

Oregon State University

Robotics Club

ResiSTORE Manual (Manager Edition)

ResiSTORE

A stylized resistor symbol consisting of a horizontal line with three zigzag peaks in the center, positioned below the word "ResiSTORE".

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Chapter 1

Philosophy & Business Model

Hello and congratulations on gaining your newly appointed position as the ResiSTORE Manager (pronounced: Resist Ore). You'll find that running the ResiSTORE is some of the most satisfying work on campus due to its direct and visible impact on students in the Engineering program here at Oregon State University. However, for it to stay that you must follow the procedures and keep this ship sailing in clean efficient condition. This manual will serve to teach you how to do that.

It is recommended that you read this manual in full in conjunction with questions toward the manager to whom you are replacing. This will ensure you know how to run the ResiSTORE. The format of this text will start with a brief description of the philosophy and business model of the store, a brief 'why we do this' preamble. Then we will cover the greatest tool you have as manager, the store website. Following that we will go through a single term as manager. Going over responsibilities and expectations before, during, and after a 10 week term at Oregon State University. Finally, we will cover the lesser known aspects of the store that a manager would want to take note of.

1.1 The ResiSTORE Philosophy

The ResiSTORE is a student-run, volunteer based, not for profit that provides electronic components to the Engineering students and the Corvallis community at large. We do not resell to make money but only to get the valued components in the hands of students who desired to

learn from them. Prices are chosen to cover the cost of the item and shipping, nothing more added. Any profit that happens to be made goes into purchasing new items that are of value to the customers of the ResiSTORE.

The volunteers of the ResiSTORE are the most valued aspect of the store. These are people who not only wish to learn more about electronics by interacting with a variety of components during their shift, but also share the desire to distribute them to the community so more people can learn how to use them. A volunteer should never be turned away for a lack of knowledge, contrary to that, encourage those who do not know much about electronics to volunteer so that can see the creative potential they possess when they have knowledge of these components. The volunteer's safety should always be a concern of the manager. A volunteer should never be forced to have a particular shift. A volunteer should be fully allowed to stop showing up to shifts, should they desire. The manager should strive to make accommodations for volunteers.

The customers of the ResiSTORE are the second most valued aspect of the store. They allow the store to function as a store. They are the community that the store, including the manager and the volunteers, are meant to serve. We offer our knowledge, trust and electronic components to the customers. Reasonable accommodations should be made for customers, so long as it fulfills our mission of getting electronics in the hands people who wish to learn more about them.

The ResiSTORE functions as its own entity. Connections to the bureaucratic decision making of Oregon State University for an on-campus electronics store (e.g. Tekbots) yields a store that becomes too inflexible to serve the large inventory we stock and the customers of the Corvallis community (never exclusively OSU Students).

Partnerships with other clubs, primarily for need of selling components to other clubs to further their programs is encouraged. However, external clubs demanding ownership or unwarranted discounts that put the ResiSTORE at a significant disadvantage should not be tolerated.

The ResiSTORE's historical connections to the Oregon State University Robotics Club (OSURC) and the Institute of Electrical and Electronics Engineers Club (IEEE Club) are part of what makes the store it is today. However, the Robotics Club does not define the actions of the

ResiSTORE. This is the responsibility of the ResiSTORE Manager. This current relationship with the Robotics Club will be further covered in Section 5.3.

1.2 The ResiSTORE Style Guidelines

The ResiSTORE has set stylistic fonts and color pallets that should be acknowledged when creating media for the store.

1.2.1 Colors

The official ResiSTORE colors are the following:

- Primary Flat Grey - HEX: 333, RGB: 51, 51, 51, CMYK: 0%, 0%, 0%, 80%
- Secondary Undertone Grey - HEX: 222, RGB: 34, 34, 34, CMYK: 0%, 0%, 0%, 87%
- Primary Orange (should have limited use for highlighting) - HEX: F77308, RGB: 247, 115, 8, CMYK: 0%, 53%, 97%, 3%

1.2.2 Fonts

The official ResiSTORE font is Aqua Grotesque in Bold, Thin, and Standard varieties.

Chapter 2

The ResiSTORE Website

The ResiSTORE website is the most powerful tool available to you as the manager, to your volunteers, and the customers of the store. This website is your main outlet for communicating and running the store so it is imperative that you manage it properly. This chapter will cover how to properly maintain the website as well as understand what you and others can do with the tools provided.

