

EE477 Database and Big Data Systems, Spring 2021

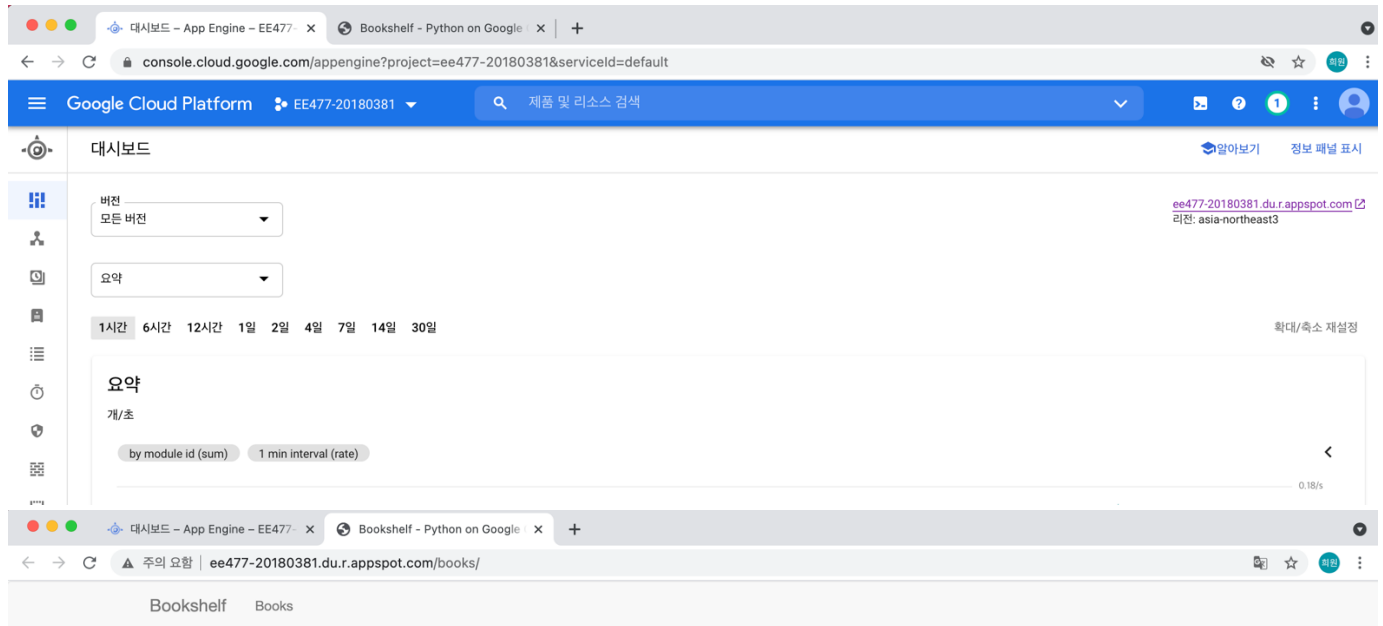
HW3

Name: Heewon Yang

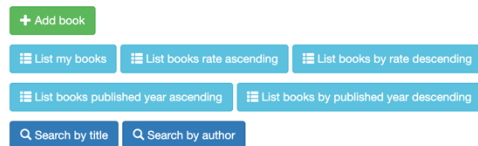
Answer to Task

[Task 1]

Below pictures can demonstrate that I successfully deployed the Bookshelf application. (Since my student id is 20180381)



Books



A Little Cloud created by 양희원
James Joyce



[Task 2]

I added attribute “rate” which is an Integer to class Book like below code.

```

39 # [START model]
40 class Book(db.Model):
41     __tablename__ = 'books'
42
43     id = db.Column(db.Integer, primary_key=True)
44     title = db.Column(db.String(255))
45     author = db.Column(db.String(255))
46     publishedDate = db.Column(db.Integer)
47     imageUrl = db.Column(db.String(255))
48     description = db.Column(db.String(4096))
49     createdBy = db.Column(db.String(255))
50     createdById = db.Column(db.String(255))
51     rate = db.Column(db.Integer)
52
53     def __repr__(self):
54         return "<Book(title='%s', author='%s')" % (self.title, self.author)
55 # [END model]

