

# Library Information System Assignment

## Department of Homeland Obscurity

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### Requirements Review

Please complete the following tables indicating which of the mandatory requirements you have completed. In cases where there is an issue or you interpreted the requirement in a specific way, please use the comment field to clarify the issue / your interpretation. In the status column indicate whether each requirement was: COMPLETED (you did it), NOT STARTED (you didn't do it), PARTIAL (you did part of it).

### Member Requirements Progress

Req. #	Title	Comment	Status
M0	Member Login	Members and librarians login with the same view but are brought to different portals.	COMPLETE
M1	View List of Loans		COMPLETE
M2	Renew Loans		COMPLETE
M3	Reserve Available Artifacts		COMPLETE
M4	Reserve On Loan Artifacts		COMPLETE
M5	View Loan History		COMPLETE
M6	Search for Artifacts		COMPLETE
M7	Update Profile		COMPLETE

### Librarian Requirements Progress

Req. #	Title	Comment	Status
L0	Librarian Login	See member login above	COMPLETE
L1	Add / Remove Artifacts		COMPLETE
L2	Search for Members		COMPLETE
L3	View Members Current Loans		COMPLETE
L4	View Members Past Loans		COMPLETE
L5	Renew Loans		COMPLETE
L6	Reserve Artifacts		COMPLETE
L7	Record Loaned Artifacts		COMPLETE
L8	Record Returned Artifacts		COMPLETE
L9	Search for Artifacts		COMPLETE
L10	Edit Member Profiles		COMPLETE

### General Requirements Progress

Req. #	Title	Comment	Status
G0	Search for Artifacts		COMPLETE
G1	Join Library		COMPLETE

## Additional Requirements

Describe any additional requirements you have completed above and beyond the spec of the project. Use as much space as you require to do this.

We implemented a Media of the Month recommendation. This is displayed to all members, librarians and general users. Librarians have the option of changing what media is displayed. You can find this in their task list.

We implemented a contact form located on the index page which any user can send to the librarians. The librarians can access these messages in their portal with the details of the message displayed. They can delete the message once they have read it.

We implemented a dynamic opening hours widget to inform users of the library's opening hours easily from the index page. The widget header changes depending on the time of day and the opening hours, <as determined by the librarian.>

Summarise these requirements using the requirements table below.

Req. #	Title	Comment	Status
A0	Media of the Month		COMPLETE

<b>A1</b>	Contact Form		COMPLETE
<b>A3</b>	Opening Hours	The widget works as expected but there is no facility to change the opening hours.	PARTIAL

## Reflections

Please summarise your experiences on the project: what did you learn; what challenges did you have to overcome; what would you have done differently if you could have started over.

### DO NOT WRITE MORE THAN ONE PAGE

#### Caoimhe's section

In this project I learnt how to use hibernate search. Hibernate search is a way of integrating apache lucene into a hibernate project. Apache Lucene is a java library that provides indexing and search features.

I discovered this when I was researching how to search for artifacts in our database. At first, I tried to follow the documentation but I grew confused. This led me to look at tutorials. I tried to implement the first one I came across, however, there were many mistakes and this delayed me. After becoming more confused I found a different tutorial which was much clearer and did not have errors.

What I would change would be to spend some more time researching and comparing information before starting to code. I would have saved time and effort. In the end, the process of integrating it into our project was much simpler than anticipated. It was great being able to search for artifacts even with small spelling errors.

#### Martynas's section

In this project I learned how user authentication works through making login forms and the concept of user sessions. I also learned how databases are used in web applications.

One of the challenges I came across was using foreign keys of one repository to access another repository. In the end I learned about findBy methods which can be put into the repository interfaces which in turn translate into a query which is used on that repository to retrieve a specific field.

In the future I would change my approach to solving a problem. Instead of diving straight into writing code I would first draw out diagrams, and charts to link the various endpoints together, following model-view-controller principles. Writing the code straight away often made me feel lost, and confused to what part or view I should go to next which resulted in wasted time long term.

#### Joseph's Section

I thoroughly enjoyed this project. Two technical challenges that I encountered during the course of the project were: how to pull various artifacts from the database with potentially different fields and display them in a consistent way on an artifact template. The solution was to use the "SingleTable" inheritance type and the Java Reflection API, which required some study to understand and implement correctly.

While I encountered many challenges over the course of the project, the most frustrating and time-consuming ones resulted from not having done enough planning. Some features, which seemed easy at first, were actually a lot more complicated to implement than expected. I think

doing more planning up-front, creating more granular User Stories, code flowcharts or, indeed, Unit Tests, would have saved a lot of time and hassle. Overall the development process was engaging and rewarding, and I am looking forward to applying the skills I have learned here toward future projects.