

### KMITL

# User Manual

Bangkok, Thailand

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### Introduction

Welcome to the comprehensive user manual for our E-borrowing web application, a robust tool designed to enhance the management and distribution of school supplies within your school. This document serves as a detailed guide to each aspect of the application, developed during our internship to streamline the borrowing process and ensure efficient utilization of resources.

In the following pages, we will explore every functionality of our platform, from user registration to the management of borrowing requests. We aim to provide you with clear instructions and insights into how each feature operates and how it can be best utilized to facilitate both students and staff in their daily educational activities. Whether you are a teacher, student, or administrator, this manual will assist you in navigating and maximizing the potential of our application effectively.

Our goal with this manual is not only to educate users on the technical features but also to highlight the practical benefits that our application brings to your educational environment. By the end of this document, you should feel confident in using our application to its full potential, enhancing the educational experience and operational efficiency at your institution.

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### **Responsibilities**

Introduction: Jarne Dirken General: Jarne Dirken User: Jarne Dirken Supervisor: Jarne Dirken & Sohaib Ibenhajene Administrator: Sohaib Ibenhajene

# 1. General

### 1.1. Register

The first part of the application, making an account. This is where the users can create an account. Standard when a user creates an account, he has the role "Student". We did this because most of the people that are going to use this system will be students. Only people with a valid telephone number or email (ending with @kmitl.ac) can create an account. When you want your role changed, or you want to use an email other than the one ending with @kmitl.ac you must contact an administrator.



### 1.2. Login

After you create an account, you can now log in to your account. You just need to fill in all the fields. When you forget your password, you can click the "Forgot password" button, this will send a link to reset your password to your email.



### 1.3. Profile

At the user profile user can modify their profile. They can upload a profile picture if they want to or change their account summary. It is not possible for the user to modify their e-mail or their role. They can only view these. An administrator can change that for them.

| 은 User I | Profile             |  |                                |        |
|----------|---------------------|--|--------------------------------|--------|
|          |                     | Upload new photo Remove At least 800 x 800 percommended. JPG or PhG is allowed |                                |        |
|          | Personal Info       |  |                                | ✔ Edit |
|          | First name<br>jarne | Last name<br>dirken  | Email<br>jarnedirken@gmail.com |        |
|          | Tel<br>0628706432   | Student number<br>12345678   | Role                           |        |
|          |                     |  |                                |        |
|          |                     |  |                                |        |
|          |                     |  |                                |        |
|          |                     |  |                                |        |
|          |                     |  |                                |        |
|          |                     |  |                                |        |

## 2. User

### 2.1. Borrow

After you have logged in or created an account this is the page that you will get automatically redirected to. The page where students can borrow items. We chose to make this page as well as almost every page taggable between a list and a card view for better user experience. At small screens you will be forced into card view that way our application is 100% responsive for mobile devices.

|   |  |   |  |                    |   | • ,   |
|---|--|---|--|--------------------|---|---|
| <u>역</u> + Borrow   |  |   |  |                    |   | 🛑 iii 🧯   |
| Name<br>Search  | ▼ Nodel<br>Search  | Ŧ   | Search   | •                  | - Location  |   |
| Filters applied:  |  |   |  |                    |   |   |
| PRODUCTS 39 PENDING BORROWS   | 6  |   |  |                    |   |   |
| Name: AC-DC Adapter 9V, 2A<br>Model: POWER SUPPLIES   | Available:<br>Location:  | : 0 Brand: Venus Supply<br>HA3 - HM Inventory Zone A Storage 3  |  |                    |   | Borrowed  |
| Name: Arduino Mega 2560 R3<br>Model: COMPUTER ACCESORIES  | Available:<br>Location:  | : 0 Brand: Arduino<br>: HA3 - HM Inventory Zone A Storage 3   |  |                    |   | Borrowed  |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES  | Available:<br>Location:  | : 14 Brand: ThaiEasyElec<br>HA3 - HM Inventory Zone A Storage 3   |  |                    |   | Borrow  |
| Name: Digital Multimeter UT89XD<br>Model: MULTIMETER KITS   | Available:<br>Location:  | : 4 Brand: UNI-T<br>HA3 - HM Inventory Zone A Storage 3   |  |                    |   | Borrow  |
| Name: HDMI Cable 3m<br>Model: COMPUTER ACCESORIES   | Available:<br>Location:  | : 0 Brand: Unitek<br>HC3 - HM Inventory Zone C Storage 3  |  |                    |   | Borrowed  |
|   |  |   |  |                    |   |   |
| Name: Ploeg E<br>Model: multimeter  | Available:<br>Location:  | : 0 Brand: uni-t<br>HF2 - HM Inventory Zone F Storage 2   |  |                    | ¢   | Borrowed  |
| Name: Ploeg E<br>Model: multimeter  | Available:<br>Location:  | 0 Brand: uni-t<br>HF2 - HM Inventory Zone F Storage 2   | Brand  |                    |   | Borrowed<br>Jarne Dirken<br>jarnedirken@gmail.com                         |
| Name: Plogg E<br>Model: multimeter  | Available:<br>Location:  | 20 Brand: uni-t<br>HF2 - HM Inventory Zone F Storage 2  | Brand  |                    | Cocation  | Borrowed          Jarne Dirken         jarnedirken@gmail.com            = |
| Name: Ploeg E<br>Model: multimeter  | Available:<br>Location:<br>Model<br>Search   | :0 Brand: uni-t<br>HF2 - HM Inventory Zone F Storage 2  | BrandSearch  |                    | Coation<br>Select   | Borrowed  |
| Name: Ploeg E<br>Model: multimeter  | Available:<br>Location:  | 0 Brand: uni-t<br>HFZ - HM Inventory Zone F Storage 2   | Brand -<br>Search  | ble: 0 Basic Ardui | Location     Select   | Borrowed  |
| Name: Plocg E         Model: multimeter   | Available: Cocation:   | O Brand: uni-t HF2-HM Inventory Zone F Storage 2  Arduino Mega 2560 R3  Arduino Mega 2560 R3  Model COMPUTER ACCESOR Location HA3-HM Inventory Zo | Brand  | ble: 0 Basic Ardui |   | Borrowed  |
| Name: Ploeg E         Mame: Ploeg E         Model: multimeter   | Available:<br>Location:<br>Model<br>Search<br>Available: 0                                 | a Brand: uni-t<br>HF2 - HM Inventory Zone F Storage 2   | Brand -<br>Search<br>Brand Brand<br>ES Arduino<br>one A Storage 3<br>owed  | ble: 0 Basic Ardui | ino Learning Kit<br>Computer AccesoRies<br>Location<br>HA3 - HM Inventory Zone<br>Borro   | Borrowed  |
| Name: Plocg E   Model: multimeter     Search     Search     PRODUCTS     PRODUCTS     Prodel: supplicities     Prodel: supplicities   Products   Prodel: supplicities  | Available:<br>Location:<br>Model<br>Search<br>Available: 0<br>Available: 1                 | a Brand: uni-t<br>HF2 - HM Inventory Zone F Storage 2   | Brand  | ble: 0 Ploeg E     | Control Contr | Borrowed  |
| Name: Plocg E<br>Model: multimeter         Mane: Plocg E<br>Model: multimeter         Search         Search         PRODUCTS         PRODUCTS         PRODUCTS         Production         Products         Products | Available:<br>Location:<br>Model<br>Search<br>Available: 0<br>Available: 1<br>Available: 4 | a Brand: uni-t<br>HF2 - HM Inventory Zone F Storage 2   | Brand -<br>Search<br>Search<br>ES Arduino<br>One A Storage 3<br>owed<br>Availa<br>ES Unitek<br>Unitek<br>Unitek<br>One C Storage 3 | ble: 0 Basic Ardui | Contained and a second and a s | Borrowed  |