```

And added some lines to ‘form.html’ file.

```

45 <div class="form-group">
46     <label for="rate">Rate books by 1 ~ 5 stars</label>
47     <input type="number" name="rate" id="rate" value="{{book.rate}}" class="form-control"/>
48 </div>
49
50 <button type="submit" class="btn btn-success">Save</button>
51 </form>
52
53 {% endblock %}
54 {# [END form] #}

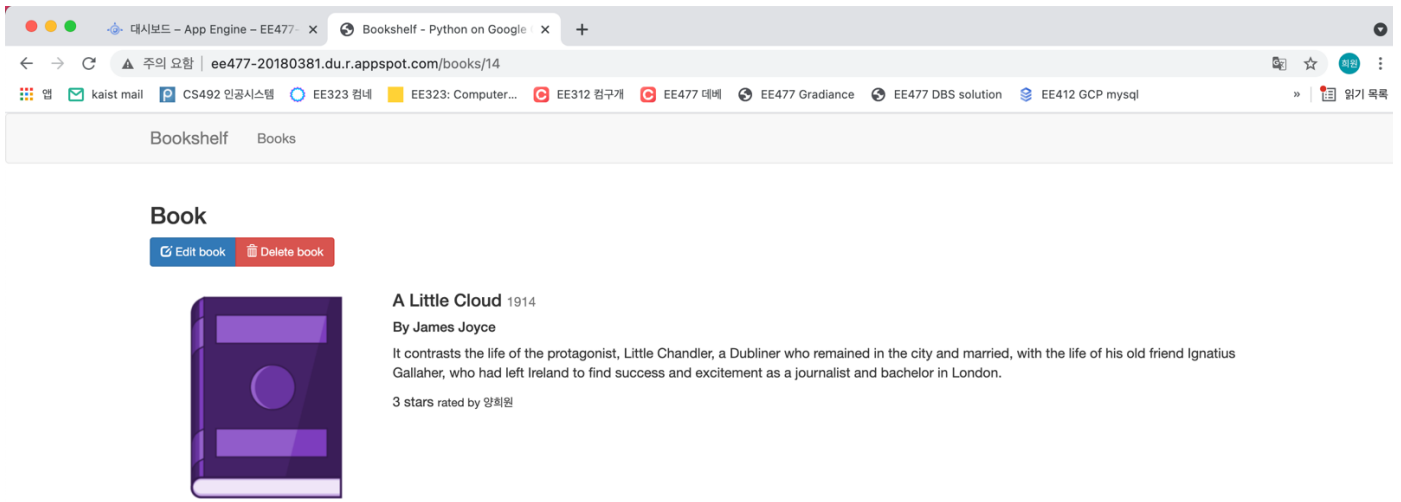
```

Therefore, in the application, when I press the button “+ Add Book”, the following window comes out.

The screenshot shows a web browser window with the URL `ee477-20180381.du.r.appspot.com/books/add`. The page has a header with 'Bookshelf' and 'Books' links. The main content is titled 'Add book' and contains the following form elements:

- Title**: A text input field.
- Author**: A text input field.
- Date Published**: A text input field.
- Description**: A text area input field.
- Rate books by 1 ~ 5 stars**: A number input field.
- Save**: A green button at the bottom of the form.

When, you type an integer from 1 to 5 to the “Rate books by 1 ~ 5 stars” block, we can see the each of the book’s rate when we click the book in the list, like below.



Also, I added the code “rated by {{book.createdBy}}” to ‘view.html’ file (below code), so that we can see “3 stars rated by 양희원” on the above picture.

