 seconds.

**PublicLibrary**

+ role: string
+ login : Login

+ welcome(): void
+ check_choice(): void

---

**login**

+ role: string
+ user : User

+ display(): void
- userlogin() : bool
- readCSV() : list

---

**User**

+ username: string
+ Guest : Guest
+ Subscriber : Subscriber
+ Librarian : Librarian

+ guestDisplay(): void
+ subscriberDisplay() : void
+ librarianDisplay() : void

---

**Librarian**

+ username : string
+ role: string

+ display() : void
+ makeBackup() : void
+ restoreBackup() : void
+ add_Book() : void
+ addPerson() : void

---

**Book**

+ loadBooks(): list
+ random_gen(): int

---

**DataManagement**

+ field: type

+ method(type): type

---

**Guest**

+ username : string
+ role: string

+ display(): void

---

**Person**

+ username : string
+ role: string
+ catalog: Catalog

+ addPersonTocsv(): void
+ addPerson(): void
+ init_catalog(): Catalog

---

**Catalog**

+ username : string
+ role: string
+ book: book
+ LoanItem: LoanItem

+ instance_Book(): Book
+ addBook(): void
+ browse(): void
+ search(): void

---

**BookItem**

- __createDatabase(): list
+ loadDatabase(): void

---

**Subscriber**

+ username : string
+ role: string

+ display(): void

---

**LoanItem**

+ username: string
+ LoanAdministration: LoanAdministration

+ get_resultOfLoanExistance(): bool
+ get_Range(): int
+ add_Copy(): void

---

**LoanAdministration**

+ duedate: date
+ loandate: date
+ username: string

+ addcopyToCSV(): void
- __addLoanitem(): void
+ returnaBook() : void

Extends

# Public Library System

**Receives an update when a book status has been changed (loaned or not )**

**Register**

**Borrow a book**

**Login**

**view catalog**

**Search a book**

**Return a borrowed book**

**Receives a update when a book is added**

**Making a backup of the data in the system**

**Add a new costumer to the administration**

**Restoring a system from a backup**

**Add a book to the catalog**

Customer

Subscriber

Librarian

Publishing Company

# USER MANUAL – SHAROEK LIBRARY

```
###WELCOME TO SHAROEK PLS###

Please login

[1] login as a guest
[2] login as a librarian
[3] login as a subscriber
[4] Data Management
[0] Exit the program
Please input your choice:
```

By Sharoek Mahboeb INF1H 1018592

# Table of contents

# 1. Introduction

As an assignment for Analysis, we have to build a Public Library System (PLS) to rent or return a book. In my PLS users are met with a login screen. For my library I have made three ways to login;

1. Login as a guest
2. Login as a subscriber
3. Login as a librarian

If you want to login as a guest, you don't need any login credentials. As a guest, you can view the catalog or search the catalog. If you wish to loan a book you can register as a subscriber. As last the librarian is a user who can add books to the catalog, add users and can backup/restore the database.

For this complete PLS you are able *to register users with associated role*s, you can *return a book* as a subscriber, you can *register as a subscriber*, see *details of a book and the available copies*.

# 2. Initiating database

Before we start using the library system, we **must** initiate the database **only once**. By initiating the database, we add **random book items** to the database and assign **random roles** to each **user**. When you start the program, you are met with 5 choices. To initiate the database, we have to pick **[4] Data Management** by typing **4.** The next screen we type **1** in to initiate the database. You'll get the notification that the database is initiated. Now we are ready to use our library. Type **0** to exit the menu and go back to the login screen. If initiated correctly the submap *data* will have an extra file *'loan.csv',* modified *'booksset1.json'* and *'members.csv (*see attachment 1)*.

```
###WELCOME TO SHAROEK PLS###

Please login

[1] login as a guest
[2] login as a librarian
[3] login as a subscriber
[4] Data Management
[0] Exit the program
Please input your choice:
4
What would you like to do?
[1] Initiate Database
[0] Exit
Please input your choice:
1
###Database initiated###
What would you like to do?
[1] Initiate Database
[0] Exit
Please input your choice:
|
```

