

**SILLIMAN UNIVERSITY MECHANICAL ENGINEERING LABORATORY  
EQUIPMENT BORROWER**

A developed project in compliance to the requirements of  
Computer Engineering 50 – Software Engineering

by

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User's Manual

## Introduction

The Silliman University Mechanical Engineering (SUME) Borrower Application is a software designed to manage the borrowing of laboratory equipment in the university's Mechanical Engineering Laboratory.

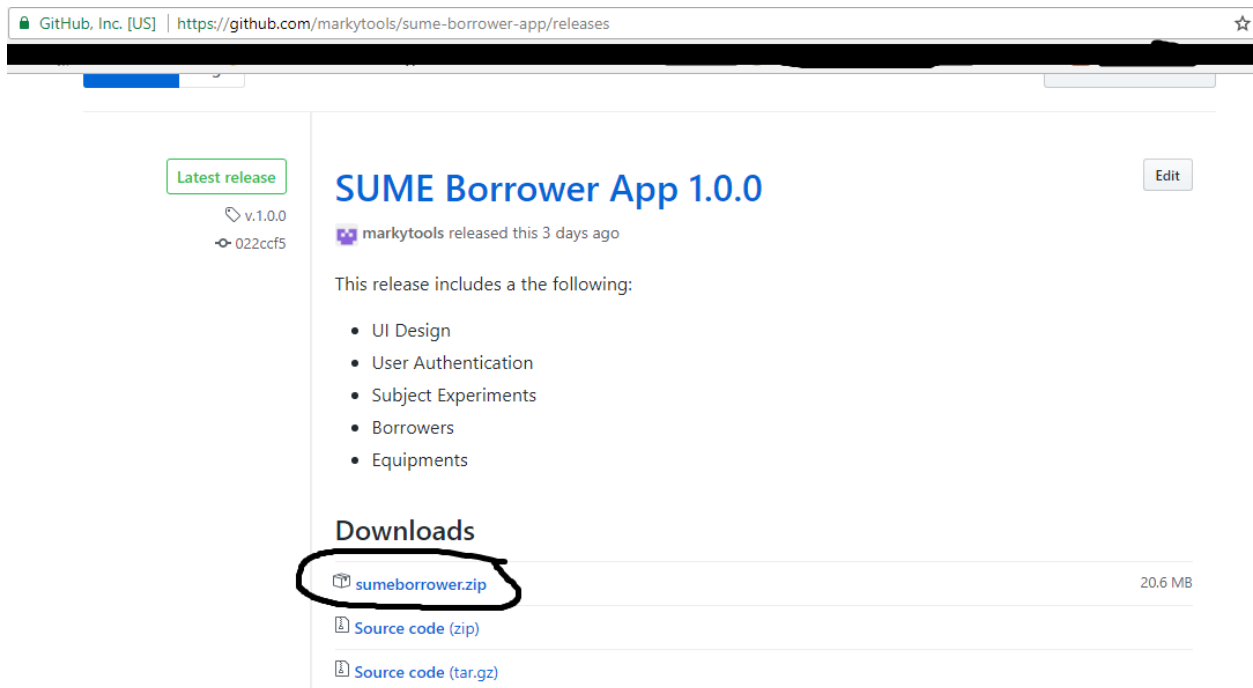
Features:

- Manage Laboratory Equipment
- Manage Equipment Borrowers
- Add Subject Experiment Equipment
- Export Borrower Info to Excel
- User Authentication

## Download and Install

The SUME Borrower App is currently being maintained in a GitHub repository called “sume-borrower-app”. It can be accessed by downloading the release version of the following GitHub URL:

<https://github.com/markytools/sume-borrower-app/releases>.



The release is a zip file. By extracting the zip file, the whole program, along with the .exe file, is included along inside it. Just run the .exe file and everything is good to go.

## Login



SUMEBorrower

 **SILLIMAN**  
UNIVERSITY

**MECHANICAL  
ENGINEERING  
LABORATORY BORROWER**

Username:

Password:

Login

Change Password

This is the first interface that appears after executing the program. To log in, the user must input the correct username with a corresponding password. By default, the username is “silliman” and the password is “password”. Upon successful login after clicking the “Login” button, the user is sent to the main menu. The user may also change password by clicking on the “Change Password” button, sending the user to the interface where the password may be changed.