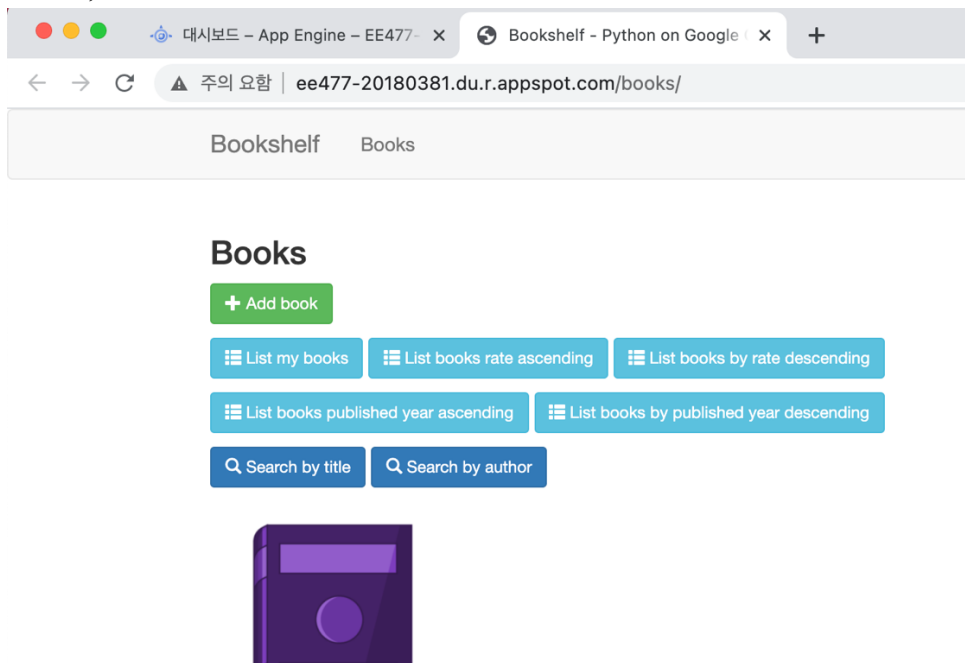
```

43     <h5 class="book-author">By {{book.author|default('Unknown', True)}}</h5>
44     <p class="book-description">{{book.description}}</p>
45     <p class="book-rate">{{book.rate}} stars
46     <small>rated by {{book.createdBy}}</small>
47     </p>
48 </div>
49 </div>
50
51 {% endblock %}

```

[Task 3]

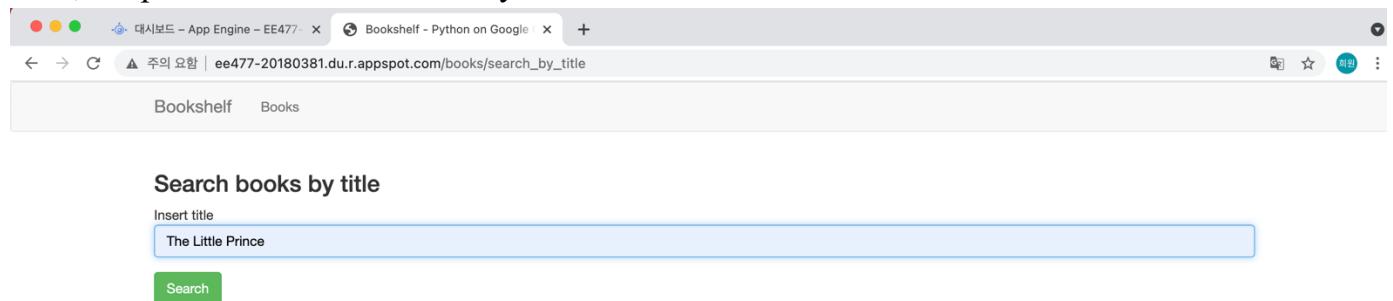
I added two buttons (Search by title, Search by author) for searching books by title and author’s name, like below.



I added the following 13 books to my Bookshelf application.

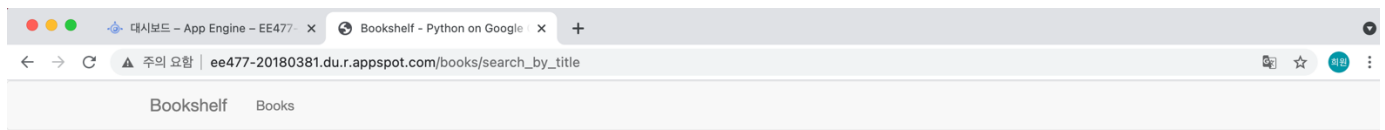
Title	Author	Published Year	Rate
A Little Cloud	James Joyce	1914	3 by 양희원
American Marxism	Mark R. Levin	2021	1 by None (initialized)
Gulliver’s Travels	Jonathan Swift	1943	3 by None (initialized)
Harry Potter and the Chamber of Secrets	J. K. Rowling	1998	4 by None (initialized)
Harry Potter and the Goblet of Fire	J. K. Rowling	2000	1 by None (initialized)
Harry Potter and the Half-Blood Prince	J. K. Rowling	2005	4 by Yang Heewon
Harry Potter and the Philosopher’s Stone	J. K. Rowling	1997	5 by None (initialized)
Harry Potter and the Prisoner of Azkaban	J. K. Rowling	1999	3 by None (initialized)
Jane Eyre	Charlotte Brontë	1847	5 by 양희원
Moby Dick	Herman Melville	1851	2 by None (initialized)
The Little Prince	Antoine de Saint-Exupéry	1943	5 by None (initialized)
The Selfish Gene	Richard Dawkins	1976	4 by None (initialized)
Twilight	Stephenie Meyer	2005	5 by Yang Heewon