Picture 1. Intiating database

# 3. Login as guest

We are ready to login as a guest. Press **1** to login as a guest. This should take you immediately to the guest page. You are met with the message **"*\*\*\*LOGGED IN AS GUEST\*\*\**"** and you have 4 options. We will go through each option to fully understand the library.

```
**LOGGED IN AS GUEST***


What would you like to do?
[1] Browse Catalog
[2] Search Catalog
[3] Register as Subscriber
[0] Logout
Please input your choice:
```
Picture 2. Guest options

## 3.1 Browse Catalog

You will see a short detail of the first book in the catalog. From here you have 3 options;

[1] Go to next page

[3] See book details

[0] Exit

First, we will go to the next page and then see the book details of that book. So, press 1 followed by 3. *Notice that after you pressed 1 you will see an extra option to go back '[2] Go back a page'.*  As you can see a guest user is only able to see how many copies are available of the total but no option to borrow it.

```
Title: Things Fall Apart
Author: Chinua Achebe
Language: English


[1] Go to next page
[3] See book details
[0] Exit
Please input your choice:
1
Title: Fairy tales
Author: Hans Christian Andersen
Language: Danish


[1] Go to next page
[2] Go back a page
[3] See book details
[0] Exit
Please input your choice:
3
Author: Hans Christian Andersen
Country: Denmark
Language: Danish
Link: https://en.wikipedia.org/wiki/Fairy_Tales_Told_for_Childre
n._First_Collection.
Pages: 784
Title: Fairy tales
Year: 1836
Copies: 2/ 2
```

Picture 2, Browse catalog

## 3.2 Search catalog

To search in the catalog, we first have to go back to the main menu of the guest account. Press **1** followed by **0** to re-enter the main menu. From here we press **2.** Here we **can** search a book by title with any character or title but if we want search an author/country or language we **must** input the specific name. Also note that the search function is *case-insensitive*. The search function uses the same design as the show catalog function. Which means to see the full detail of the book we press **3**.

```
Search by title or specific author/country/language:
sa
Found: 1/4
Title: One Thousand and One Nights
Author: Unknown
Language: Arabic


[1] Go to next page
[3] See book details
[0] Exit
Please input your choice:
3
Author: Unknown
Country: India/Iran/Iraq/Egypt/Tajikistan
Language: Arabic
Link: https://en.wikipedia.org/wiki/One_Thousand_and_One_Nights
Pages: 288
Title: One Thousand and One Nights
Year: 1200
Copies: 5/ 5


[1] Go back
Please input your choice:
```

Picture 3, search catalog

## 3.3 Register as subscriber

To register as a subscriber, go back to the main menu and press **3**. You will need to input multiple answers. After doing this you will get a notification that registration was successful and you'll be added to the *'members.csv'* as a subscriber.

```
To register as subscriber you need to fill in a view fields:
Gender: Male
Nationality:    Dutch
GivenName:  Sharoek
Surname:    Mahboeb
StreetAddress:  I Dont know
Zipcode:    2639 ZH
City:   Rotterdam
Email:  sharoek@gmail.com
Username:   shark
TelephoneNumber:    06-45839021
You have been registered as subscriber
```

