

## 4 Storing data in Database

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Up to now, all books are stored in the service class itself. Every time you restart the project, all books are deleted. Therefore, it is more convenient to store all data in a database.

You've already noticed at the user lab that you're going to have to thoroughly rework your code. Therefore, you should create a version or release in your GitHub project of your last commit. Alternatively, you can start a new branch. That way, you can later easily find the point where stories 1-3 worked with in-memory data (ArrayList).

This part of the project consists of two components.

1. Refactor the code you created so far so that the data is stored in a database. You will find the reworked user stories (denoted with v2) attached to this assignment. Note that in some stories the output of the rest controller has changed.
2. Add extra functionalities (story 4-6)

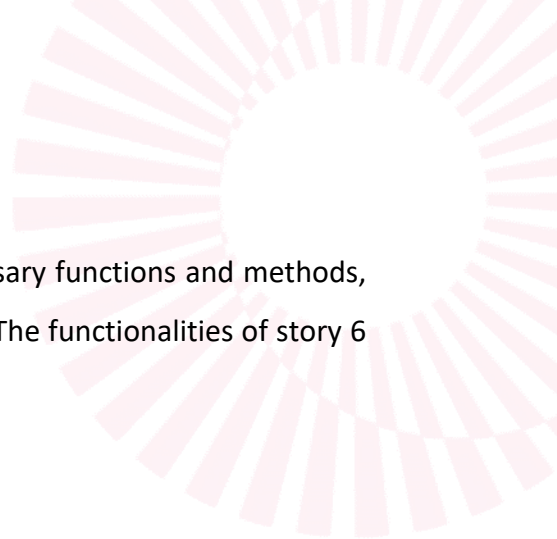
Download new resources (front-end, test classes and stories) from

<https://github.com/UCLLBackEndDevelopment/startercode/tree/main/Project/deel-2> .

They replace the previous stories, test classes, front-end.

For component 1, follow the same steps as for the lab User.

- Add the necessary Maven dependencies
- Prepare your project for the h2-database: update the file application.properties
- Refactor your Book class to match v2 of the stories 1-3. Comment or remove the “old” BookTest and download the new one. Refactor your code until all tests pass.
- Refactor the class BookService such that all data will be stored in and queried from the database (put the repository in package “repo”). Make sure all methods have the correct return value. These may be different from the previous version. Test with the new BookServiceTest.
- Refactor the restcontroller where necessary.
- Test first with your Thunderbird collection and next with the new front-end.



For component 2, complete the class diagram. Write the necessary functions and methods, run the tests until they pass. Test the url's first in Thunderbird. The functionalities of story 6 are not used in the given front-end.