First, if I push the button “Search by title” then the below window comes out.



The screenshot shows a web browser window with the address bar displaying "ee477-20180381.du.r.appspot.com/books/search_by_title". The page has a header with "Bookshelf" and "Books" links. Below the header, there is a section titled "Search books by title". Under this title, there is a text input field labeled "Insert title" containing the text "The Little Prince". Below the input field is a green button labeled "Search".

If I type “The Little Prince” and push the button “Search”, the below picture comes out, which only shows the book “The Little Prince”.



Books

[Back to list](#)

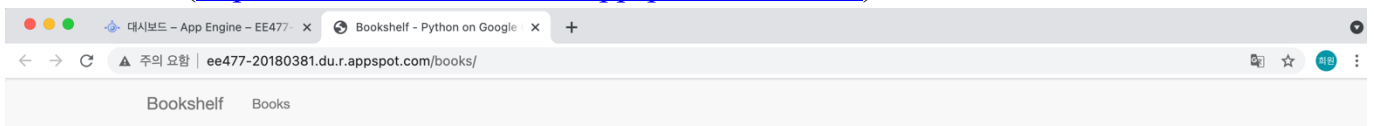


The Little Prince

Antoine de Saint-Exupéry

5 stars

And, If I push the button “Back to list”, I can go back to the list that has all of the books that user have added. (<http://ee477-20180381.du.r.appspot.com/books/>)



Books

[+ Add book](#)

[List my books](#)

[List books rate ascending](#)

[List books by rate descending](#)

[List books published year ascending](#)

[List books by published year descending](#)

[Search by title](#)

[Search by author](#)

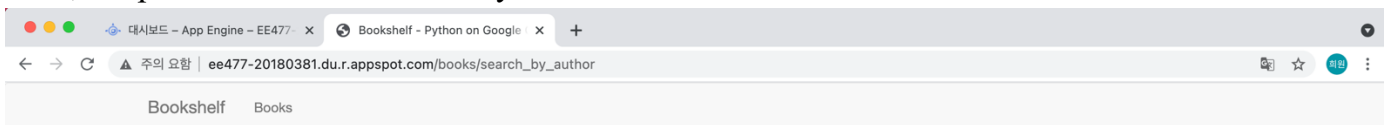


A Little Cloud created by 양희원

James Joyce



Also, if I push the button “Search by author” then the below window comes out.