Picture 4 and 5 registrations

```
Number,Gender,NameSet,GivenName,Surname,StreetAddress,ZipCode,City,EmailAddress,Username,TelephoneNumber,Role
1,male,Dutch,Hisham,Altink,Borkelsedijk 53,5571 GA,Bergeijk,HishamAltink@teleworm.us,Reech1950,06-16898224,librarian
2,female,Dutch,Maren,Breider,Van Humboldtstraat 130,3514 GS,Utrecht,MarenBreider@dayrep.com,Othed1997,06-23093526,subscriber
3,male,Dutch,Hayati,van Dekken,Schorweg 101,5993 PC,Maasbree,HayativanDekken@teleworm.us,Drem1996,06-74004784,librarian
4,male,Dutch,Valentin,Bosgra,Bloemgracht 9,1016 KA,Amsterdam,ValentinBosgra@armyspy.com,Malame,06-72509347,subscriber
5,female,Dutch,Minou,Hagendoorn,Antillen 40,3524 EZ,Utrecht,MinouHagendoorn@jourrapide.com,Ringdorges,06-21398457,librarian
6,female,Dutch,Anthonia,ten Thije,Kamperfoeliestraat 166,4725 AT,Wouwse Plantage,AnthoniatenThije@jourrapide.com,Ancion,06-98717738,librarian
7,female,Dutch,Talita,Selles,Princestraat 62,7741 JJ,Coevorden,TalitaSelles@gustr.com,Proutirepach,06-50015976,librarian
8,male,Dutch,BartholomeÃ¼s,Filippo,Helmerslaan 124,5615 JE,Eindhoven,BartholomeusFilippo@jourrapide.com,Didly1970,06-67324675,librarian
9,female,Dutch,Andreia,Sijtsma,Van Arkelstraat 141,2973 AL,Molenaarsgraaf,AndreiaSijtsma@jourrapide.com,Arge1936,06-23078929,subscriber
10,male,Dutch,Ziad,Talen,Ge van Rielstraat 59,7622 ET,Borne,ZiadTalen@rhyta.com,Lishat,06-10432698,subscriber
11,male,Dutch,Rodin,Reuser,Walstraat 43,4381 GT,Vlissingen,RodinReuser@gustr.com,Wortuld,06-52718159,librarian
12,male,Dutch,Enno,Wemmers,Draadrusplein 83,5223 DA,s-Hertogenbosch,EnnoWemmers@superrito.com,Ores1936,06-43021268,subscriber
13,male,Dutch,Amiet,Voorwinden,Birkhoven 36,3452 JK,Vleuten,AmietVoorwinden@jourrapide.com,Prands1940,06-41912638,librarian
14,female,Dutch,Khadya,John,Tongeloseweg 44,5087 KX,Diessen,KhadyaJohn@fleckens.hu,Greanded1959,06-59737627,librarian
15,female,Dutch,Kate,Joris,Tongerloplein 96,5071 CX,Udenhout,KateJoris@gustr.com,Owittionfe,06-24588031,librarian
16,female,Dutch,Huda,van Woerden,Schoondijkseweg 1,4503 GK,Groede,HudavanWoerden@cuvox.de,Whosed,06-11031086,subscriber
17,male,Dutch,Pavan,van Wichen,Vlamingstraat 96,2713 RT,Zoetermeer,PavanvanWichen@armyspy.com,Myst1937,06-27254336,subscriber
18,male,Dutch,Bengt,Scheepers,Riouwstraat 194,1094 XM,Amsterdam,BengtScheepers@jourrapide.com,Wher1976,06-82354705,librarian
19,female,Dutch,Ã–zgÃ¼l,Overgaauw,Adriana Noorlandersingel 200,3065 HE,Rotterdam,OzgulOvergaauw@superrito.com,Shrothem1971,06-15253488,subscri
20,female,Dutch,GÃ¼lseren,Willigenburg,Dingspelstraat 28,9461 JE,Gieten,GulserenWilligenburg@teleworm.us,Ressoare,06-92433659,librarian
63,Male,Dutch,Sharoek,Mahboeb,I Dont know,2639 ZH,Rotterdam,sharoek@gmail.com,shark,06-45839021,subscriber
```

