

TALLINN UNIVERSITY OF TECHNOLOGY
School of Information Technologies

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Tartu Health Care College Practice Equipment Lending System

Course work

Supervisor: Andres Käver

Tallinn 2024

Author's declaration of originality

I hereby certify that I am the sole author of this thesis. All the used materials, references to the literature and the work of others have been referred to. This thesis has not been presented for examination anywhere else.

Author: Kirke Tammperre

18.02.2024

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1 Introduction

This project aims to create a comprehensive **practice equipment** reservation system for Tartu Health Care College, as the current system lacks real-time visibility, making it **time-consuming and inaccurate**. This results in several drawbacks:

- **Resource Waste:** The frequent loss, theft, and damage of practice equipment due to the absence of a centralized tracking system.
- **Insufficient Availability:** Students and teachers may struggle to access the necessary practice equipment in a timely manner, as the booking system is cumbersome and slow.
- **Inefficient Management:** Administrators are burdened with an excessive workload in managing bookings and tracking the availability of practice equipment.

The software simplifies resource management for everyone involved. It will offer clear visibility on who has borrowed what and where, enabling administrators to efficiently approve or reject reservations online. Additionally, the system will maintain a live inventory of where resources are currently located or where they should be returned.

Furthermore, the application will serve as a valuable tool for gathering statistical data, offering insights into:

- **Maintenance of Resources:** Understanding the frequency at which each resource requires maintenance.
- **Costs of Maintenance and Resources:** Calculating the maintenance and repair costs of each resource, aiding in budget planning.
- **Availability of Resources:** Assessing the availability of resources to ensure all students and teachers have access to the necessary equipment. This data might also highlight the need for purchasing additional resources based on high demand.

For instance, if a particular mannequin is frequently booked, the acquisition of a duplicate could be considered.

Furthermore, the application is designed to enhance the management and utilization of educational resources through several key features:

- **Real-Time Notifications:** The software will facilitate real-time notifications to both lenders and managers about upcoming reservations, maintenance needs, or other significant events. This ensures that all parties remain informed about important activities and deadlines.
- **Feedback and Rating System:** Incorporating a feedback and rating system, the software will enable users to leave evaluations and comments on the equipment they use. This feedback will assist in identifying issues with resources, necessitating attention or replacement, and will aid other users in making informed decisions.
- **Multilingual Support:** In acknowledgment of the diverse student body at the college, including international students, the software will also feature multilingual support. This ensures that the system is accessible and user-friendly for as wide an audience as possible, promoting inclusivity and equitable access to educational resources.

2 User

The system is designed to cater to two distinct user groups: clients (teachers and pupils) and managers. For the purposes of this document, 'clients' will refer to both teachers and pupils collectively, while 'managers' are those who manage the inventory and usage regulations of the equipment.

2.1 Client Functionality

Clients will be granted limited access to the system, enabling them to:

- View the current availability of equipment, indicating whether items are in usable condition and not under maintenance or repair.
- Reserve equipment and verify its availability for the desired loan period.
- Review their borrowing history and any items currently borrowed.
- Cancel reservations and confirm the return of equipment.
- Communicate within the system through messages.

2.2 Manager Functionality

Managers play a crucial role in reservation confirmation and possess administrative rights that include:

- Adding or removing inventory items.
- Updating the details and status of the equipment.

By integrating these functionalities, the system not only simplifies the process of managing and accessing educational resources but also enhances the overall efficiency and accountability within Tartu Health Care College.