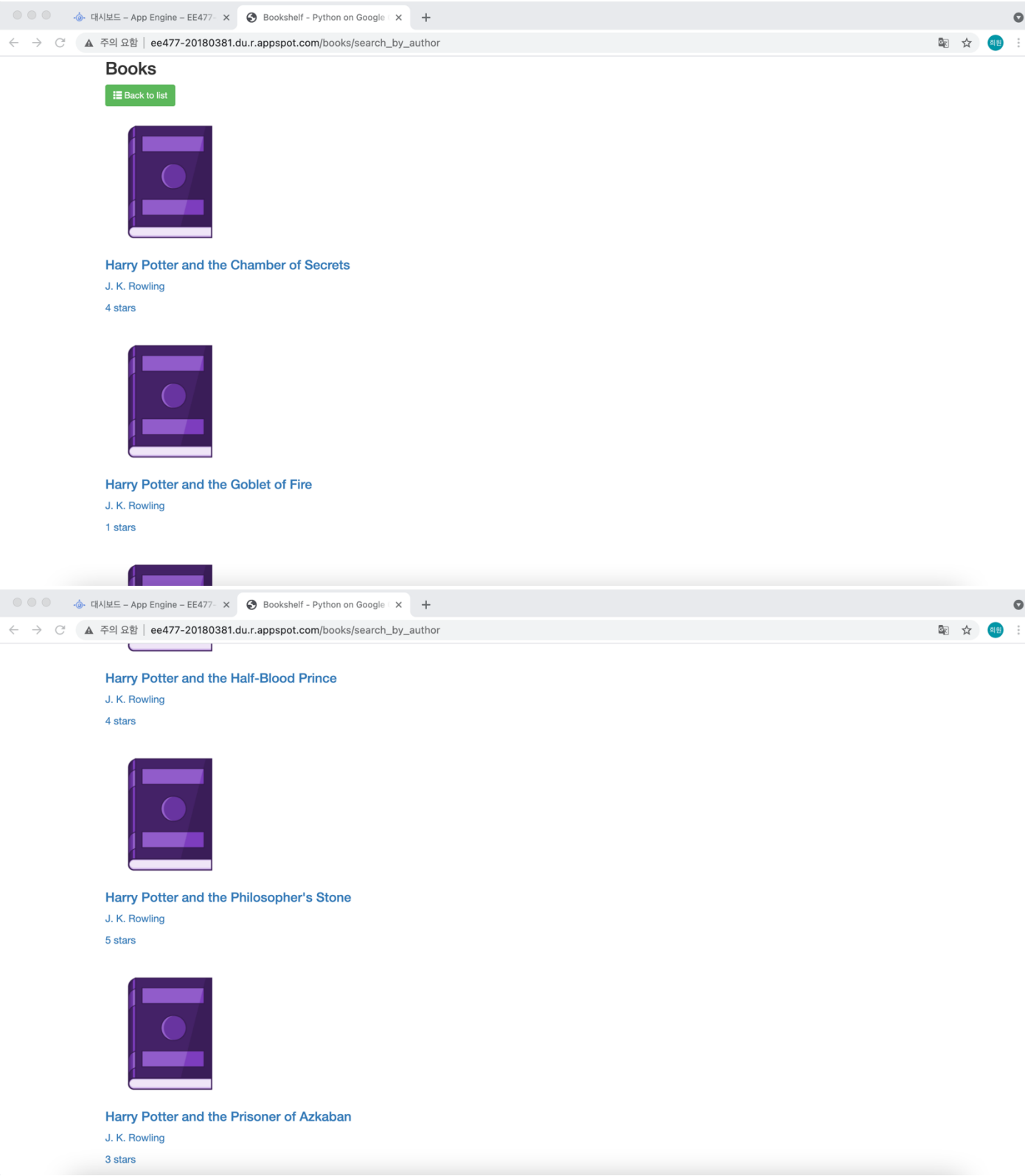
Search books by author's name

Insert author's name

J. K. Rowling

[Search](#)