# 4. Login as a subscriber

To login as a subscriber, we have to go back to the main menu from the guest login by pressing **0**.
Once you are in the main menu, we press **3** to login as a subscriber. Let us use the account we just **registered** with. If you **want** to use a **different** account, you can look in the *'members.csv'* file and pick a member with the **role subscriber**. Note that to login I have chosen to login with **username** and **email**. For this manual that would be **shark** for username and **sharoek@gmail.com** for email. If successful you'll be greeted with a *"welcome 'username', how can we help you?"*. From here we see 3 functions and an exit to go back to the main menu.

```
Please login as subscriber with your username and email:

Username:   shark
Email:  sharoek@gmail.com
###LOGGED IN AS SUBSCRIBER###
Welcome shark, how can we help you?


[1] View Catalog
[2] Search Catalog
[3] Return a book
[0] Go back to login
Please input your choice:
```

Picture 6, subscriber login

## 4.1 View catalog

The view catalog is pretty much the same as the guest, but when you go to the book details you will get an extra option to loan a copy of that particular book. **You can loan a book as long as the IDs of the copies are available and the id's does not exceed the number of copies we have. For example. If we have 10 unique IDs for a book but only 4 copies of a book, you will still only be able to borrow to a maximum of 4 books.**

Press **2** in the details section to loan a copy of that book. You will get a notification that you have successfully loaned a copy. If it happened correctly, it will be added to the "loan.csv". This file keeps track of which book and which copy of that book you have borrowed. For the next step please borrow a few more random books so we can see how we will return them.

```
Author: Chinua Achebe
Country: Nigeria
Language: English
Link: https://en.wikipedia.org/wiki/Things_Fall_Apart
Pages: 209
Title: Things Fall Apart
Year: 1958
Copies: 5/ 5


[1] Go back
[2] Loan a copy of this book
Please input your choice:
2
You have sucessfully loaned 1 copy of this book
Title: Things Fall Apart
Author: Chinua Achebe
Language: English


[1] Go to next page
[3] See book details
[0] Exit
Please input your choice:
```

Picture 7, loan a book in the view catalog

## 4.2 Search catalog

The search catalog is the same as the guest search function but also with the added option that you can loan a copy of that particular book. By searching a book and viewing the details of that book you will see the option to loan it.

```
Search by title or specific author/country/language:
Unknown
Found: 1/4
Title: The Epic Of Gilgamesh
Author: Unknown
Language: Akkadian


[1] Go to next page
[3] See book details
[0] Exit
Please input your choice:
3
Author: Unknown
Country: Sumer and Akkadian Empire
Language: Akkadian
Link: https://en.wikipedia.org/wiki/Epic_of_Gilgamesh
Pages: 160
Title: The Epic Of Gilgamesh
Year: -1700
Copies: 5/ 5


[1] Go back
[2] Loan a copy of this book
Please input your choice:
2
You have sucessfully loaned 1 copy of this book
```

Picture 8, search catalog

## 4.3 Return a book

Before we start returning a book let us look at the **"loan.csv"** file. If you followed my manual for this long you will know that I have borrowed 2 books in total. So, I am expecting to find 2 books with a different title and a unique id of that book and of course the user who borrowed it.

Book,UUID,Loandate,Duedate,Borrower
Things Fall Apart,0bb950c8-f187-48ed-b38f-9d90f2266289,2021-07-01,2021-07-22,shark
The Epic Of Gilgamesh,742446a3-973a-4745-bb85-ad5e15526c77,2021-07-01,2021-07-22,shark

As you can see I have now the book title, the date at which I borrowed it, the due date and the "Borrower" (which is the username).

So, the next step is to return a book, which you can do by pressing **3** in the main menu of subscriber. Notice that you will see the details of each copy that you have borrowed. By pressing **1** we can input the correct data to return a book. The data I have chosen to return a book is the UUID. We can simply copy and paste the UUID of the terminal. But in case you input the wrong id it will give you an error that the wrong UUID has been used and you'll get redirected to the main menu of subscriber. Do check your **"loan.csv"** to see that has been modified.

```
Title: Things Fall Apart
UUID: 0bb950c8-f187-48ed-b38f-9d90f2266289
Loandate: 2021-07-01
Duedate: 2021-07-22


Title: The Epic Of Gilgamesh
UUID: 742446a3-973a-4745-bb85-ad5e15526c77
Loandate: 2021-07-01
Duedate: 2021-07-22


[0] Go back
[1] Return a book
Please input your choice:
1
Please use the UUID 742446a3-973a-4745-bb85-ad5e15526c77
You have succesfully returned a copie
```