The items are grouped together so you can see how many items there are left. You can also choose to use the filter at the top to get a more accurate search. When you find the item you want to borrow you simple click "Borrow", a popup opens. Inside the popup you must select a borrow and return date. This will allow you to borrow the item directly or add the item into your cart, that way you can borrow multiple items at once.

| KMITL *       |  | Jarne Dirken |
|---------------|--|--------------|
| At Borrow     | 0  | <b>• • •</b> |
| ← Return      | St Borrow details X  | O = H        |
| History       | Name Search  | Select -     |
| Supervisor    | K May v / 2024 v >   |              |
| C Requests    | Su Mo Tu We Th Fr Sa   |              |
| C Lendings    | PRODUCTS   |              |
| 🔀 Repairs     |  |              |
| Admin         | Name / 12 13 14 15 16 17 18<br>Mode: 19 20 21 22 23 24 25  | Borrowed     |
| Products      | Name<br>Basic Arduino Learning Kit 26 27 28 29 30  |              |
| OP Literat    | Model: Model Brand 1 v: 19 v PM v  | Borrowed     |
| Characteria   | COMPUTER ACCESORIES ThaiEasyElec   |              |
| E Lear        | Name: E HA3 - HM Inventory Zone A Storage 3 L2PM JPM JPM SPM   | Borrow       |
|               |  |              |
| III Analytics | Name: L Borrow date Return date Select a date Select a date  | Borrow       |
|               | Cancel @ Borrow I Add cart   |              |
|               | Name: 1 Model: Court of Lin molecularities   | Borrowed     |
| E. Lucou      | Name: Plong E         Available: 0         Brand: unit           Model: multimeter         Location: Hf2 - HM Investory Zone F Storage 2 | Borrowed     |

After making a request or in this screenshot, adding an item into your cart you will be greeted with a popup message in the bottom left corner. This allows for great user feedback. When doing this a notification will be sent to the supervisors and admins.

|   | £   | Jarne Dirken<br>jarnedirken@gmail.com |
|---|---|---------------------------------------|
| 2+ Borrow                                     | 음* Borrow   | <u>⊜</u> ≋ ⊭⁰                         |
| <ul> <li>Keturn</li> <li>History</li> </ul>   | (Name<br>Search ▼   | Basic Arduino Learning Kit ×          |
| Supervisor<br>Requests                        | Filters applied:  | BOILOW AI                             |
| <ul> <li>Lendings</li> <li>Repairs</li> </ul> | PRODUCTS PENDING BORROWS  |                                       |
| Admin Products                                | Name: AC: DC Adapter 9V, 2A         Available: 0         Brand: Venus Supply           Model: POWER SUPPLIES         Location: HA3 - HM Inventory Zone A Storage 3            | Borrowed                              |
| <ul> <li>Locations</li> <li>Users</li> </ul>  | Name: Arduino Mega 2560 R3         Available: 0         Brand: Arduino           Model: COMPUTER ACCESORIES         Location: HA3 - HM Inventory Zone A Storage 3             | Borrowed                              |
| Parameters                                    | Name: Basic Arduino Learning Kit         Available: 14         Brand: ThaiEasyElec           Model: COMPUTER ACCESORIES         Location: HA3 - HM Inventory Zone A Storage 3 | Borrow                                |
| II. Analytics                                 | Name: Digital Multimeter UTS9XD         Available: 4         Brand: UNI-T           Model: MULTIMETER KITS         Location: HA3 - HM Inventory Zone A Storage 3              | Borrow                                |
|   | Name: HDMI Cable 3m         Available: 0         Brand: Unitek           Model: COMPUTER ACCESORIES         Location: HC3 - HM Inventory Zone C Storage 3                     | Borrowed                              |
| Item successfully added to cart               | Name: Ploog E         Available: 0         Brand: uni t           Mode: multimeter         Location: HF2 - HM Inventory Zone F Storage 2                                      | Borrowed                              |

After you have borrowed an item, you can go to the tab "Pending Borrows". Here you will see all the borrowings that are pending, accepted, or rejected.

When clicking on cancel you will cancel your request. This will also give you a popup for a good user experience.

When clicking on the message tab you will see a popup with the message on why the item got rejected.

| ne<br>Iarch   | ▼ Model Brand Search Search  | h - Select  |         |
|---|--|---|---------|
| ers applied:  |  |   |         |
| PRODUCTS 33 PENDING BORROW                                | 5 <b>0</b>   |   |         |
| Name: Ploeg E<br>Model: multimeter                        | Brand: uni-t<br>Location: HF2 - HM Inventory Zone F Storage 2              | <ul> <li>○ Pending</li> <li>○ May 6, 2024 - May 8, 2024</li> </ul>        | Cancel  |
| Name: Basic Arduino Learning<br>Model: COMPUTER ACCESORIE | tit Brand: ThaiEasyElec<br>G Location: HA3 - HM Inventory Zone A Storage 3 | <ul> <li>○ Pending</li> <li>○ May 7, 2024 - May 9, 2024</li> </ul>        | Cancel  |
| Name: Digital Multimeter UT89<br>Model: MULTIMETER KITS   | (D Brand: UNI-T<br>Location: HA3 - HM Inventory Zone A Storage 3           | <ul> <li>○ Pending</li> <li>○ May 6, 2024 - May 8, 2024</li> </ul>        | Cancel  |
| Name: Basic Arduino Learning<br>Model: COMPUTER ACCESORIE | tit Brand: ThaiEasyElec<br>G Location: HA3 - HM Inventory Zone A Storage 3 | <ul> <li>○ Pending</li> <li>○ May 6, 2024 - May 7, 2024</li> </ul>        | Cancel  |
| Name: Digital Multimeter UT89<br>Model: MULTIMETER KITS   | (D Brand: UNI-T<br>Location: HA3 - HM Inventory Zone A Storage 3           | <ul> <li>⊗ Rejected</li> <li>⊙ April 23, 2024 - April 26, 2024</li> </ul> | Message |

### 2.2. QR-code page

Most items will have a QR-code on them. This QR-code has 2 functionalities. One for the user that wants to borrow it and one for the supervisor that is going to check the items. In this part we will only cover the user part.

When the student scans the QR-code they will be redirected to this page. Here they can see the item and if the item is available or not. If the item is available and the user wants to borrow it, they can by simply pressing on the "Borrow" button.

| 🖻 Digital Multimeter UT89XD |   |   |
|-----------------------------|---|---|
|                             | Model<br>MULTIMETER KITS<br>Brand<br>UNI-T<br>Location<br>HA3 - HM Inventory Zone A Storage 3 | Borrow  |
|                             |   |   |
| 回 Digital Multimeter UT89XD |   |   |
|                             | Model<br>MULTIMETER KITS<br>Brand<br>UNI-T<br>Location<br>HA3 - HM Inventory Zone A Storage 3 | Not available for borrow<br>(5) May 6, 2024 – May 8, 2024 |

### 2.3. Return

When you made a request, a supervisor approved the request and when you actually received the item you will see your item show up in the return section of our application.

Here you can see how many days remain before you must bring it back and if it's already too late or not.