## Change Password



The screenshot shows a web browser window titled "SUMEBorrower". The page features the Silliman University logo and the text "MECHANICAL ENGINEERING LABORATORY BORROWER". Below this, there are three input fields labeled "Username:", "Old Password:", and "New Password:". At the bottom, there are two red buttons labeled "Back" and "Submit".

SUMEBorrower

 **SILLIMAN**  
UNIVERSITY

**MECHANICAL  
ENGINEERING  
LABORATORY BORROWER**

Username:

Old Password:

New Password:

**Back** **Submit**

Here, the user is able to change the password of the account. Upon clicking submit – if the username and the old password matches – the user’s password is changed into the password written in the “New Password” field. Clicking “Back” returns to the login page.

## Main Menu



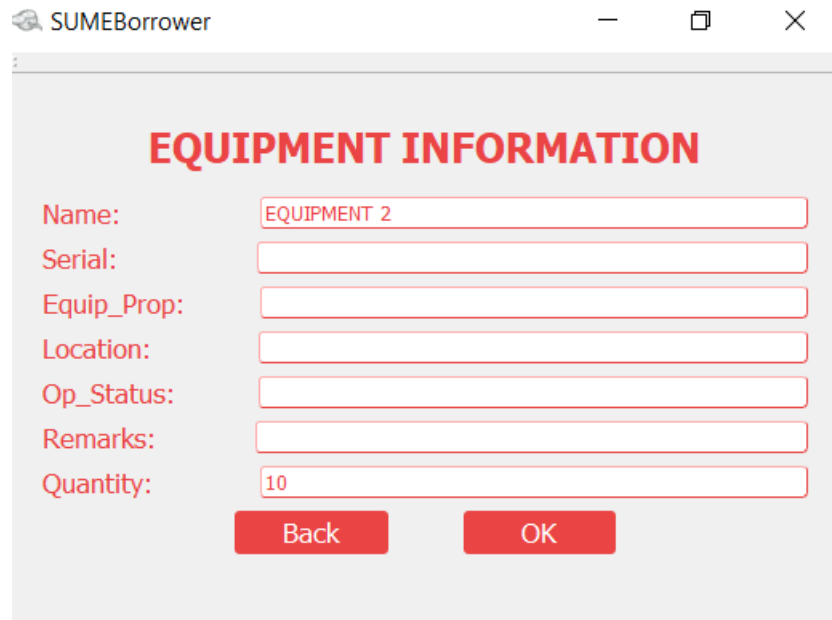
This is the main menu interface that displays after the user has successfully logged in.

## Equipment

[illegible]

This is the interface that appears if the equipment option is clicked in the main menu. The user is able to remove an equipment, remove all equipment, add an equipment, or edit an equipment's details.