Picture 9, return a book

# 5. Login as librarian

To login as a librarian, we **must** look up in the *"member.csv"* file as the **roles** is **distributed randomly** so it will **differ** than the one in this manual. As seen in picture 5 I will be using the second last user to log in which is Ressoare as username and GulserenWilligenburg@teleworm.us as email.  Once logged in you also will be welcomed as a librarian, just like the subscriber. As a librarian, you have more functions than a subscriber. In total we got 6 main functions and 1 option to go back. We will go over **4** functions, for the last 2 functions we don't need any explanation as it is the same functions as the **guest** functions.  Which is show a catalog and search the catalog. Notice that I said it is the same as the **guest** functions, so the librarian is **not** able to loan a book.

```
###LOGGED IN AS LIBRARIAN###
Welcome Ressoare, what would you like to do?



[1] Make Backup
[2] Restore Backup
[3] Add a user
[4] Add a book
[5] View Catalog
[6] Search Catalog
[0] Go back to login
Please input your choice:
```

Picture 10, librarian login

## 5.1 Make Backup

To make a backup, just press 1 in the main menu of librarian. If successful it will make a backup of all the 3 files in data. If any of the backup is not successful it will notify you by giving an error that a particular database has not been backed up.

```
****Checking all the files****
****FAILED TO MAKE BACKUP OF CATALOG FILE****
****FAILED TO MAKE BACKUP OF LOAN FILE****
****FAILED TO MAKE BACKUP OF MEMBER FILE****
****LOGGED IN AS LIBRARIAN****
```

Picture 11, backup exception path

Let us take the happy path, make a backup and see what has been changed.

```
****Checking all the files****
****Making a backup of the catalog****
****Making a backup of the borrowed books****
****Making a backup of all the users****
****Backup has been made****
```

Picture 12, backup happy path

If we look in the data subfolder, we will that there are 3 more files made as backup.

| | | | |
|---|---|---|---|
| backupbooksset1.json | 1-7-2021 23:22 | JSON File | 52 KB |
| backuploan.csv | 1-7-2021 23:22 | Microsoft Excel C... | 1 KB |
| backupmembers.csv | 1-7-2021 23:22 | Microsoft Excel C... | 3 KB |
| booksset1.json | 30-6-2021 19:42 | JSON File | 52 KB |
| loan.csv | 1-7-2021 22:35 | Microsoft Excel C... | 1 KB |
| members.csv | 1-7-2021 21:32 | Microsoft Excel C... | 3 KB |

Picture 13, backup data

The backup has been successfully made. And you will be auto redirected to the main menu of the librarian. Next step we will add a user and a book before restoring the backup.

## 5.2 Add a user

As a librarian you are able to make another librarian or a subscriber user. Press **3** from the main menu of librarian to register a user. It will be the same input as when you register as a subscriber in guest page. The only difference is that you can choose to make a subscriber or a librarian.

```
To register as user you need to fill in a view fields:
Gender: Female
Nationality:    Dutch
GivenName:  Jessica
Surname:    Anderson
StreetAddress:  Queenstreet
Zipcode:    2491 DH
City:   Goringchem
Email:  ezlife@gmail.com
Username:   Jess
TelephoneNumber:    06-09829304
Role:
[0] subscriber
[1] librarian

Please input your choice:
1
You have successfully registered a librarian
```

Picture 14, add user

Do check in the *"members.csv"* file to see if Jessica has been added as a librarian.

| 61,Female,Dutch,Jessica,Anderson,Queenstreet,2491 DH,Goringchem,ezlife@gmail.com,Jess,06-09829304,librarian | | | | | | | |

Picture 15, check members.csv

As you can see, we have successfully added a user to our database.