When clicking on return your request will be put into "Pending", waiting until the supervisor received your item.

| ← Returns   |  |  |        |
|---|--|--|--------|
| Name Search -   | Borrow Date<br>Select Dates                            |  |        |
| Filters applied:  |  |  |        |
| CURRENT BORROWS   |  |  |        |
| (0 4 days remaining<br>Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES | Borrow date: May 10, 2024<br>Return date: May 14, 2024 | Brand: ThaiEasyElec<br>Location: HA3 - HM Inventory Zone A Storage 3 | Return |
| O         2 days late           Name: Ploeg E         Model: multimeter               | Borrow date: May 6, 2024<br>Return date: May 8, 2024   | Brand: uni-t<br>Location: HF2 - HM Inventory Zone F Storage 2        | Return |
|   |  |  |        |
|   |  |  |        |
|   |  |  |        |
|   |  |  |        |
|   |  |  |        |
| ← Returns   |  |  | e      |
| ← Returns<br>Name →   | Borrow Date —<br>Select Dates                          |  | ē      |
| ← Returns<br>Name<br>Search ←   | Borrow Date<br>Select Dates                            |  | ⊜      |
| ← Returns<br>Name<br>Search ←   | Borrow Date<br>Select Dates                            |  |        |
| ← Returns<br>Name<br>Search ←<br>Filters applied:<br>CURRENT BORROWS <sup>2</sup>     | Borrow Date<br>Select Dates                            |  | e      |
| ← Returns<br>Name<br>Search   | Borrow Date  | Brand: ThaiEasyElec<br>Location: HA3 - HM Inventory Zone A Storage 3 | Return |

### 2.4. History

When the supervisor receives your return request your item will be marked as "complete". This means the request has been finished and for the user you will see your items appear on the history page.



That was the whole cycle for the student.

### 3. Supervisor

### 3.1. Requests

For the supervisor you start with the request page. Here all the requests will come in. There are two types of requests, normal borrows or urgent borrows. These are shown at the top with a number next to them. This way you can easily see how many of each there are.

When viewing a borrow request you can choose to view it or approve or reject it.

| earch - Sele   | ct Dates                                       | Search - Search  |                           |
|--|--|--|---------------------------|
| ers applied:   |  |  |                           |
| NDING BORROWS  | TED BORROWS                                    |  |                           |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>() May 7, 2024 - May 9, 2024 | O Pending<br>Year: 2018<br>Brand: ThaiEasyElec | Requestor: Jarne Dirken<br>Location: HA3 - HM Inventory Zone A Storage 3 | Reject<br>Approve<br>View |
| Name: Digital Multimeter UT89XD<br>Model: MULTIMETER KITS<br>③ May 6, 2024 - May 8, 2024       | O Pending<br>Year: 2018<br>Brand: UNI-T        | Requestor: Jarne Dirken<br>Location: HA3 - HM Inventory Zone A Storage 3 | Reject<br>Approve<br>View |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>③ May 6, 2024 - May 7, 2024  | O Pending<br>Year: 2018<br>Brand: ThaiEasyElec | Requestor: Jarme Dirken<br>Location: HA3 - HM Inventory Zone A Storage 3 | Reject<br>Approve<br>View |
|  |  |  |                           |
|  |  |  |                           |

In our example we click on view so we can view the information before accepting or rejecting the request. Here we can view the mutual history of the item or user by clicking on the clock next to the name.

| KMITL «       |                  |                                     |        |                           |              | Jarne Dirken<br>jarnedirken@gmail.com |
|---------------|------------------|-------------------------------------|--------|---------------------------|--------------|---------------------------------------|
| 2+ Borrow     | 🗂 Requests       | (                                   |        |                           |              | 0 =                                   |
| ← Return      | - Name           | 📋 Request details                   |        |                           | × Location - |                                       |
| 49 History    |                  |                                     |        | () Pending                | - Searchy    | *                                     |
| Supervisor    | Filters applied: |                                     |        | May 7, 2024 - May 9, 2024 |              |                                       |
| Lendings      | PENDING BORROWS  |                                     |        |                           |              |                                       |
| 🔀 Repairs     |                  |                                     |        |                           |              | Reject                                |
| Admin         | Model:           |                                     |        |                           |              | Approve                               |
| Products      |                  | Name 🕥                              |        | Requestor 📀               | A Storage 3  | View                                  |
| Ocations      | Name: I          | Basic Arduino Learning Kit          |        | Jame Dirken               |              | Reject                                |
| 路 Users       | Model:           | Model<br>COMPUTER ACCESORIES        |        | Brand<br>ThaiEasyElec     | A Storage 3  | Approve                               |
| ፼ Parameters  |                  | Location                            |        |                           |              | view                                  |
| E Logs        | Name:            | HA3 - HM Inventory Zone A Storage 3 |        |                           |              | Reject                                |
| II. Analytics | G May            | 1                                   |        |                           | A Storage 3  | View                                  |
|               |                  |                                     |        |                           |              |                                       |
|               |                  | Cancel                              | Reject | Ø Approve                 |              |                                       |
|               |                  |                                     |        |                           |              |                                       |
| [→ Log Out    |                  |                                     |        |                           |              |                                       |

When clicking on accept or reject you will get a confirmation message asking if you really want to accept or reject a request. When rejecting a request, a message is mandatory, when accepting a request it is optional.

|                | к |                  |  |                           |             | Jarne Dirken<br>jarnedirken@gmail.com |
|----------------|---|------------------|--|---------------------------|-------------|---------------------------------------|
| At Borrow      |   | P. Domusete      |  |                           |             |                                       |
| ← Return       |   |                  | You're about to reject a borrow request. Are you s | ure?                      | ×           | •                                     |
| History        |   | Search           | · <del></del>                                      |                           | - Search    | *                                     |
| Supervisor     |   | Filters applied: |  | () Pending                |             |                                       |
| 🗂 Requests     |   |                  |  | May 7, 2024 - May 9, 2024 |             |                                       |
| Cendings       |   | PENDING BORROWS  |  |                           |             |                                       |
| 🔀 Repairs      |   | Name: I          |  |                           |             | Reject                                |
| Admin          |   | Model:           | A CON  |                           |             | Approve                               |
| Products       |   | () May           | Name   | Populator                 | A Storage 3 | View                                  |
| O Locations    |   |                  | Basic Arduino Learning Kit                         | Jarne Dirken              |             | Reject                                |
| <b>의</b> Users |   | Model:           | Model  | Brand                     |             | Approve                               |
| រទី Parameters |   | ( May            | COMPUTER ACCESORIES                                | ThaiEasyElec              | A Storage 3 | View                                  |
|                |   |                  | Location<br>HA3 - HM Inventory Zone A Storage 3    |                           |             | Reject                                |
| E Logs         |   | Model:           |  |                           |             | Approve                               |
| Analytics      |   | () May           | Message  |                           | A Storage 3 | View                                  |
|                |   |                  |  |                           |             |                                       |
|                |   |                  | Cancel   | Confirm                   |             |                                       |
|                |   |                  |  |                           |             |                                       |
|                |   |                  |  |                           |             |                                       |
| [→ Log Out     |   |                  |  |                           |             |                                       |

After accepting or rejecting a request the user will get a notification saying that the request has been processed and that they must come pick it up at the given location at the given time.