## Add/Edit Equipment



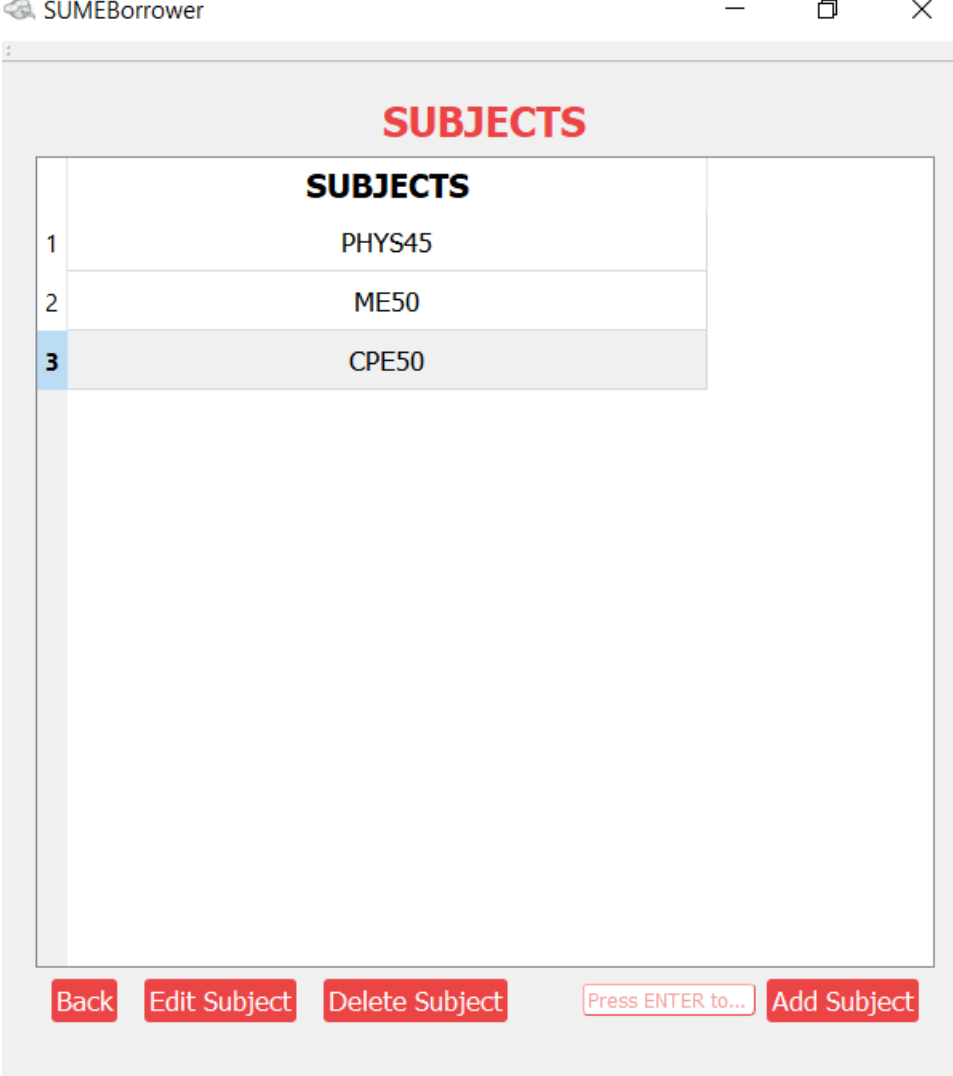
The screenshot shows a web browser window titled "SUMEBorrower". Inside the browser, there is a form titled "EQUIPMENT INFORMATION" in red text. The form contains several input fields with red borders and labels in red text. The fields are: "Name:" with the value "EQUIPMENT 2", "Serial:", "Equip\_Prop:", "Location:", "Op\_Status:", "Remarks:", and "Quantity:" with the value "10". At the bottom of the form, there are two red buttons labeled "Back" and "OK".

EQUIPMENT INFORMATION	
Name:	EQUIPMENT 2
Serial:	
Equip_Prop:	
Location:	
Op_Status:	
Remarks:	
Quantity:	10

Back OK

The user is able to view and edit an equipment's details here. Clicking "Add Equipment" in the Equipment interface also brings to this same interface. If "Edit Equipment" was clicked, the "Name" field is automatically set to read-only and only the other fields may be edited.

## Subjects



The screenshot shows a web application window titled "SUMEBorrower". The main heading is "SUBJECTS" in red. Below it is a table with three rows. The first row has index "1" and subject "PHYS45". The second row has index "2" and subject "ME50". The third row has index "3" and subject "CPE50", and it is highlighted with a blue background. At the bottom of the window are five buttons: "Back", "Edit Subject", "Delete Subject", "Press ENTER to...", and "Add Subject".


SUBJECTS	
1	PHYS45
2	ME50
3	CPE50

Back Edit Subject Delete Subject Press ENTER to... Add Subject

This is the interface that appears if the subjects option was clicked in the main menu. A list of subjects will appear. The user may add, delete, or edit a subject. To add, the user must input the name of the subject in the field provided then press the Enter button or click “Add Subject”.