## 5.3 Add a book

To add a book press **4** in the main menu of librarian. You will be asked multiple questions to successfully register a book.  Do note that are a few restrictions on the add book function.

1.  Pages are in the range of 1 to 12000
2.  Year is in the range of 1 to 2021
3.  Copies is in the range of 1 to 6

I have added the restriction of copies just for the purpose of reviewing the loan function. For year you can have books written in the past but not books written from the future. If you use a number that is outside of this range it will **not** result in an error but it **will ask again** for an amount.

```
To add a book we need some information
Author: Sharoek
Country:    Suriname
Imagelink:  Pictures
Language:   Dutch
Link:    www.suriname.su
Pages:   203
Title:   How to add a book
Year:    2021
Copies: 7
Copies: 2
You have succesfully added a book to the catalog
```

Picture 16, add book

Let us look in the 'booksset1.json' if the book has been added. It will be the **last** book in the json.

```
1533    ⊟{
1534         "author": "Sharoek",
1535         "country": "Suriname",
1536         "imageLink": "Pictures",
1537         "language": "Dutch",
1538         "link": "www.suriname.su",
1539         "pages": "203",
1540         "title": "How to add a book",
1541         "year": "2021",
1542         "copies": "2",
1543         "copies_id1": "814ac961-b18f-4690-bcaf-f666e105cd6f",
1544         "copies_id2": "9b961a25-064f-4108-96be-3cf6312b6bd5"
1545    }
```

Picture 17, check json

## 5.4 Restore backup

For the last part in this user manual, we will restore the system before we had added a book and a user.  To do this only press **2**. Beware that it will execute **immediately**.

```
****Checking if there is a backup available****
****Backup Available****
****Restoring now****
****Restoring the catalog****
****Restoring of the borrowed books****
****Restoring of all the users****
****System has been restored****
****DONE****
```

Picture 18, restore happy path

As you can see, we have successfully restored the backup. We can check this by looking at the "members.csv" which should not have 'Jessica' and the 'booksset1.json' which should not have the book 'How to add a book'.

| 21 | 20,female,Dutch,GÃ¼lseren,Willigenburg,Dingspelstraat 28,9461 JE,Gieten,GulserenWilligenburg@teleworm.us,Ressoare,06-92433659,libra |
| 22 | 63,Male,Dutch,Sharoek,Mahboeb,I Dont know,2639 ZH,Rotterdam,sharoek@gmail.com,shark,06-45839021,subscriber |
| 23 | |
| 24 | |

```
1516      ]{
1517          "author": "Marguerite Yourcenar",
1518          "country": "France/Belgium",
1519          "imageLink": "images/memoirs-of-hadrian.jpg",
1520          "language": "French",
1521          "link": "https://en.wikipedia.org/wiki/Memoirs_of_Hadrian"
1522          "pages": 408,
1523          "title": "Memoirs of Hadrian",
1524          "year": 1951,
1525          "copies": 6,
1526          "copies_id1": "3cb0e1bb-4ccc-44ff-8cfb-c994e63806d9",
1527          "copies_id2": "7cc92a3c-97d0-49c3-a02a-84b1b196a8db",
1528          "copies_id3": "c20ba832-21aa-4c3e-8b2d-033b7638d35b",
1529          "copies_id4": "b516a34c-8d0d-4509-aca8-b7b890a69baf",
1530          "copies_id5": "b9370f76-1ab6-40ab-9680-8a53badc0f94",
1531          "copies_id6": "7efd67a2-c488-4672-a5f7-ef8fa41da915"
1532      }
1533  ]
```