Then in the last tab "Requested borrows", you will see all the borrows that have been requested. Here you can see what has been rejected, accepted, if there was a document connected to the request (urgent).

| Requests  | Borrow Date   | c Requestor  | <b>e </b>         |
|---|---|--|-------------------|
| Search 🔹  | Select Dates  | Search 👻 Search  | •                 |
| Filters applied:  |   |  |                   |
|   |   |  |                   |
| PENDING BORROWS <sup>3</sup> URGENT BORROWS <sup>0</sup>  | REQUESTED BORROWS   |  |                   |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>() May 10, 2024 - May 14, 2024  | <ul> <li>Accepted</li> <li>Approve date: May 10, 2024</li> <li>Brand: ThaiEasyElec</li> </ul> | Approver: Jarne Dirken<br>Requestor: Jarne Dirken<br>Location: HA3 - HM Inventory Zone A Storage 3 |                   |
| Name: Ploeg E<br>Model: multimeter<br>() May 6, 2024 - May 8, 2024                                | ⊘ Accepted<br>Approve date: May 10, 2024<br>Brand: uni-t                                      | Approver: Jarne Dirken<br>Requestor: Jarne Dirken<br>Location: HF2 - HM Inventory Zone F Storage 2 |                   |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>() May 6, 2024 - May 7, 2024    | ⊘ Accepted<br>Approve date: May 6, 2024<br>Brand: ThaiEasyElec                                | Approver: Jarne Dirken<br>Requestor: Jarne Dirken<br>Location: HA3 - HM Inventory Zone A Storage 3 |                   |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>() May 3, 2024 - May 6, 2024    | Ø Accepted Approve date: May 2, 2024 Brand: ThaiEasyElec                                      | Approver: Jarne Dirken<br>Requestor: Jarne Dirken<br>Location: HA3 - HM Inventory Zone A Storage 3 | <u>A Document</u> |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>() April 30, 2024 - May 1, 2024 | ⊘ Accepted<br>Approve date: April 29, 2024<br>Brand: ThaiEasyElec                             | Approver: Jarne Dirken<br>Requestor: Test Userr<br>Location: HA3 - HM Inventory Zone A Storage 3   |                   |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>() April 30, 2024 - May 1, 2024 | ⊘ Accepted<br>Approve date: April 29, 2024<br>Brand: ThaiEasyElec                             | Approver: Jarne Dirken<br>Requestor: Test Userr<br>Location: HA3 - HM Inventory Zone A Storage 3   |                   |
| *   | <b>~</b> · · · ·  |  |                   |

### 3.2. Mutual history page

When clicking on the clock icon we can see the item or user history page. Here you can view the history and export all data to excel.



### 3.3. Lendings

When a supervisor approves a request, the student must come and pick up the item at the given location. This means that we must check whether we have actually given the item away or not. This is what the tab lending's is for. It works as a double check in order to make sure we have handed over the item to the student.

Here we can view some information about the item and what user needs to come and pick it up. When clicking on "Hand Over" A popup appears with more detailed information.

| Search -   | Select Dates                                       | Search            | - Search   |           |
|--|--|-------------------|--|-----------|
| Iters applied:   |  |                   |  |           |
|  |  | 2Y                |  |           |
| Name: Basic Arduino Learning Kit<br>Model: COMPUTER ACCESORIES<br>() May 7 - 2024 at 4:23 PM | O Pending<br>Approve date: Ma<br>Brand: ThaiEasyEl | y 10, 2024<br>lec | Approver: Jarne Dirken<br>Requestor: Jarne Dirken<br>Location: HA3 - HM Inventory Zone A Storage | Hand over |
| May 7 - 2024 at 4:23 PM  | Brand: ThaiEasyEl                                  | ec                | Location: HA3 - HM Inventory Zone A Storage  | 23        |
|  |  |                   |  |           |
|  |  |                   |  |           |
|  |  |                   |  |           |

Seeing the popup, we see more information about the user like telephone number and email. Here we can click confirm if we have handed over the item to the user.



Going further, we have another tab for "Pending Returns" right next to "Pending Borrows" This tab does exactly the same thing as pending borrows but the other way around. Now we are not giving away the item, but we are receiving it. Because when a user clicks on "Returned" we have to check if we have returned this item.

|                        |  |   | Jarne Dirken<br>jarnedirken@gmail.com  |
|------------------------|--|---|--|
| 2+ Borrow ← Return     | Cendings   |   | <b>e</b> #   |
| History     Supervisor | Search  Filters applied:                                       | Dates Requestor   | ✓ Coation ✓  |
| Prequests              |  |   |  |
| Cendings               | PENDING BORROWS  | K ITEMS HISTORY   |  |
| X Repairs              | Name: Plog E<br>Model: multimeter<br>③ May 8 - 2024 at 4/23 PM | O Pending<br>Approve date: May 10, 2024<br>Brand: uni-t | Approver: Jarne Dirken Requestor: Jarne Dirken Location: HF2 - HM Inventory Zone F Storage 2 |
| Cocations              |  |   |  |
| S Users                |  |   |  |
| វិស្តិវ Parameters     |  |   |  |
| E Logs                 |  |   |  |
| L Analytics            |  |   |  |
| [→ Log Out             |  |   |  |

When we have received the item, we can click on the button "Received" this will open a popup with more information, the same as pending borrows. Here we can choose to call up our fellow student if he has not returned the item or accepts it.

| KMITL  |                            |  |   | ¢ (                       | Jarne Dirken<br>jarnedirken@gmail.com |
|--|----------------------------|--|---|---------------------------|---------------------------------------|
| 2 Borrow<br>← Return   | Name Lendings              | ✓ You're about to receive this item. Are you sure?                     |   | ×                         | <b>e</b> =                            |
| Supervisor<br>Requests                                       | Search<br>Filters applied: | ~  | May 8 - 2024 at 4:23 PM<br>Information requestor:<br>Telephone: <u>0628706432</u> | Search                    | •                                     |
| <ul> <li>Lendings</li> <li>Repairs</li> <li>Admin</li> </ul> | PENDING BORROWS            | Name<br>Ploeg E  | Email: <u>jarnedirken@gmail.com</u><br>Requestor<br>Jarne Dirken                  | ien<br>ken                | Received                              |
| Products Contactions   | () May                     | Model<br>multimeter<br>Location<br>HF2 - HM Inventory Zone F Storage 2 | Approver<br>Jarne Dirken<br>Brand<br>uni-t  | tventory Zone F Storage 2 |                                       |
| 왕, Users<br>황: Parameters                                    |                            | in a for internet frank and ge a                                       |   |                           |                                       |
| II. Analytics  |                            |  |   |                           |                                       |
|  |                            | Cancel   | Confirm   |                           |                                       |
| [+ Log Out   |                            |  |   |                           |                                       |

Next stage in the lending's process is that we must check the items. When students bring back an item the supervisor doesn't always have time to check the item on the spot. This is why all the items that have been returned will be placed in the "Check Item" Tab. This way the supervisor can later check all the items that have been returned to see if they have been damaged or not.

| KINTL IK   |  |  | ¢   | Jarne Dirken<br>jarnedirken@gmail.com |
|--|--|--|---|---------------------------------------|
| Arrow Arrow Arrow Arrow Arrow Arrow Supervisor Arrow | Vane<br>Search<br>Filters applied:   | Regustor - Search  | • Cloaton<br>Search                             | <b>:</b>                              |
| <ul> <li>Lenoings</li> <li>Repairs</li> <li>Admin</li> <li>Products.</li> <li>Locations</li> <li>Users</li> <li>Parameters</li> <li>Logs</li> <li>Analytics</li> </ul>   | PENDING BEDRIKUS         PENDING RELIDING           Image: A state of the sta | HISTORY<br>Brand: uni-t<br>Location: HF2 - HM Inventory Zone F Storage 2 | Approver: Jame Dirken<br>Requestor: Jame Dirken | Checked                               |
| [→ Log Out   |  |  |   |                                       |

After clicking on "Checked" the supervisor will be prompted with a confirmation popup where he can choose to confirm the item as good or to put it in repair. When putting an item in repair the supervisor must give a message so we can keep track of what actually broke with the item.

|  |   |                                      |             |  | 1                                 | Jarne Dirken<br>jarnedirken@gmail.com |
|--|---|--------------------------------------|-------------|--|-----------------------------------|---------------------------------------|
| <ul> <li>♣* Borrow</li> <li>← Return</li> <li>④ History</li> <li>Supervisor</li> <li>● Requests</li> <li>● Requests</li> <li>● Requests</li> <li>● Londings</li> <li>Admin</li> <li>● Products</li> <li>● Locations</li> <li>♣: Parameters</li> <li>● Logs</li> <li>↓ Analytics</li> </ul> | Euclings     Search     Eiters applied:      PENDING BORROWS     Mane: 1 Model: 2 | Vou're about to check this item. Are | : you sure? | May 8-2024 at 423 PM<br>Information requestor:<br>Telephone: (562705432<br>Email: jamedirken@gmail.com<br>Jame Dirken<br>Jame Dirken<br>Brand<br>uni-t | x<br>+ Search<br>search<br>search | Checked                               |
| F→ Log Out   |   | Cancel                               | Confirm     | Repair   |                                   |                                       |
| La rogout  |   |                                      |             |  |                                   |                                       |

