

M1

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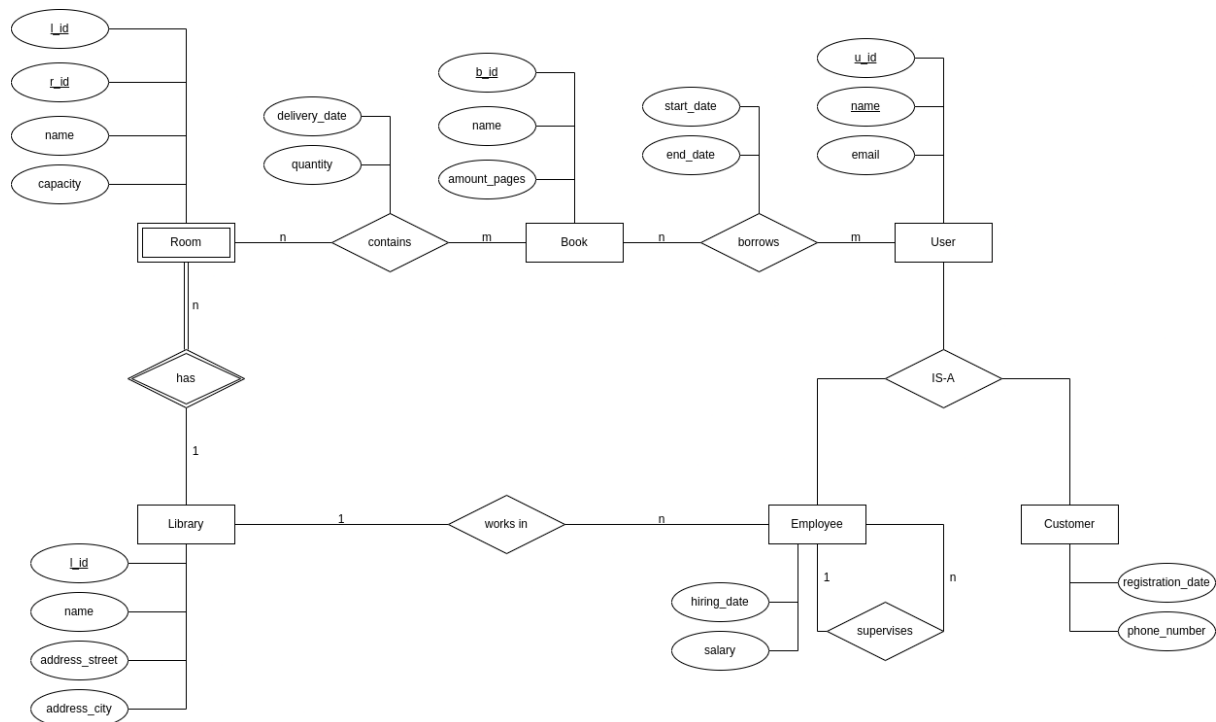
The application domain of this project covers a company that owns several self-checkout libraries. This library service is accessible to any user of the system, whether they are employees or customers. Employees, on the one hand, can log into the system and see the current status of their corresponding library. On the other hand, customers can log in to the system to view the books available for rent. These users have a unique username, email and two additional attributes specific to their entity type (employee/customer).

Libraries in the system have multiple rooms that assign books based on their delivery date and room capacity. Books are described by their name and their total number of pages, while rooms differ by size and capacity.

Finally, a library may have several employees and is described by an address and the city in which it is physically located. Each library selects one employee to be the supervisor of all current workers.