3 GUI Sketches

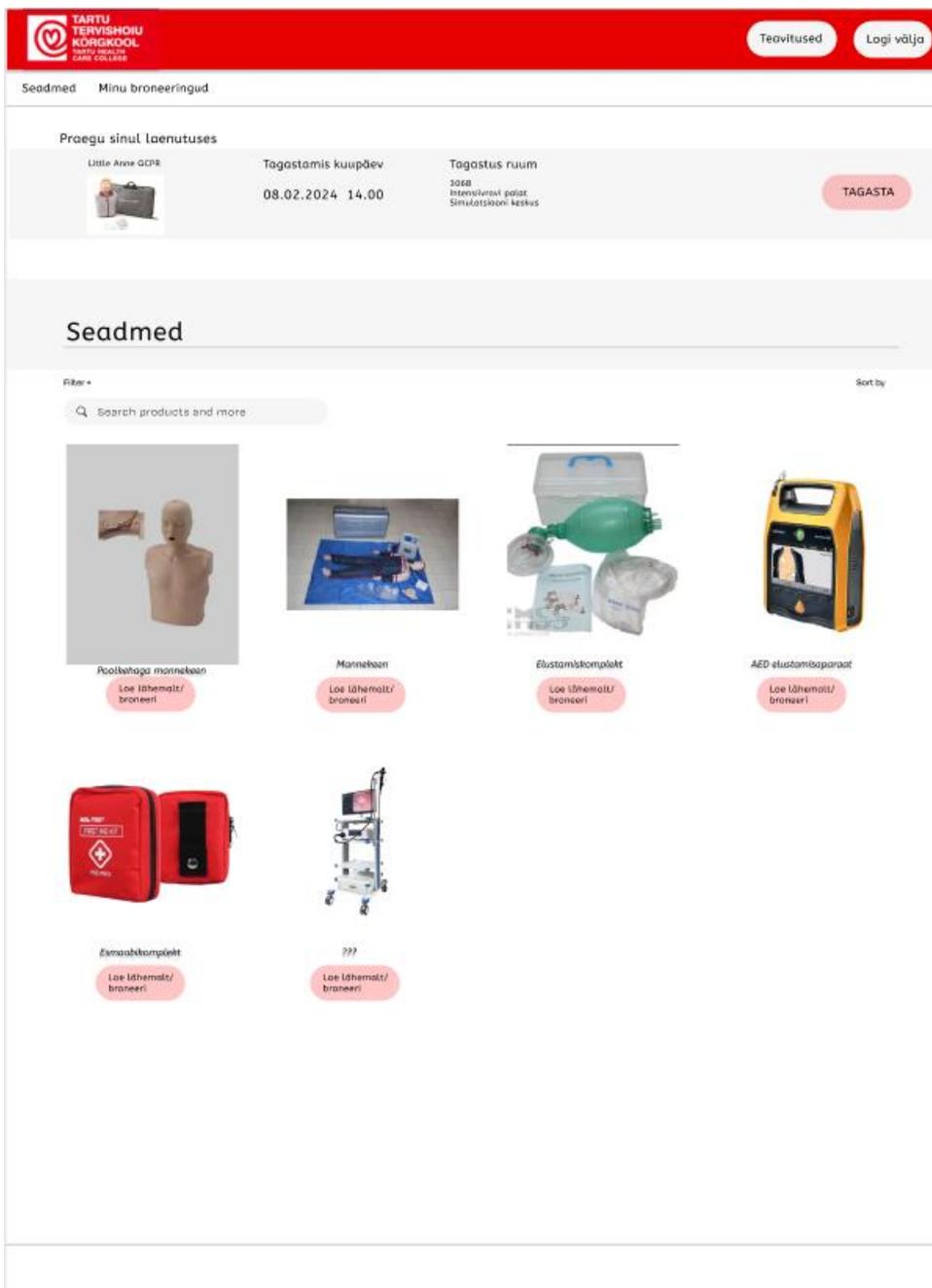


Figure 1. Home page for client user


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Little Anne QCPR rakendusega saab instruktor jälgida kuni kuut samal ajal harjutavat õpilast! Näiteks näed kohe, kui mõni õpilane ei vajuta südamemassaaži käigus piisavalt tugevalt, kui keegi teeb südamemassaaži liiga kiiresti või aeglaselt või puhub suust suhu hingamisel liiga palju või liiga vähe õhku.

Little Anne QCPR

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Asukoht, kuhu soovite vahendit laenutada?

Mis tunni või praktikumi jaoks laenutuse teete?