### 3.4. QR-Code page

The same as lending's where you can check the item is this page for the supervisor. When checking the items you can easily scan the item you checked and from your phone by scanning the QR code on the item, you will be able to mark it as good or put it in for repair. (Only supervisors or admins will be able to see this "Checked" button.)

| 〒 Ploeg E |  |   |
|-----------|--|---|
| $\sim$    | Model<br>multimeter<br>Brand<br>uni-t<br>Location<br>HF2 - HM Inventory Zone F Storage 2 | Not available for borrow<br>() May 6, 2024 - May 8, 2024<br>(Checked) |

### 3.5. Repairs

The last page to where supervisors have access is the repair page. Here we will see all the current items that are in reparation.

| Repairs   | Borrow Date     Select Dates            |  | ⊜ ∷     |
|---|---|--|---------|
| Filters applied:  |   |  |         |
| IN REPAIR   |   |  |         |
| Name: Ploeg E<br>Model: multimeter<br>() May 10, 2024 - / | O Pending<br>Year: 2017<br>Brand: uni-t | Requestor: Jarne Dirken<br>Location: HF2 - HM Inventory Zone F Storage 2 | Details |
|   |   |  |         |
|   |   |  |         |
|   |   |  |         |

When clicking on details you will be greeted with more details about the reparation request. Here you can mark the item as repaired or broken.

|            |  | Jarne Dirken<br>jarnedirken@gmail.com |
|------------|--|---------------------------------------|
|            | Nerror   Nerror <th>Details</th> | Details                               |
| [→ Log Out |  |                                       |

## 4. Administrator

### 4.1. Products

We have finally arrived at the administrator side of the application. This is where we will be able to configure and manage everything. First the products tab where we can add, edit, delete, soft delete, make QR-codes, export or import products.

|  |   |  |  |             |                              | ¢  | JD Jarne Dir | <b>ken</b><br>en@gmail.co | om             |
|--|---|--|--|-------------|------------------------------|--|--------------|---------------------------|----------------|
| Borrow     Return     History pervisor     Requests     Lendings     Require | Products Name Search Var Var Var Filters applied: | Select   | ~  | BrandSearch |                              | • Caston Search  |              |                           | •              |
| min<br>Products<br>) Locations   | + Add  Delet                                      | NO.  | Import EXCEL   | MODEL       | BRAND                        | LOCATION<br>HF2 - HM Inventory Zone E Storage 2                            | YEAR         | ACTION                    |                |
| Users<br>Parameters  |   | RAI-COMP-ACES-106-01<br>RAI-ELEC-POW-401-01    | HDMI Cable 3m  | COMPUTER AC | Unitek<br>Venus Supply       | HC3 - HM Inventory Zone C Storage 3<br>HA3 - HM Inventory Zone A Storage 3 | 2018         |                           | -9<br>-9<br>-9 |
| Analytics  |   | RAI-COMP-ACES-2101-02<br>RAI-COMP-ACES-2101-01 | Arduino Mega 2560 R3<br>Arduino Mega 2560 R3             | COMPUTER AC | Arduino<br>Arduino           | HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3 | 2018         | / Ō                       | -0<br>-0       |
| [→ Log Out   |   | RAI-COMP-ACES-801-27<br>RAI-COMP-ACES-801-26   | Basic Arduino Learning Kit<br>Basic Arduino Learning Kit | COMPUTER AC | ThaiEasyElec<br>ThaiEasyElec | HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3 | 2018<br>2018 | / 0                       | 49<br>49       |
| L. 105000  | n 🎯 🌢   | RAI-COMP-ACES-801-25                           | Basic Arduino Learning Kit                               | COMPUTER AC | ThaiEasvElec                 | HA3 - HM Inventory Zone A Storage 3  | 2018         | 1 🗖                       | P              |

First, we will look at how we can add a new product. We simply press on the button add at the top and we get a popup where we can fill in everything that a product needs. Standard is the product active, available for borrowing and from this current year. These can be changed but are just here to make your life a bit easier.

Fields: name, brand, model, location are all autocomplete to make the users life easier when trying to create multiple of the same product. Image is optional.

|  |  |                       |                               |                          |              | ¢                        | Jarne | e Dirken<br>dirken@gmail.com |
|--|--|-----------------------|-------------------------------|--------------------------|--------------|--------------------------|-------|------------------------------|
| 2+ Borrow<br>← Return                        | Products                               |                       |                               |                          |              |                          |       |                              |
| History                                      | Search                                 | Add product           |                               |                          | ×            | Location     Search      |       | •                            |
| Supervisor                                   | - Year<br>Search                       |                       | Ť                             |                          |              |                          |       |                              |
| Cendings                                     | I Sort by Select ↑<br>Filters applied: |                       | JPG, JPEG, PNG less then 5MB. |                          |              |                          |       |                              |
| Repairs                                      |  | Name *                | No *                          |                          |              |                          |       |                              |
| Products                                     | + Add To Del                           | Model *               | Branc                         | 1.                       |              |                          |       |                              |
| <ul> <li>Locations</li> <li>Users</li> </ul> |  | Role *                | Locat                         | ion *                    | ¥            | vantonu Zona E Storage 3 | YEAR  | ACTION                       |
| têt Parameters                               |  | 2024                  | Availa                        | Die<br>Dinumber          | •            | ventory Zone C Storage 3 | 2018  | 180                          |
| E Logs                                       |  | Active?               |                               | nsumable?                |              | ventory Zone A Storage 3 | 2018  | 1 6 0                        |
| 山 Analytics                                  |  | Cancel                |                               | Ø Add                    |              | ventory Zone A Storage 3 | 2018  | 1 1 2                        |
|  |  | RAI-COMP-ACES-2101-01 | Arduino Mega 2560 R3          | COMPUTER AC Arduino      | HA3 - HM Im  | ventory Zone A Storage 3 | 2018  |                              |
|  | - 44                                   | RAI-COMP-ACES-801-27  | Basic Arduino Learning Kit    | COMPUTER AC ThaiEasyElec | HA3 - HM Im  | ventory Zone A Storage 3 | 2018  | 1 6 -9                       |
| [→ Log Out                                   |  | RAI-COMP-ACES-801-26  | Basic Arduino Learning Kit    | COMPUTER AC ThaiEasyElec | HA3 - HM Inv | ventory Zone A Storage 3 | 2018  | 1 6 3                        |

Next, we will see the edit functionality because this one is the most similar to add. We simply click on the pencil at the end if we want to edit an item and we see the same popup appear, but this time are all the fields filled in with data. We can choose to change these fields and press save to update an item.