## Edit Subject

 SUMEBorrower

SUBJECT: CPE50

EXPERIMENTS

	EXPERIMENTS
1	EXPERIMENT 1

EXPERIMENT: EXPERIMENT 1

LIST OF EQUIPMENTS

	EQUIPMENT NAME
1	EQUIPMENT 3

>> <<

EXPERIMENT EQUIPMENTS

	EQUIPMENT NAME
1	EQUIPMENT 2
2	EQUIPMENT 1

This is the interface that appears when “Edit Subjects” is clicked from the subjects interface. The experiments of the subject are shown here. The user may add or delete an experiment, similar to how a subject can be added or deleted. Furthermore, the user may also determine the equipment that the specific experiment will need. This is done by selecting certain equipment from the “List of Equipment” table and then transferring them to the “Experiment Equipment” table. Doing this will serve the filtering of the list of equipment in the Borrow Equipment section.

SUMEBorrower

LIST OF BORROWERS

	NAME	SUBJECT	SECTION	INSTRUCTOR	START	END
1	GROUP 1	CPE 50	A	ENGR. DIPUTADO	2017-10-18 03:0...	2017-10-18 03:0...
<						>


Back

Info

Add

This is the interface that appears when “Borrow” is selected from the main menu. A list of borrower groups is displayed. Clicking “Info” will view the information of a specific borrower group. Clicking “Add” will send the user to a set of interfaces which serves as the process of adding a borrower group.

## Borrowing Details

 SUMEBorrower

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**BORROWING DETAILS**

Enter the Student Name:

JAN

CLYDE

JACK

MOE

Group Name:

Subject:

Section:

Instructor:

Start:

End:

☒ Has End Time

This is the interface that appears when “Add” is clicked from the Borrower interface. This is the first step of the borrowing process. Here, the user can add a list of students by typing their names and clicking “Add” and can delete them by highlighting their names in the list and clicking “Delete”. Afterwards, the user will have to fill in the other details before being able to proceed to the next process. The “End” field is automatically disabled. If the user determines that there should be an end time of the borrowing of equipment by clicking on the checkbox provided, the “End” field is enabled and the user can set the date and time that the equipment are to be returned.

## Borrow Equipment

SUMEBorrower

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**BORROW EQUIPMENT**

SUBJECTS

SUBJECTS	
1	PHYS45
2	ME50
3	CPE50

EXPERIMENTS

EXPERIMENTS	
1	EXPERIMENT 1

USE THIS BUTTON TO FILTER OUT THE LIST OF EQUIPMENTS FOR A SPECIFIC EXPERIMENT

Add Filter

LIST OF EQUIPMENTS

	EQUIPMENT NAME	QUANTITY
1	EQUIPMENT 2	10
2	EQUIPMENT 1	10

< >

CPE50@EXPERIMENT 1

EQUIPMENTS TO BE BORROWED

BORROWED	EQUIPMENT NAME
1 2	EQUIPMENT 1
2 4	EQUIPMENT 2

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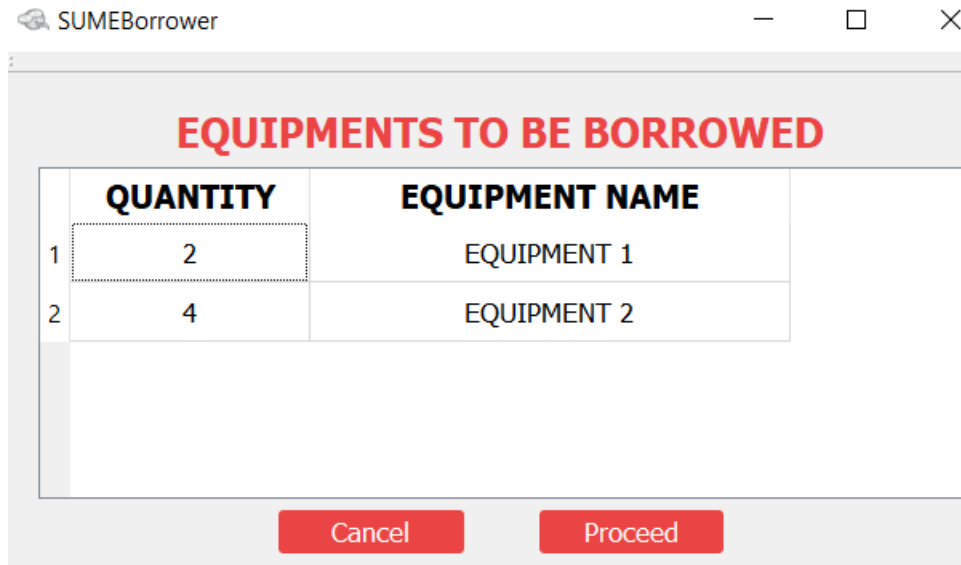
>>