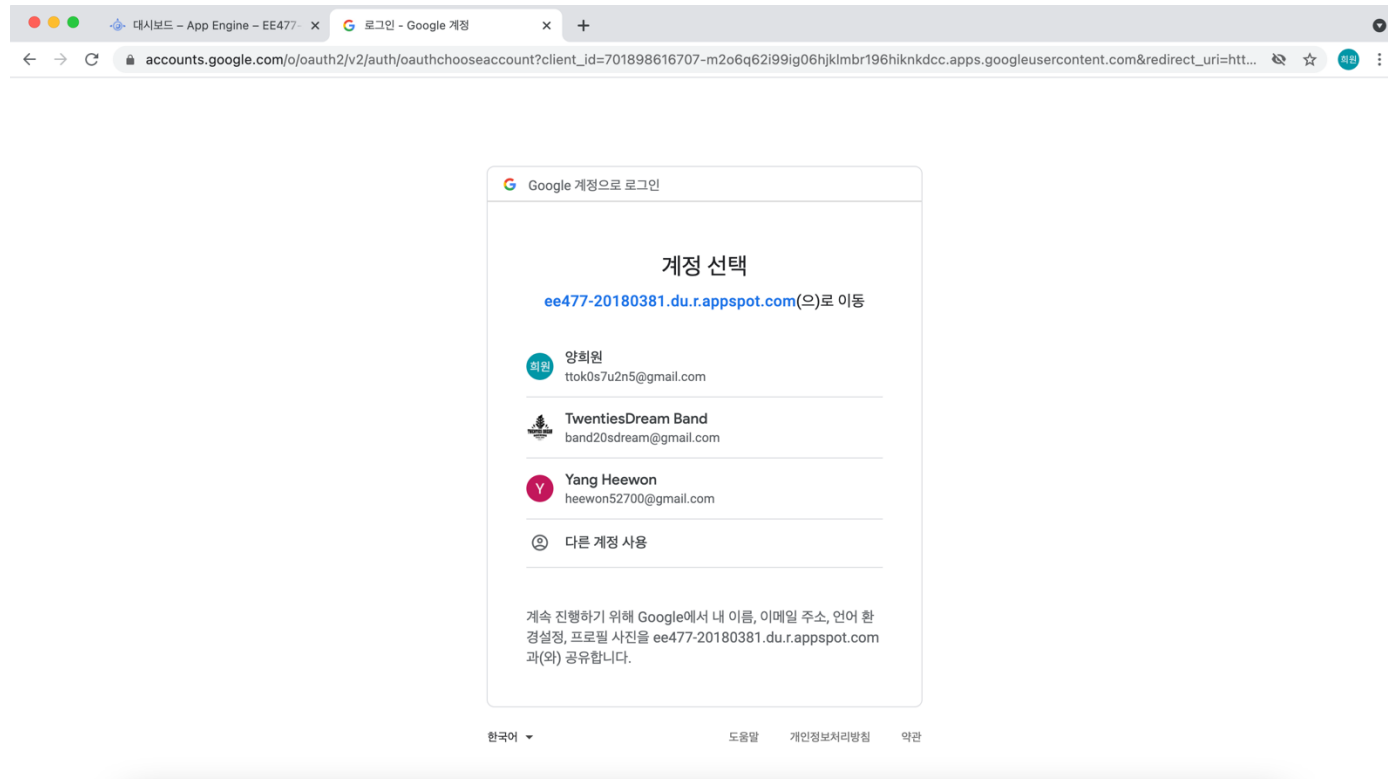
If I type “J. K. Rowling” and push the button “Search”, the below picture comes out, which shows 5 books which were written by J. K. Rowling.