|                       |                     |                       |  |                                 |                               | 📌 🕕 Jan     | ne Dirken<br>nedirken@gmail.com |
|-----------------------|---------------------|-----------------------|--|---------------------------------|-------------------------------|-------------|---------------------------------|
| &+ Borrow<br>← Return | Products            |                       |  |                                 | Lastie                        |             |                                 |
| History               | Search              | Edit product          |  |                                 | × - Search                    |             | -                               |
| Supervisor            | Search              |                       | Ť  |                                 |                               |             |                                 |
| Requests              | t₄ Sort by Select ↑ |                       | Click to upload or drag and dro<br>JPG, JPEG, PNG less then 5MB. | p                               |                               |             |                                 |
| Lendings              | Filters applied:    | Name*                 | - No* -  |                                 |                               |             |                                 |
| Repairs               |                     | Ploeg E               | 0468   |                                 | _                             |             |                                 |
| Admin                 | + Add 🗇 Dele        | multimeter            | uni-t  |                                 |                               |             |                                 |
| Occations             | IMAGE               | Role*<br>Student      | ▼ Locati<br>HF2  | - HM Inventory Zone F Storage 2 | •                             | YEAR        | ACTION                          |
| <b>의</b> Users        |                     | Year*2017             | Status<br>Brok   | °en                             | ✓ ventory Zone F Sto          | rage 2 2017 | 100                             |
| 203 Parameters        |                     | Notes                 | Scho   | pol number                      | ventory Zone C Sto            | rage 3 2018 | 1 6 0                           |
| Analytics             |                     | Active?               | _ c  | onsumable?                      | ventory Zone A Sto            | rage 3 2018 | / 8 9                           |
|                       | • 🛷                 | Cancel                |  | Save                            | ventory Zone A Sto            | rage 3 2018 | 100                             |
|                       | • 🛷                 | RAI-COMP-ACES-2101-01 | Arduino Mega 2560 R3   | COMPUTER AC Arduino             | HA3 - HM Inventory Zone A Sto | rage 3 2018 | / 8 0                           |
|                       | - 🥠                 | RAI-COMP-ACES-801-27  | Basic Arduino Learning Kit                                       | COMPUTER AC ThaiEasyElec        | HA3 - HM Inventory Zone A Sto | rage 3 2018 | / 6 0                           |
| [-+ Log Out           | - <b>*</b>          | RAI-COMP-ACES-801-26  | Basic Arduino Learning Kit                                       | COMPUTER AC ThaiEasyElec        | HA3 - HM Inventory Zone A Sto | rage 3 2018 | 1 6 9                           |

After this we will look at the single item "delete". This can be done by either selecting one item on the left and then pression the button delete at the top or clicking the delete icon associated with the item you want to delete.

You will get a confirmation popup asking if you really want to delete the item. Here you can select soft delete (this will put the item inactive so no one can borrow it) or permanently delete the item this way the item is really gone from the database.

|   |                  |                        |   |  |  | 4   | ja<br>P              | arne Dirken<br>rnedirken@gmail.com |
|---|------------------|------------------------|---|--|--|---|----------------------|------------------------------------|
| 2+ Barrow<br>← Return<br>← History<br>Supervisor<br>■ Requests<br>← Requests  | Produ            | l <b>cts</b><br>elect↑ | Active     Active |  | Brand     Search   | ♥ Search  |                      | *                                  |
| Centongs  Repairs  Admin  Products  Cucations  Adm Supers  Cucations  Cucati | Filters applied: | T Dele                 | Vear<br>2017  |  | Name<br>Plog E<br>Brand<br>uni-t<br>Model<br>multimeter<br>Location<br>HF2 - HM Inventory Zone F Storage 2 | ventory Zone F Storage 2  | YEAR<br>2017         | ACTION                             |
| <ul> <li>Parameters</li> <li>Logs</li> <li>Analytics</li> </ul>   |                  |                        | Cancel<br>RAI-ELEC-POW-401-01   | Soft Delete<br>AC-DC Adapter 9V, 2A  | Permanent Delete POWER SUPPL Venus Supply  | ventory Zone C Storage 3<br>HA3 - HM Inventory Zone A Storage 3   | 2018<br>2018         |                                    |
|   |                  | 4<br>4<br>4<br>4       | RAI-COMP-ACES-2101-02<br>RAI-COMP-ACES-2101-01<br>RAI-COMP-ACES-801-27  | Arduino Mega 2560 R3<br>Arduino Mega 2560 R3<br>Basic Arduino Learning Kit | COMPUTER AC Arduino COMPUTER AC Arduino COMPUTER AC ThaiEasyElec   | HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3 | 2018<br>2018<br>2018 |                                    |
| [-+ Log Out   |                  | 44                     | RAI-COMP-ACES-801-26  | Basic Arduino Learning Kit   | COMPUTER AC ThaiEasyElec   | HA3 - HM Inventory Zone A Storage 3   | 2018                 | 1 6 9                              |

We can also select multiple items and press the button "delete" at the top. This will give us this popup where we can see a quick overview of the items we have selected. Now we can choose to delete or soft delete all these items.

| KMITL K  |  |  |  |   | ¢  | JD Jam                               | n <b>e Dirken</b><br>Iedirken@gmail.com |
|--|--|--|--|---|--|--------------------------------------|---|
| 2+ Borrow<br>← Return<br>③ History<br>Supervisor<br>☐ Requests<br>♥ Lendings | Products Name Search Year Search 1, Sort by Select * | Model     Search     Available     Soloct  Delete products                     |  | Eand     Search   | • Esaten   |                                      | -                                       |
| Admin  Products  Cocations  Users  Parameters                                | Filters applied:                                     |  | Are you sure you want to delet<br>Are you Cable 3m<br>Are Ac-DC Adapter 9V, 2A<br>Arduino Mega 2560 R3 | te 3 items?   | ventory Zone F Storage 2   | YEAR<br>2017                         | ACTION                                  |
| E Logs   |  | Cancel<br>RAI-ELC-POW-401-01<br>RAI-COMP-ACES-2101-02<br>RAI-COMP-ACES-2101-01 | Soft Delete<br>AC-DC Adapter 9V, 2A<br>Arduino Mega 2560 R3<br>Arduino Mega 2560 R3                    | Permanent Delete POWER SUPPL Venus Supply COMPUTER AC Arduino COMPUTER AC Arduino | HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3 | 2018<br>2018<br>2018<br>2018<br>2018 |   |
| [-+ Log Out  |  | RAI-COMP-ACES-801-27<br>RAI-COMP-ACES-801-26                                   | Basic Arduino Learning Kit   | COMPUTER AC ThaiEasyElec  | HA3 - HM Inventory Zone A Storage 3<br>HA3 - HM Inventory Zone A Storage 3   | 2018                                 |   |

If we want to export data to excel, we can simply select the data we want to export. Or filter on the data by entering the name, model, location. We can select everything by clicking on the topmost checkbox. This will select everything. Then we can click "Export Excel" and we will get a file that we can save on our computer with the data.

| พระจอมมาต่ายามกระบัง         |   | Jarne Dirken<br>jarnedirken@gmail.com |
|------------------------------|---|---------------------------------------|
| <b>≙+</b> Borrow<br>← Return |   |                                       |
| History                      | Name         O Save As         X         ✓         Excition           Search         ← → ∨ ↑ ★ J Dewriteds J         ∨ C         Search Downloads         P   | h •                                   |
| Supervisor                   | Search Omnities New felder  |                                       |
| Requests                     | Southy Select + >   |                                       |
| Cendings                     |   |                                       |
| 🔀 Repairs                    | rmers appued: > alare - Thomas  |                                       |
| Admin                        | prote<br>V Earlier this year  |                                       |
| Products                     | + Add 🔂 Delete 🗱 QR-Cod 🔳 Desitop   |                                       |
| O Locations                  | IMAGE NO.  MAGE NO.  Comments #  Comments | YEAR ACTION                           |
| a Users                      | V 0468227 File name Item-Data (2).xixx V F2 - HM Inventory Zone F St  | orage 2 2017 🥒 📋 🕙                    |
| 段 Parameters                 | Save as type: Microsoft Eacel Worksheet (*xtra)   |                                       |
| E Logs                       | A Hide Folders Save Cancel  | iorage 3 2018 🥢 🖸 49                  |
| Analytics                    | 🛛 🗣 RAI-ELEC-POW-401-01 AC-DC-Adapter 9V, 2A POWER SUPPL Venus Supply HA3 - HM Inventory Zone A St  | torage 3 2018 🧷 🗖 🕙                   |
|                              | 🛛 🛷 RAI-COMP-ACES-2101-02 Arduino Mega 2560 R3 COMPUTER A.C Arduino HA3 - HM Inventory Zone A St  | torage 3 2018 🧪 🛱 🕙                   |
|                              | 💋 🛷 RAI-COMP-ACES-2101-01 Arduino Mega 2560 R3 COMPUTER AC Arduino HA3 - HM Inventory Zone A St   | orage 3 2018 🧷 🗖 🕓                    |
|                              | 🛛 🍫 RAI-COMP-ACES 801-27 Basic Arduino Learning Kit COMPUTER AC ThaiEasyElec HA3 - HM Inventory Zone A St   | torage 3 2018 🧪 🗖 😔                   |
| [→ Log Out                   | 🗹 🛷 RAI-COMP-ACES-801-26 Basic Arduino Learning Kit COMPUTER AC ThaiEasyElec HA3 - HM Inventory Zone A St   | orage 3 2018 🧷 🗂 🕓                    |