Picture 19 and 20, check csv and json

***Notice the lines and compare it with picture***

# Attachment 1

## 1.1 Modified JSON

```json
    "author": "Chinua Achebe",
    "country": "Nigeria",
    "imageLink": "images/things-fall-apart.jpg",
    "language": "English",
    "link": "https://en.wikipedia.org/wiki/Things_Fall_Apart",
    "pages": 209,
    "title": "Things Fall Apart",
    "year": 1958,
    "copies": 5,
    "copies_id1": "0bb950c8-f187-48ed-b38f-9d90f2266289",
    "copies_id2": "e6736412-8212-46cc-97ce-a9e884595d9e",
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## 1.2 Modified members.csv

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2,female,Dutch,Maren,Breider,Van Humboldtstraat 130,3514 GS,Utrecht,MarenBreider@dayrep.com,Othed1997,06-23093526,subscriber
3,male,Dutch,Hayati,van Dekken,Schorweg 101,5993 PC,Maasbree,HayativanDekken@teleworm.us,Drem1996,06-74004784,librarian
4,male,Dutch,Valentin,Bosgra,Bloemgracht 9,1016 KA,Amsterdam,ValentinBosgra@armyspy.com,Malame,06-72509347,subscriber
5,female,Dutch,Minou,Hagendoorn,Antillen 40,3524 EZ,Utrecht,MinouHagendoorn@jourrapide.com,Ringdorges,06-21398457,librarian
6,female,Dutch,Anthonia,ten Thije,Kamperfoeliestraat 166,4725 AT,Wouwse Plantage,AnthoniatenThije@jourrapide.com,Ancion,06-98717738,librarian
7,female,Dutch,Talita,Selles,Princestraat 62,7741 JJ,Coevorden,TalitaSelles@gustr.com,Proutirepach,06-50015976,librarian
8,male,Dutch,BartholomeÃ¼s,Filippo,Helmerslaan 124,5615 JE,Eindhoven,BartholomeusFilippo@jourrapide.com,Didly1970,06-67324675,librarian
9,female,Dutch,Andreia,Sijtsma,Van Arkelstraat 141,2973 AL,Molenaarsgraaf,AndreiaSijtsma@jourrapide.com,Arge1936,06-23078929,subscriber
10,male,Dutch,Ziad,Talen,Ge van Rielstraat 59,7622 ET,Borne,ZiadTalen@rhyta.com,Lishat,06-10432698,subscriber
11,male,Dutch,Rodin,Reuser,Walstraat 43,4381 GT,Vlissingen,RodinReuser@gustr.com,Wortuld,06-52718159,librarian
12,male,Dutch,Enno,Wemmers,Draadrusplein 83,5223 DA,s-Hertogenbosch,EnnoWemmers@superrito.com,Ores1936,06-43021268,subscriber
13,male,Dutch,Amiet,Voorwinden,Birkhoven 36,3452 JK,Vleuten,AmietVoorwinden@jourrapide.com,Prands1940,06-41912638,librarian
14,female,Dutch,Khadya,John,Tongerloseweg 44,5087 KX,Diessen,KhadyaJohn@fleckens.hu,Greanded1959,06-59737627,librarian
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16,female,Dutch,Huda,van Woerden,Schoondijkseweg 1,4503 GK,Groede,HudavanWoerden@cuvox.de,Whosed,06-11031086,subscriber
17,male,Dutch,Pavan,van Wichen,Vlamingstraat 96,2713 RT,Zoetermeer,PavanvanWichen@armyspy.com,Myst1937,06-27254336,subscriber
18,male,Dutch,Bengt,Scheepers,Riouwstraat 194,1094 XM,Amsterdam,BengtScheepers@jourrapide.com,Wher1976,06-82354705,librarian
19,female,Dutch,Ã–zgÃ¼l,Overgaauw,Adriana Noorlandersingel 200,3065 HE,Rotterdam,OzgulOvergaauw@superrito.com,Shrothem1971,06-15253488,subscriber
20,female,Dutch,GÃ¼lseren,Willigenburg,Dingspelstraat 28,9461 JE,Gieten,GulserenWilligenburg@teleworm.us,Ressoare,06-92433659,librarian

## 1.3 New loan.csv

Book,UUID,Loandate,Duedate,Borrower