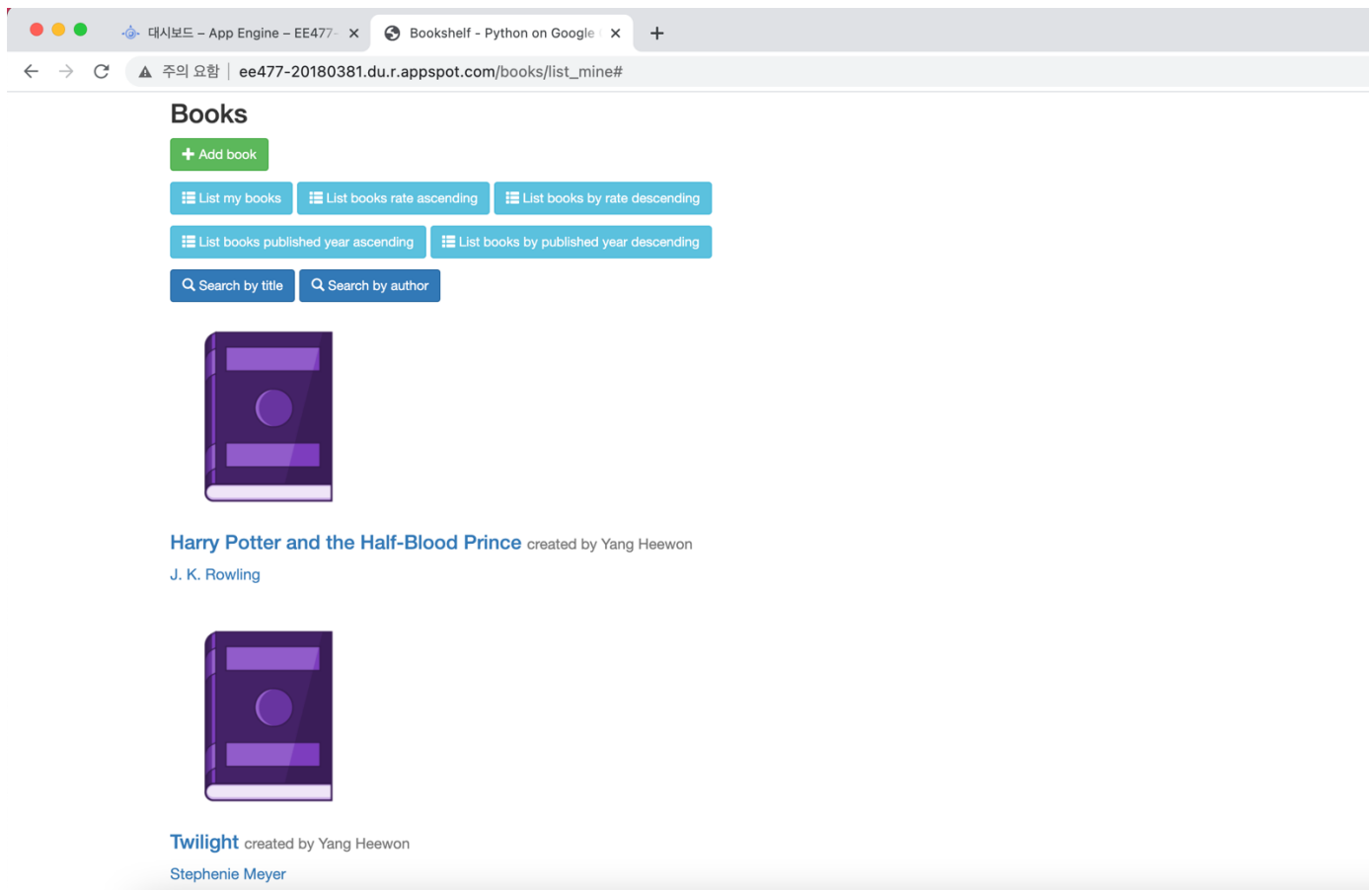
[Task 4]

I added a function authenticating to Google with a library UserOAuth2, from `oauth2client.contrib.flask_util`. I referred to this code <https://github.com/clayheaton/flask-oauth2-domain-restriction/blob/master/app.py> to implement the “create_app” and “_request_user_info” functions in `__init__.py`.

Thanks to UserOAuth2 library, I made the application reachable to whom has the google account. If you access the application and want to list the books which are uploaded by only you, press “List my books”. Then, the following window comes out. (Since I have three google accounts, this shows three accounts.)