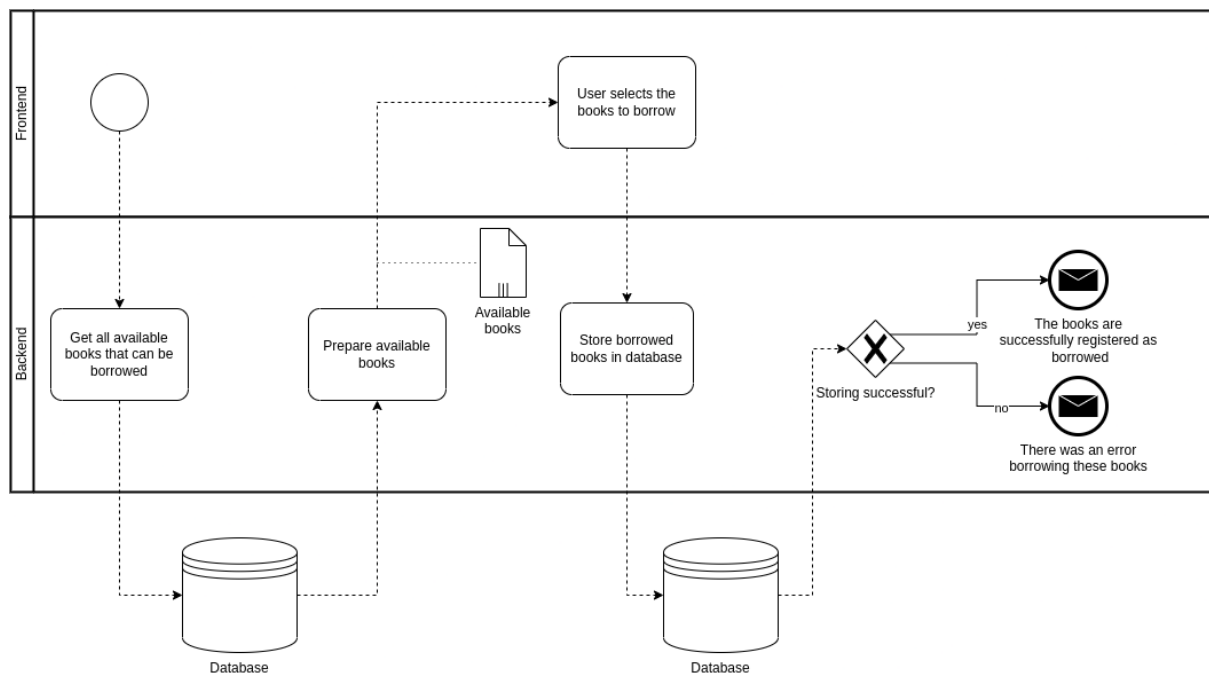
ER Diagram

If the diagram is too small to display, it can be viewed here: https://drive.google.com/file/d/1YPR_UoBrHf-GoQjBfhuAQRbVLYvz5ncP/view?usp=sharing



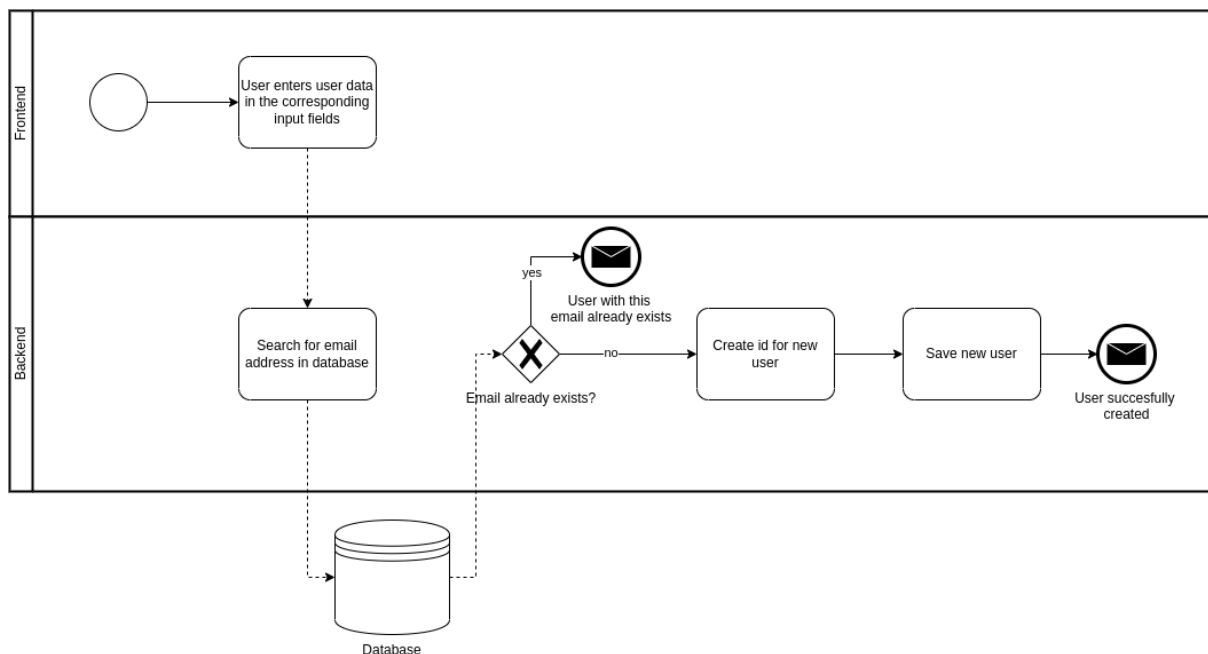
Main Use Case 1: Borrowing a book (Hinterleitner Lukas)

- Objective
 - The customer borrows a book at the library he/she is currently at.
- Short description
 - The customer selects the book he/she wants to borrow. Then a button which triggers the borrowing process is clicked. Afterwards, either a success or a failure message is shown.
- Precondition
 - The customer has to be registered and the corresponding account is created. Additionally, the user has to be logged in.
- Expected execution
 - Success
 - The customer gets a message that the book is successfully marked as borrowed.
 - Failure
 - The customer gets a corresponding error message.