The ResiSTORE website is under thre url: `https://resi.store`. The site is written in HTML and CSS on the front end, the user interface. It is written in PHP, Javascript and SQL on the back end, the database access and site scripting.

The site is hosted on an Apache based Linux server owned by the Robotics Club. You can access this server via a connection to the `osurobotics.club` over an SSH connection. Be sure to contact the Robotics Club Webmaster/Web Developer to get access to the server. You will inevitably need to access to the server so get this access before you need it.

The location of the source code to the ResiSTORE website is at

```
../var/www/resi.store
```

from the home directory of the server. Version control of the ResiSTORE website is handled with git. The current repository can be found at `https://github.com/tristanluther28/ResiStore`. Should you want or need to make edits to the source code you will need to branch from the original repository.

2.1 Main Page

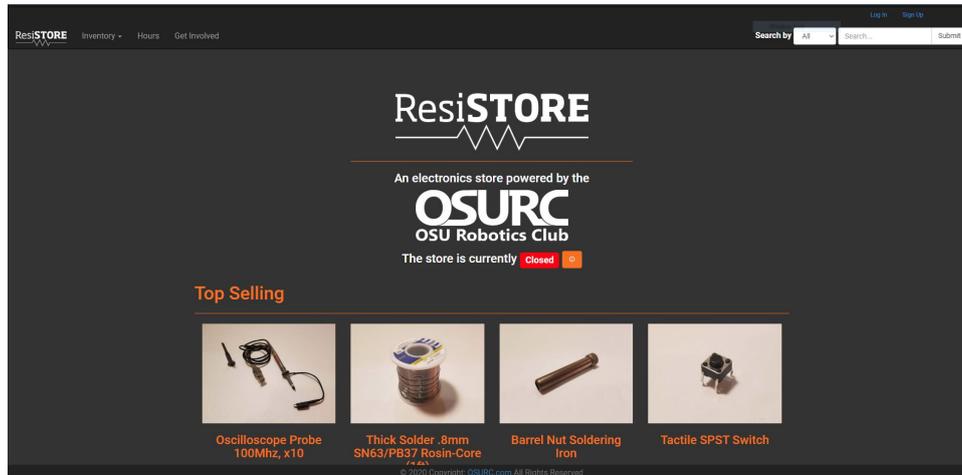


Figure 2.1: ResiSTORE Main Page

The Main Page of the ResiSTORE Website has the following elements. A top navbar, logo banner with the open/close banner, the 'Top Selling' item bar, the 3-column description section, and the bottom footer.

The top navbar is persistent across the entire website. You can access this navbar from any point in the website experience. Moving from left to right, the navbar consists of the ResiSTORE logo which returns you to this main page. The Inventory drop-down menu gives the options to go to one of the two full inventory pages (full sorted list or the category page). Covered in Section 2.2. Below that, in the drop-down, each of the product categories are listed and can be clicked to take you to the item list that share that category or a similar name to that category. Next the Hours tab will take you to the hours page for the website. Covered in Section 2.3. The Get Involved tab will take you to the get involved page. Covered in Section 2.4.

The logo banner has the store logo with the Robotics Club logo featured underneath. Underneath that is the store open/closed banner. This banner indicates if the light sensor under the florescent tube light is on or off. This is the main outlet though which people know if the store is open or closed due to the dynamic hours of the store. This banner works by having a Particle Photon Board read the status of the LDR (light dependent resistor) and report that status (either a 0 for off or 1 for on) to a PHP script on the `osurobotics.club` server. This PHP script then writes the status to the file `lux.bool` (located in the same directory). The ResiSTORE

Main Page then has a small script of Javascript code that reads the status of this `lux.bool` file to determine if the banner should read 'Closed' or 'Open'. All of the PHP to `lux.bool` script transaction takes place at

```
../var/www/web_scripts
```

from the home directory of the server. For addressing issues with the Open Close Banner see Section 2.1.1

The Top Selling bar derives its data from the database inventory table. It displays the four items that have the largest number in the 'sold' data category of the inventory table. The Top Selling bar will not display items that are Out of Stock or have an item quantity of zero.