As for the import from an excel sheet. As you can see from the image. If you press on the import excel button, you'll be met with a popup modal.

| KMITL K                   |                    |                           |  |                  | ¢          | Sohai              | b Ibenhajene<br>oibenhajene( | e<br>@kmitl.ac.tł |
|---------------------------|--------------------|---------------------------|--|------------------|------------|--------------------|------------------------------|-------------------|
| St Borrow                 | Name<br>Search     | ← Model<br>Search         | •  | Brand<br>Search  | •          | Location<br>Search |                              | •                 |
| ← Return                  | - Year             | ✓ Availability<br>Select  | •  |                  |            |                    |                              |                   |
| 1 History                 | 1 Sort by Select ↑ | >                         |  |                  |            |                    |                              |                   |
| Supervisor                | Filters apr        | products                  |  |                  | ×          |                    |                              |                   |
| Cendings                  | + Add              | D Terrelate               | Ţ  |                  |            |                    |                              |                   |
| 🔀 Repairs                 |                    | L] Template               | Click to upload or drag a<br>XLSX and XLS only | and drop         | ION        | YEAR               | ACTION                       |                   |
| Admin Products            |                    | Cancel                    |  | Import           | IM I       | 2018               | / 1                          | <b>3</b> 0        |
| Locations                 |                    | RAI-ELEC-POW-401-01 AC-   | DC Adapter 9V, 2A PC                           | OWER S Venus Su  | HA3 - HM I | 2018               | 1 1                          | 0                 |
| හා Users<br>හි Parameters | •                  | RAI-COMP-ACES-2101-02 Ard | uino Mega 2560 R3 CC                           | DMPUTE Arduino   | HA3 - HM I | 2018               | / 1                          | 5 0               |
| E Logs                    | •                  | RAI-COMP-ACES-2101-01 Ard | uino Mega 2560 R3 CC                           | DMPUTE Arduino   | HA3 - HM I | 2018               | 1                            | 5 0               |
| [→ Log Out                | •                  | RAI-COMP-ACES-801-27 Bas  | ic Arduino Learning Kit CC                     | DMPUTE ThaiEasyE | HA3 - HM I | 2018               | 1 1                          | 3 0               |

There are two options in this modal, you can either choose to upload an excel sheet or you can download the template that we provide for the user. You can then fill in this template with all the data that you would like to import into the application. If you upload a file that does not meet the requirements set by the system you'll receive an error message telling you what you're doing wrong and on what row it is.

| KMITL K                       |                     |  |                            |                   | ¢          | <b>So So</b> so | haib Ibenhaj<br>haibibenhaje | <b>ene</b><br>ne@km | itl.ac.tł |
|-------------------------------|---------------------|--|----------------------------|-------------------|------------|-----------------|------------------------------|---------------------|-----------|
| 2+ Borrow                     | Name<br>Search      | - Model<br>Search                                  | •                          | Brand<br>Search   | •          | Search          |                              |                     | •         |
| ← Return                      | Year<br>Search      | <ul> <li>✓ Availability</li> <li>Select</li> </ul> | •                          |                   |            |                 |                              |                     |           |
| History                       | t₄ Sort by Select ↑ | >  |                            |                   |            |                 |                              |                     |           |
| Supervisor                    | Filters applied:    |  |                            |                   |            |                 |                              |                     |           |
| 🗂 Requests                    |                     | t products   |                            |                   | ×          |                 |                              |                     |           |
| Cendings                      | + Add               | Import El  | has been loaded ( ) Dome   |                   | prov.      |                 |                              |                     |           |
| X Repairs                     |                     | Connel   |                            | O langest         | ION        | YEAR            | ACTION                       |                     |           |
| Products                      |                     | Cancel   |                            | _ import          | IM I       | 2018            | Ĩ                            | Ō                   | •         |
| O Locations                   |                     | RAI-ELEC-POW-401-01                                | AC-DC Adapter 9V, 2A       | POWER S Venus Su  | HA3 - HM I | 2018            | î                            | ō                   | 0         |
| 와 Users                       |                     | RAI-COMP-ACES-2101-02                              | Arduino Mega 2560 R3       | COMPUTE Arduino   | HA3 - HM I | 2018            | Ĩ                            | n                   | 0         |
| 203 Parameters                | - •                 |  |                            |                   |            |                 | No.                          |                     |           |
| E Logs                        |                     | RAI-COMP-ACES-2101-01                              | Arduino Mega 2560 R3       | COMPUTE Arduino   | HA3 - HM I | 2018            | î                            | Ō                   | 0         |
| 😵 Row 2: 'Model' is required. | 0 44                | RAI-COMP-ACES-801-27                               | Basic Arduino Learning Kit | COMPUTE ThaiEasyE | HA3 - HM I | 2018            | ĩ                            | Ō                   | -0        |

You can then change the file accordingly, until there are no errors. Then you can safely import all the data that you want into the application.

As for generating QR-codes for items, it is very easy to do. All you have to do is select the products for which you want to generate a QR-code and then press on the generate QR-code button, then you'll get the option to download a pdf document that looks like the image below.



Finally, you can scan these QR-codes and you'll be brought to a page with the details for the specific item that you scanned.

#### 4.2. Locations

As you can see from the image. Locations have the exact same functionalities as products. The add, delete, edit, multi delete all work the exact same.

| <b>หระบอยแก่ห้าการการบัง</b>  | к |   | Jarne Dirken<br>jarnedirken@gmail.com |
|---|---|---|---------------------------------------|
| 2+ Borrow<br>← Return<br>① History<br>Supervisor<br>P Requests<br>② Lendings<br>> Applied |   | ♥ Locations       Name       Search       * |                                       |
| Admin Products C Locations Users Parameters   |   | Add Delete Export EXCEL      NAME      CENTRAL LAB      ECC      HM Inventory   | ACTION                                |
| E Logs  |   | ECC-ECC305-A     HA1 - HM Inventory Zone A Storage 1     HA2 - HM Inventory Zone A Storage 2     H42 - HM Inventory Zone C Storage 2  |                                       |
| [→ Log Out  |   | HA3 - HM Inventory Zone A Storage 3   | / 0                                   |

#### 4.3. Users

As you can see from the image. Users have the exact same functionalities as products. The add, delete, edit, multi delete all work the exact same.