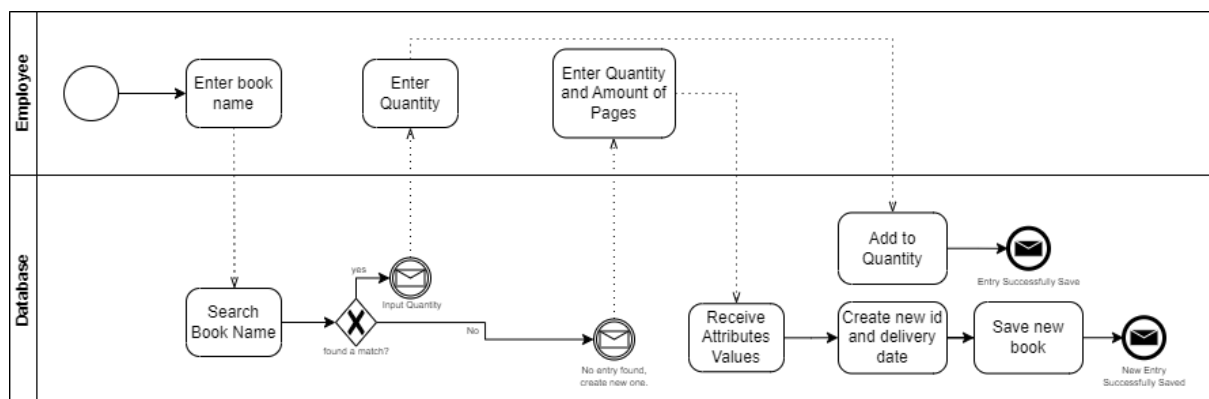
Secondary Use Case 1: Customer registration (Hinterleitner Lukas)

- Objective
 - The customer registers a new account at the library.
- Short description
 - The customer registers for an account using the necessary credentials. For simplicity of the login process, only the email, the name and the phone number will be taken for it and no password is generated.
- Precondition
 - none
- Expected execution
 - Success
 - The customer will be redirected to the page, where he/she can borrow books.
 - Failure
 - The customer gets an adequate error message.



Main Use Case 2: Employee Adds Book to Inventory (Arostegui Arias Andres Vladimir)

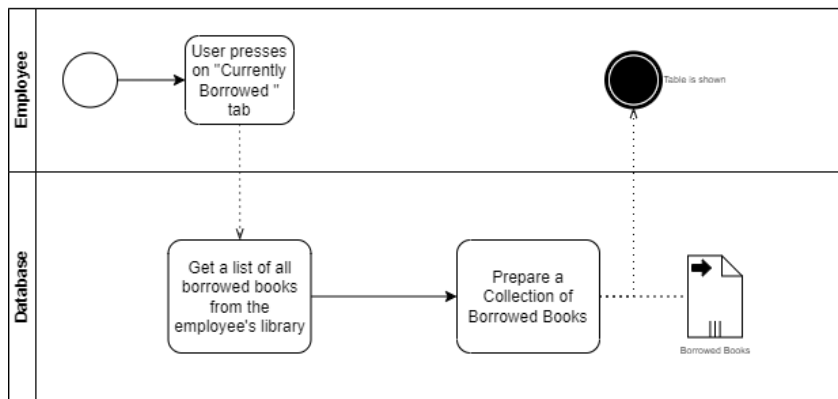
- Objective
 - The employee adds a book to the inventory of a library.
- Short description
 - The employee adds necessary book characteristics to the database.
- Precondition
 - The employee must be registered in the system as a User and belong to a library branch. The User has to be logged in.
- Expected execution
 - Success
 - Employee inputs the values relevant for the book in question into the database and adds a new entry. He/she receives a pop-up message with the confirmation of success.
 - Failure
 - If the book is already in the database, then an error message would appear not allowing the user to add an entry with the same attributes.



Secondary Use Case 2: Employee Checks Borrowed Books (Arostegui Arias Andres Vladimir)

- Objective
 - The employee checks the books that are currently borrowed.
- Short description
 - The employee logs on to the system to verify the books that are currently borrowed.
- Precondition
 - Employees must have a User account and there should exist at least one book in the database.

- Expected execution
 - Success
 - Employees are able to successfully log in to the system and display an actual table of all books borrowed locally.
 - Failure
 - Employees get an error message if there are no entries for books in the database.



Reporting (Arostegui Arias Andres Vladimir)

Books borrowed the most for each library sorted by name of the book and filtered by amount of pages > 200.

- Entities: Library, Room, Book, User
- Filtered by: Amount of Pages
- Sorted by: Book Name
- Columns: Library Name, Book Name, Amount of Pages, Username

Reporting (Hinterleitner Lukas)

For each library list the book with its corresponding quantity for each room filtered by delivery date December and sorted by name of the book.

- Entities: Library, Room, Book
- Filtered by: delivery date
- Sorted by: book name
- Columns: Library name, room name, delivery date, book name