The three column blurbs give each give some information about the who, what and where of the store. This was carried over from the previous website and includes the link to the 'classic' style inventory page for those who prefer the old website.

The footer contains the copyright info. We currently do not hold copyright so this claim is entirely unfounded.

2.1.1 Troubleshooting the Open Closed Banner

Like with any system, especially one involving wireless connections, issues can occur and connection can be lost. Go through the following troubleshooting procedures should the system fail.

1. Check the power and verify that it is plugged in correctly.
2. Be sure that there are no shorts to the board. Not contacting any metal objects that should be sending either false negative or positive signals.
3. Check the status LED on the Particle Board. The appropriate action to take for a particular LED color can be found on Particle's website: <https://docs.particle.io/tutorials/device-os/led/photon/#looking-for-internet>.
4. If the LED is breathing cyan as though the Particle Photon is functioning as intended then move over to the Robotics Server and change the file permission on both `lux.bool` and the PHP script with the command `chmod 755 fileName`.

5. If that still has not resolved the issue then check and re-flash the Particle Board code though the particle web portal. The Robotics Club credentials will be needed to access this portal, contact the Webmaster/Web Developer.
6. If that does not resolve the issue, make it a group effort and get help from others.

2.2 Inventory Page

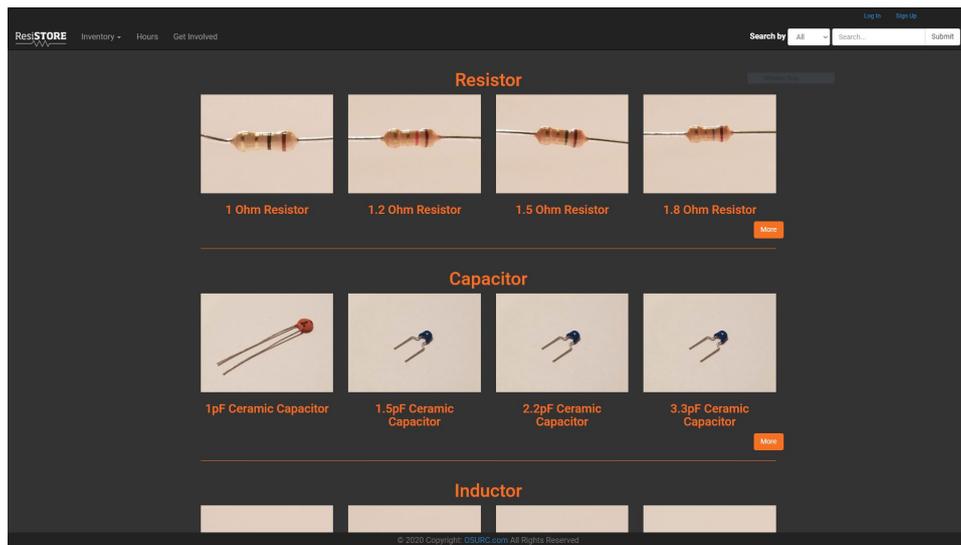
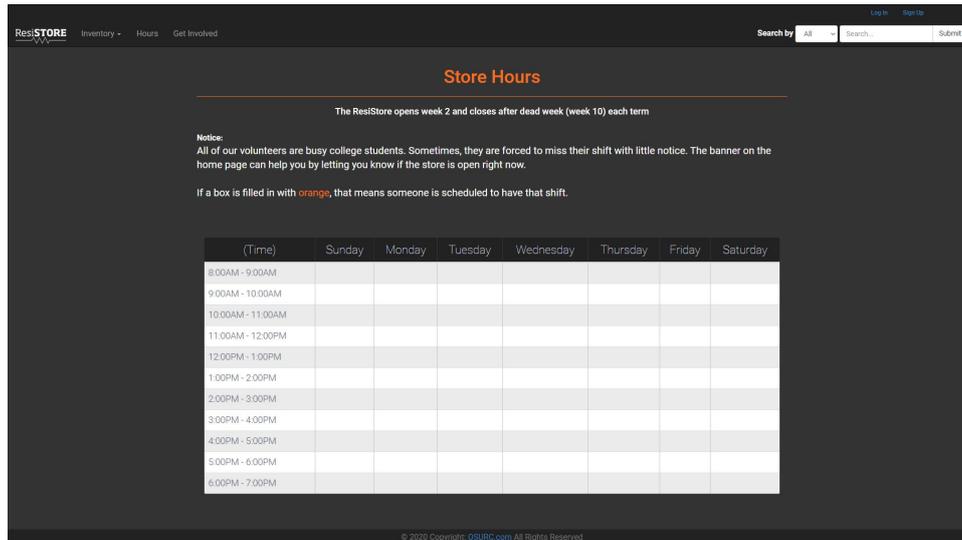