Back

Proceed

This is the second step of the borrowing process. The “Subjects” and the “Experiments” tables are for filtering purposes of the “List of Equipment” table. Once a subject and an experiment is highlighted, the user can make use of the “Add Filter” button. Upon clicking it, the “List of Equipment” table is automatically filtered by the search field below it through the codeword “subjectname@experimentname”. If the search field is left blank, the list will show all the equipment in the inventory. The user is then able to determine the number of equipment and pieces of the equipment the borrower group can borrow.

## Borrow Confirmation




A screenshot of a web application window titled "SUMEBorrower". The window displays a confirmation screen for borrowing equipment. At the top, the title "EQUIPMENTS TO BE BORROWED" is shown in red. Below this is a table with two columns: "QUANTITY" and "EQUIPMENT NAME". The table contains two rows of data. The first row shows a quantity of 2 for "EQUIPMENT 1". The second row shows a quantity of 4 for "EQUIPMENT 2". At the bottom of the window, there are two red buttons: "Cancel" and "Proceed".

	QUANTITY	EQUIPMENT NAME
1	2	EQUIPMENT 1
2	4	EQUIPMENT 2

Cancel Proceed

This is the third and final step of the borrowing of equipment. A final confirmation is displayed to the user. Upon clicking “Proceed” a new borrower group is created and the user is sent back to the borrower page where a list of borrower groups is shown.

## Borrower Information

 SUMEBorrower

**INFORMATION**

EQUIPMENTS

	EQUIPMENT NAME	BORROWED	RETURNED
1	EQUIPMENT 1	2	<input type="checkbox"/>
2	EQUIPMENT 2	1	<input type="checkbox"/>

MEMBERS

	STUDENTS
1	ANGELO
2	MARK
3	PHILIP
4	MARC

Export To Excel

Some of the equipments have not been returned yet!

Delete Borrower

Group Name:

Subject:

Section:

Instructor:

Start Time:

End Time:

GROUP 1

CPE 50

A

ENGR. DIPUTADO

2017-10-18 03:09:34 PM

Back

This is the interface that appears when “Info” is clicked from the borrower interface. This interface shows the full details of the borrower group: the students, the equipment borrowed, and other necessary details. Clicking “Export To Excel” opens up Microsoft Excel with a pre-made table containing the details of the borrower group. The “Delete Borrower” button is automatically disabled. If the user knows that the equipment is returned, the user may click on the checkbox on the rightmost of the equipment field. If all equipment is returned the “Delete Borrower” button is enabled. Upon clicking the button, the borrower group is deleted and the user is sent back to the borrower page where a list of borrower groups is shown.

## Borrower Slip

### ***MECHANICAL ENGINEERING LABORATORY BORROWER SLIP***

Subject: CPE 50  
Borrower/Group: GROUP 1  
Adviser/Instructor: ENGR. DIPUTADO

Section: A  
Start Date/Time: 2017-10-18 03:09:34 PM  
End Date/Time:

Students	Equipment	Quantity	Remarks
ANGELO	EQUIPMENT 1	2	✓
MARK	EQUIPMENT 2	1	
PHILIP			
MARC			

Mechanical Engineering Department, Charles Bachelor Building, Silliman University,  
Dumaguete, Negros Oriental

\_\_\_\_\_  
Instructor's Signature

This is the display of the Microsoft Excel file when “Export to Excel” is clicked from the “Borrower Information” interface. A checkmark determines that the equipment is returned.