Tạo một project dạng sau:

Tên Project: **<MASV>_Lab04**
Nén bài làm lại với tên: `submit.zip`

Sau đó submit bài làm (`submit.zip`) vào mục **Assignment/Lab04** trên EduNext.

Due: 23:59, 07/10/2024

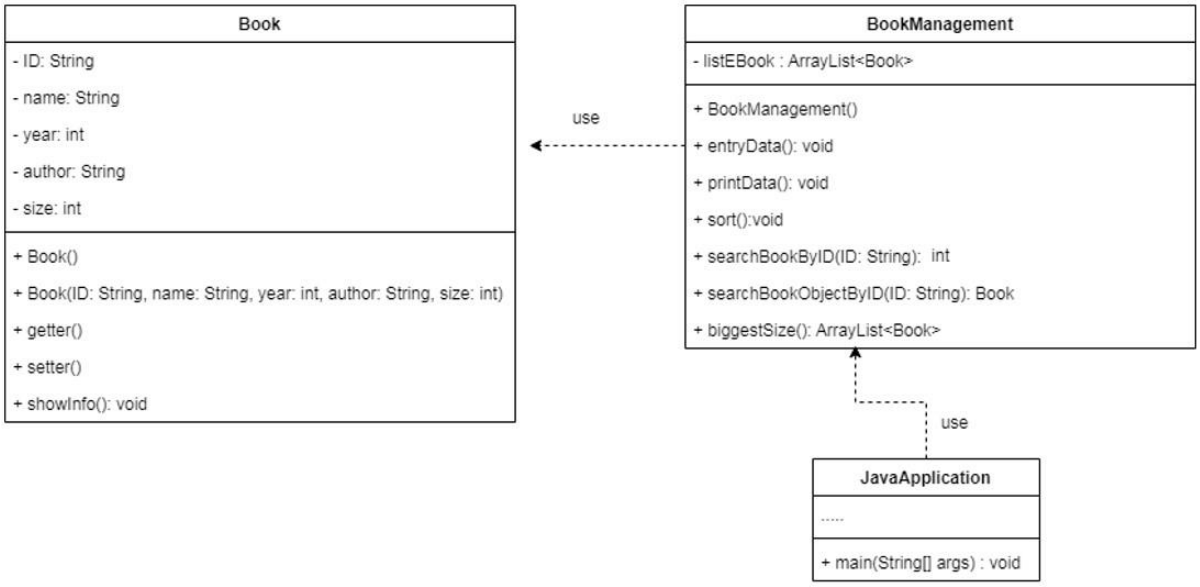
Lưu ý các yêu cầu (tham khảo tiêu chí đánh giá các bài lab/assignment):

- Comment giải thuật đầy đủ,
- Format code,
- Thông tin phần author,
- .jar file,
- Output format.

Technical Requirements:

1. Using Object-Oriented programming style.
2. Using ArrayList to store data
3. Check data input is valid with following information:
   ID: must be exactly 5 characters and no duplicated with existed ID in Database (your list).
   name: not empty
   year: must be in range 1900 to 2024 and not empty
   author: not empty
   size: must be greater than 0 and not empty

Create 3 classes as below: **(2 marks)**



- **entryData():** Add new book to ArrayList (listEBook)
- **printData():** Print list of books
- **sort():** Sort the list of books ascending by size
- **searchBookByID(ID):** This function will return the index of the Book found in the list, if it is found. It will return -1 if the book is not found
- **searchBookObjectByID(ID):** This function will return the object of the Book found in the list, if it is found. It will return null if the Book is not found
- **biggestSize():** Returns a list of books with the largest size

Write a book management program with the following functions:

Create menu for this program as below:

```
----- BOOK MANAGEMENT -----
1. Adds new book.
2. Shows all books.
3. The biggest size book.
4. Search a book by ID.
5. Sort the list of books ascending by size.
6. Quit.
Please select a function:
```

Function 1. **(2 marks)** When user selects the first function, the application will receive book information from the user's keyboard and add this book into a list.

```
----- Add new ebook -----
Input ID: B0001
Input name: HTML
Input year: 2024
Input authors: Pierre, Jack
Input size (kilobyte): 120
Ebook created and added to list of ebooks successful!
```

Function 2. **(2 marks)** When user selects the second function, the list of books will be shown:

```
----------------------------BOOK MANAGEMENT ----------------------
| No. | ID    | Name               | Year | Author         | Size  |
+-----+-------+--------------------+------+----------------+-------+
|  1  | B0001 | HTML               | 2022 | Peter, John    | 100KB |
+-----+-------+--------------------+------+----------------+-------+
|  2  | B0002 | C/C++              | 2000 | Bobita         |  90KB |
+-----+-------+--------------------+------+----------------+-------+
|  3  | B0003 | JAVA               | 1999 | Jerry          |  65KB |
+-----+-------+--------------------+------+----------------+-------+
|  4  | B0004 | Python             | 1998 | John           |  70KB |
+-----+-------+--------------------+------+----------------+-------+
|  5  | B0005 | Javascript         | 2000 | Peter          |  19KB |
+-----+-------+--------------------+------+----------------+-------+
```

Function 3. **(1 marks)** When user select the third function, the list of ebooks having the largest size:

```
---------------------- BOOK MANAGEMENT ----------------------
| No. | ID    | Name               | Year | Author     |  Size |
+-----+-------+--------------------+------+------------+-------+
|  1  | B0002 | Java               | 2010 | Mark       | 200KB |
+-----+-------+--------------------+------+------------+-------+
```

Function 4. **(1 marks)** When the user selects the fourth function, it will return the book information with the ID entered by the user.

```
>>> Please enter book's ID to search: B0002
Search Results:
---------------------- BOOK MANAGEMENT ----------------------
| No. | ID    | Name               | Year | Author     |  Size |
+-----+-------+--------------------+------+------------+-------+
|  1  | B0002 | Java               | 2010 | Mark       | 200KB |
+-----+-------+--------------------+------+------------+-------+
```

If the book is not found, it will display the message 'Not Found'.

```
>>> Please enter book's ID to search: B0009
Search Results: Not Found
```

Function 5. **(1 marks)** When the user selects the fifth function, the list will be sorted in ascending order by size, and the sorted list of books will be displayed.

```
----------------------------BOOK MANAGEMENT ----------------------
| No. | ID    | Name               | Year | Author         | Size  |
+-----+-------+--------------------+------+----------------+-------+
|  1  | B0005 | Javascript         | 2000 | Peter          |  19KB |
+-----+-------+--------------------+------+----------------+-------+
|  2  | B0003 | JAVA               | 1999 | Jerry          |  65KB |
+-----+-------+--------------------+------+----------------+-------+
|  3  | B0004 | Python             | 1998 | John           |  70KB |
+-----+-------+--------------------+------+----------------+-------+
|  4  | B0002 | C/C++              | 2000 | Bobita         |  90KB |
+-----+-------+--------------------+------+----------------+-------+
|  5  | B0001 | HTML               | 2022 | Peter, John    | 100KB |
+-----+-------+--------------------+------+----------------+-------+
```

Function 6. **(0.5 marks)** When the user selects 6th function, end the program and display the information below

```
THANK FOR USING OUR APPLICATION!
SEE YOU AGAIN!
```

Function 7. **(0.5 marks)** When user selected invalid function, the application will be shown the warning message "The function of application must be from 1 to 6!"