Figure 2.2: ResiSTORE Category Inventory Page

The store inventory pages derive all of their data from the database. They organize the data by category, price, PLU, name (all can be customized from the search bar in the top navbar). To access the data on a particular item click on the picture, name, or View Item button. Editing information about items will be covered in Section 2.5.3.

2.3 Hours Page



The ResiSTORE opens week 2 and closes after dead week (week 10) each term

Notice:
All of our volunteers are busy college students. Sometimes, they are forced to miss their shift with little notice. The banner on the home page can help you by letting you know if the store is open right now.
If a box is filled in with orange, that means someone is scheduled to have that shift.

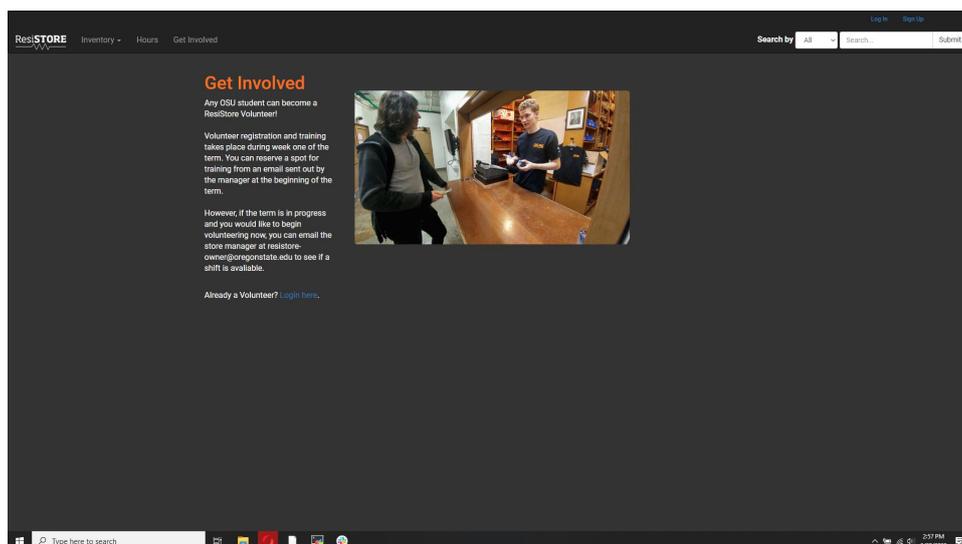
(Time)	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:00AM - 9:00AM							
9:00AM - 10:00AM							
10:00AM - 11:00AM							
11:00AM - 12:00PM							
12:00PM - 1:00PM							
1:00PM - 2:00PM							
2:00PM - 3:00PM							
3:00PM - 4:00PM							
4:00PM - 5:00PM							
5:00PM - 6:00PM							
6:00PM - 7:00PM							

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Figure 2.3: ResiSTORE Hours Page

The Hours page lets customers know when it is expected for someone to be in the store. The Hours page will automatically update as volunteers register and select times. Taken time slots are marked with the hour block being filled in by orange.

2.4 Get Involved Page



Get Involved

Any OSU student can become a ResiStore Volunteer!

Volunteer registration and training takes place during week one of the term. You can reserve a spot for training from an email sent out by the manager at the beginning of the term.

However, if the term is in progress and you would like to begin volunteering now, you can email the store manager at resistoreowner@oregonstate.edu to see if a shift is available.

Already a Volunteer? [login here.](#)



Figure 2.4: ResiSTORE Get Involved Page

The Get Involved page gives basic contact information to the customers. It is recommended you change the email contact on the page with one that you, as manager, will be checking regularly.

The page also give basic information about how people can sign-up to volunteer.