BRONEERI

Figure 2. Reservation page

9


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TERVISHOIU
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CARE COLLEGE

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Minu broneeringud

Sinu broneeringud

 <small>Elustamiskomplekt</small>	<small>Läenutuse kuupäev</small> 17.02.2024 14.00 - 17.02.2024 18.00	<small>Broneeringu olek</small> Kinnitatud	TÜHISTA
 <small>AED elustamisaparatuur</small>	<small>Läenutuse kuupäev</small> 17.02.2024 14.00 - 17.02.2024 18.00	<small>Broneeringu olek</small> Ootel	TÜHISTA

Praegu sinul laenutuses

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Figure 3. Reservations and lending page for client user


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Seadmed
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Kinnitust vajavad broneeringud

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Pooltehoga mannekeen

Muuda andmeid



Mannekeen

Muuda andmeid



Elustamiskomplekt

Muuda andmeid



AED elustamisaparaat

Muuda andmeid



Esmabiokomplekt

Muuda andmeid

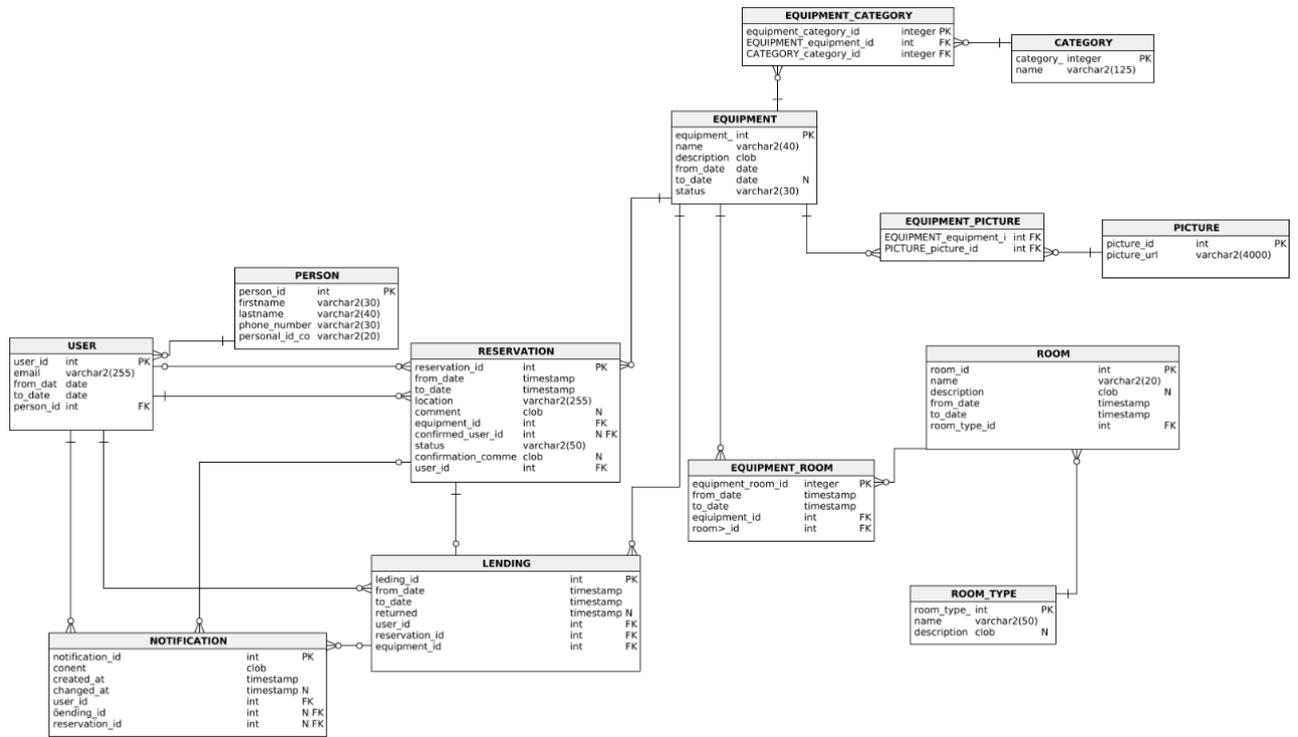


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Muuda andmeid

Figure 4. Home page for manager user

4 ERD



References

There are no sources in the current document.