|  | к |                      |                     |           |              |                  | ¢                       | Jarne Dir<br>jarnedirke | <b>ken</b><br>≥n@gma | Lcom       |
|--|---|----------------------|---------------------|-----------|--------------|------------------|-------------------------|-------------------------|----------------------|------------|
| et Borrow  |   | <u>ද</u> Users       |                     |           |              |                  |                         |                         |                      |            |
| History     Supervisor                               |   | First Name<br>Search | elect↑ >            | Search    | -            | E-mail<br>Search | - Search                |                         |                      | •          |
| <ul><li>Requests</li><li>Lendings</li></ul>          |   | Filters applied      | £                   |           |              |                  |                         |                         |                      |            |
| Admin  |   | + Add                | Delete Export EXCEL | LAST NAME | STUDENT CODE | TELEPHONE        | EMAIL                   | ROLE                    | ACTIO                | 4          |
| <ul> <li>Products</li> <li>Locations</li> </ul>      |   |                      | Test                | Userr     | 87654321     | 0812345678       | dirkendigital@gmail.com | Student                 | ľ                    | <b>ð</b> 📀 |
| 2. Users<br>2. Parameters<br>E. Logs<br>I. Analytics |   |                      | jame                | dirken    | 12345678     | 0628706432       | jarnedirken@gmail.com   | Admin                   | ľ                    | <u>0</u>   |
| [→ Log Out   |   |                      |                     |           |              |                  |                         |                         |                      |            |

#### 4.4. Parameters

The parameter page looks simple because it has only one purpose, change some specifications of our system. In this case we can change the start and end borrow and return time with the buffer time. Buffer time should always be the time in minutes and for the others we have date time pickers so that we can select the exact time we want. This influences the times the students can make borrow requests.

|   | Jame Dirken<br>jamedirken@gmail.com   |
|---|---|
|   | Start Mannag Time       End Mannag Time       Start Evening Time       End Evening Time       Mannag Time |
| Control Contr |   |

### 4.5. Logs

As we know sometimes, we get a notification when making a request, canceling, accepted, etc. An admin can view all the logs that happened in our application on this page. This way there will be no confusion when something happens. The admin can simply go back and view who did what at the given time.

|                     | к |  | Jarne Dirken<br>jarnedirken@gmail.com |
|---------------------|---|--|---------------------------------------|
| 2+ Borrow           |   |  | 1                                     |
| ← Return            |   |  |                                       |
| History     History |   | User: Jarne Dirken has been deleted by Sohaib Ibenhajene -> with role: Admin - 5/10/2024, 5:58:24 PM   🚳<br>New user: Jarne Dirken has been created from Sohaib Ibenhajene -> with role: Admin - 5/10/2024, 5:55:30 PM   🊳   |                                       |
| Supervisor          |   | Ploeg E succesfully received → with role: Admin - 5/10/2024, 4:55:39 PM  <br>Your request for Basic Arduino Learning Kit has been approved - pick it up at HA3 - HM Inventory Zone A Storage 3 -> with role: Admin - 5/10/2024, 4:46:56 PM   |                                       |
| Requests            |   | New user: Jame Dirken has been created from Sohaib Ibenhajene -> with role: Admin - 5/10/2024, 4:30:26 PM   @  |                                       |
| Lendings            |   | Basic Arduino Learning Kit succesfully received -> with role: Admin - 5/10/2024, 1:55:43 PM   🚳  |                                       |
| X Repairs           |   | rour request for dasic Arouno Learning Kit nas been approved - pick it up at HaS - HM Inventory Zone A Storage 3 → with role: Admin - 5/10/2024, 1:55:40 PM   👁<br>New borrow request from jame dirken → with role: Admin - 5/10/2024, 1:55:36 PM   👁  |                                       |
| Admin               |   | Plong E successfully received ⇒ with role: Admin - 5/10/2024, 155:18 PM  <br>Way request for Plone F has been approach, airkit in a VHC - WH instantion Zone E Storane 2 with role: Admin - 5/10/2024, 1:55:48 PM   ●  |                                       |
| Products            |   | New borrow request from jame dirken → with role: Admin - 5/10/2024, 1:42:54 PM   ③   |                                       |
| Locations           |   | New borrow request from jarne dirken -> with role: Admin - 5/10/2024, 1:29:12 PM  <br>Location: Test has been deleted by Sohaib Ibenhajene -> with role: Admin - 5/7/2024, 8:38:22 AM  |                                       |
| a Users             |   | New location: Test has been created from Sohaib Ibenhajene -> with role: Admin - 5/7/2024, 8:37:57 AM   ☎  |                                       |
| Parameters          |   | Location: dawdwad, with ID: 25 has been permanently deleted by Sohaib Ibenhajene -> with role: Admin - 5/7/2024, 8:18:45 AM   👁  |                                       |
| E Logs              |   | New location: goorgsg nas been created from Sohaib ibenhajene -> with role: Admin - 5/7/2024, 8:18:35 AM   @<br>New location: dawdwad has been created from Sohaib ibenhajene -> with role: Admin - 5/7/2024, 8:18:35 AM   @   |                                       |
| Analytics           |   | Location: Jarne Smooth af has been deleted by Sohaib Ibenhajene -> with role: Admin - 5/7/2024, 8:18:31 AM   <b>③</b><br>Location: Jarne Smooth af has been updated by Sohaib Ibenhajene -> with role: Admin - 5/7/2024, 8:18:24 AM   <b>④</b>   |                                       |
|                     |   | New location: Drifting has been created from Sohaib Ibenhajene -> with role: Admin - 5/7/2024, 8:18:03 AM   👁  |                                       |
|                     |   | Location: Test has been detected by sonabilities with note: Admin - 5//7024, 8:16:55 AM ( Control A Contro |                                       |
|                     |   | Basic Arduino Learning Kit succesfully received -> with role: Admin - 5/6/2024, 2:27:48 PM   🚳   |                                       |
|                     |   | User jarne dirken returned: Basic Arduino Learning Kit → with role: Admin - 5/6/2024, 2:27:43 PM   ⊕   |                                       |
|                     |   | Basic Arduino Learning Kit succesfully received → with role: Admin - 5/6/2024, 2:27:40 PM   🌑  |                                       |
|                     |   | Your request for Basic Arduino Learning Kit has been approved - pick it up at HA3 - HM Inventory Zone A Storage 3 -> with role: Admin - 5/6/2024, 2:27:37 PM   |                                       |
| -                   |   | Basic Arduino Learning Kit successfully received -> with role: Admin = 5/6/2024, 225-240 PM [0]  |                                       |
| L→ Log Out          |   | Basic Arduino Learning Kit successfully received -> with role: Admin - 5/6/2024, 2:25:47 PM ()   |                                       |

### 4.6. Analytics

As for an extra we made a quick little analytics page where we can view the bare minimum of data for our application. Standard filter is the current year. Here we can view a line chart of how many requests were made each month. On the pie chart we can view how many requests were made in total that year, how many requests were cancelled and how many were completed. The same goes for the KPI's at the bottom.

|                |   |                              | ↓ Jarne Dirken<br>jarnedirken⊚gmail.com    |
|----------------|---|------------------------------|--|
| 2+ Borrow      |   |                              |  |
| ← Return       | II. Analytics                                   |                              |  |
| History        | Year  |                              |  |
| Supervisor     | Filters applied: X Year: 2024                   |                              |  |
| 📋 Requests     |   |                              |  |
| Lendings       |   |                              |  |
| 🔀 Repairs      | <sup>10</sup> ] 8                               |                              |  |
| Admin          | - <sup>8</sup>                                  |                              |  |
| Products       | 6-<br>6-  |                              | 14 Requests made                           |
| O Locations    | 12 4-   |                              | 6 29 Requests cancelled Requests completed |
| <b>음</b> Users | ₹ 2-  |                              |  |
| 203 Parameters | Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nev Dec |                              |  |
| E Logs         | Total Requests Made                             | Amount of requests cancelled | Amount of requests finished                |
| II. Analytics  |   |                              |  |
|                |   | 6                            | 34   |
| [→ Log Out     |   |                              |  |