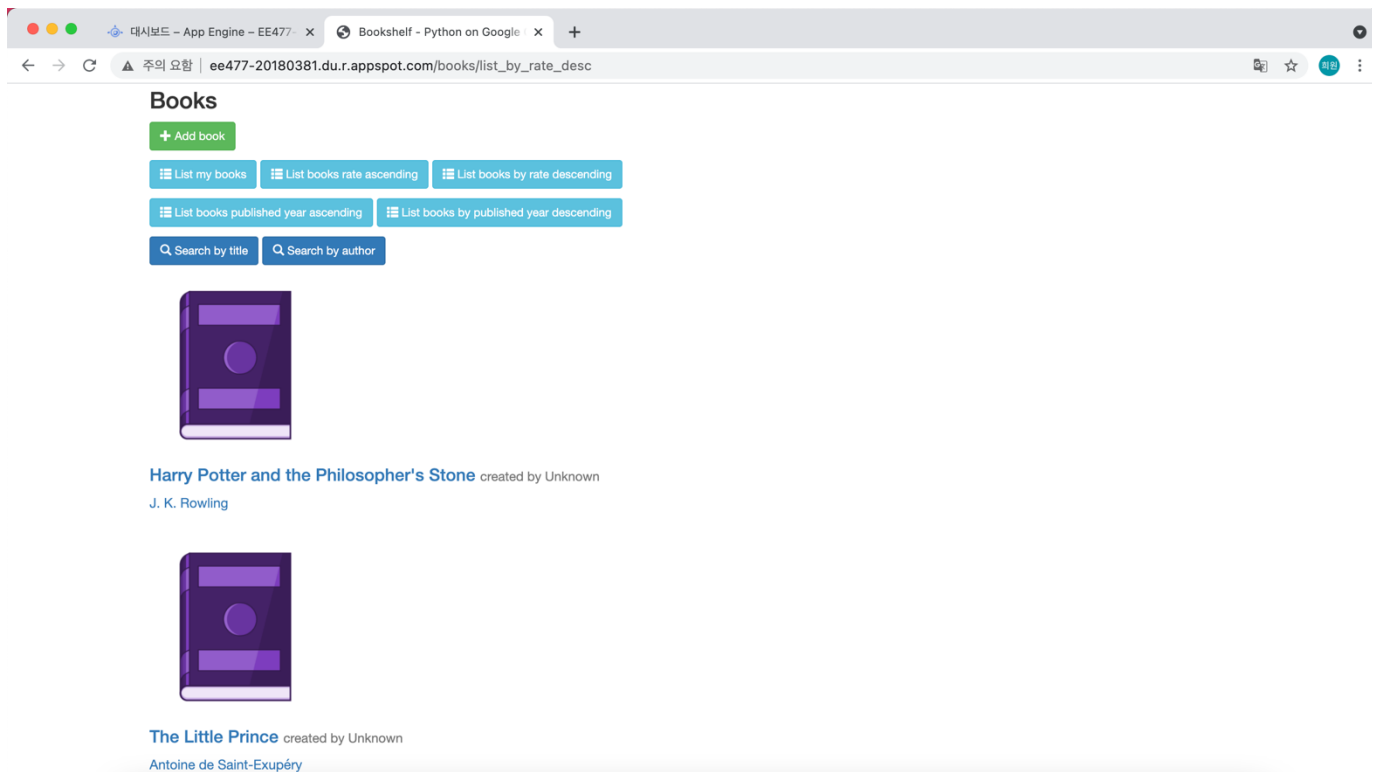


Click one of your accounts, and connect to my Bookshelf application. Then, the application would store the name and email address of you (the users). Therefore, if I want to list books which are uploaded by the account “Yang Heewon (heewon52700@gmail.com)”, so I choose the account, then the following window comes out, which contains books that are uploaded by me (Yang Heewon account).

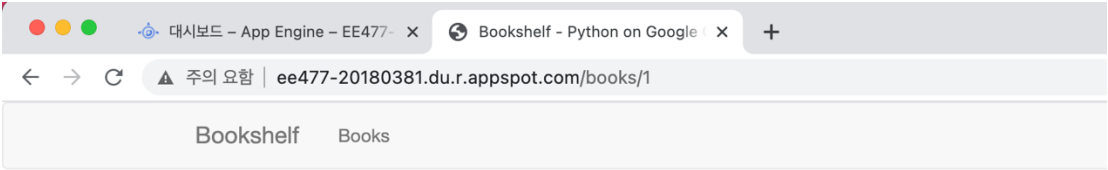


Also, I added functions for listing the books by the rate and by the published year. If I push one of the buttons in the below picture, I can list all of the books ordered by their rates or their published years.

For example, If I push the button “List books by rate descending”, then I can reach the highest rated books first.



If I check the top two books, “Harry Potter and the Philosopher’s Stone” and “The Little Prince”, I can see that the rates of both books are 5 stars.



Book

[Edit book](#) [Delete book](#)

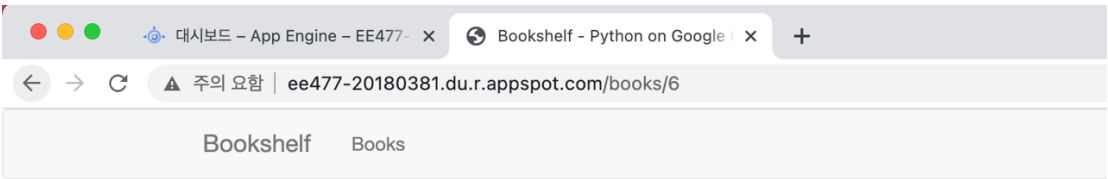


Harry Potter and the Philosopher's Stone 1997

By J. K. Rowling

1st Harry Potter novel

5 stars rated by None



Book

[Edit book](#) [Delete book](#)



The Little Prince 1943

By Antoine de Saint-Exupéry

The little prince

5 stars rated by None