2.5 Using the Manager Tools

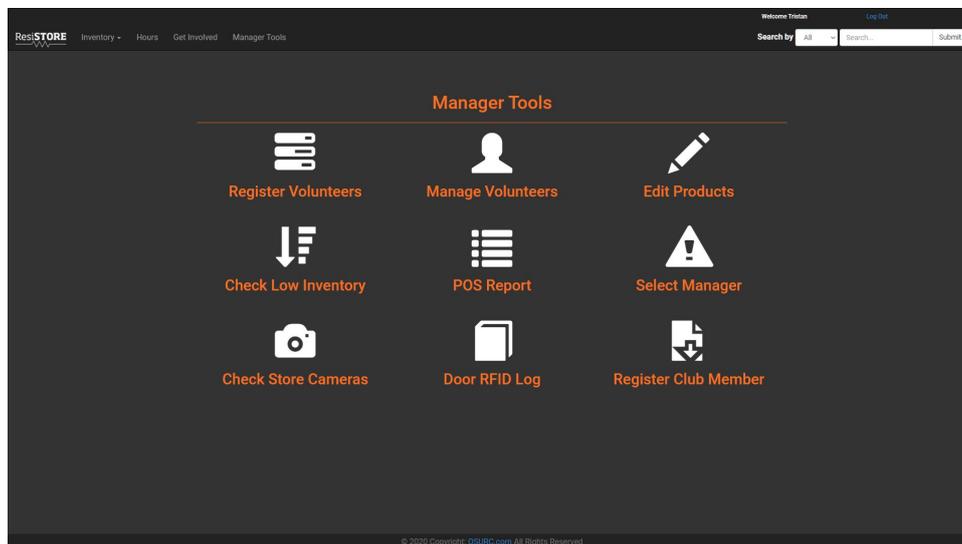


Figure 2.5: ResiSTORE Manager Tools Page

When you sign-in with your ResiSTORE Manager enabled account, given to you by your preceding Manager, you will have another menu option on the top navbar. This option is the Manager Tools page. It will be your main access to the tools you need to add/remove/edit inventory, add/remove/edit volunteers, and much more. The tools listed in Figure 2.5 show nine different tools. Seven of the nine tools are still in use. The two tools that are no longer in use are the POS Report tool, which was no longer needed after the institution of the Square POS, and the Check Store Cameras page which is an unfinished prototype. Details on the store cameras can be found in Section 6.2. We will go through the remaining seven tools one by one to explain their function and use to you as Manager.

2.5.1 Register Volunteers Page

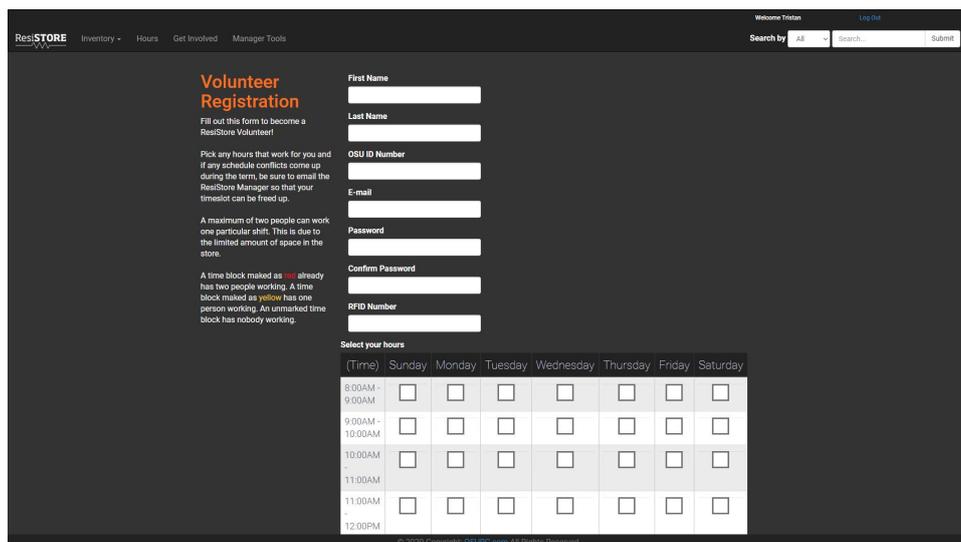


Figure 2.6: ResiSTORE Volunteer Registration Page

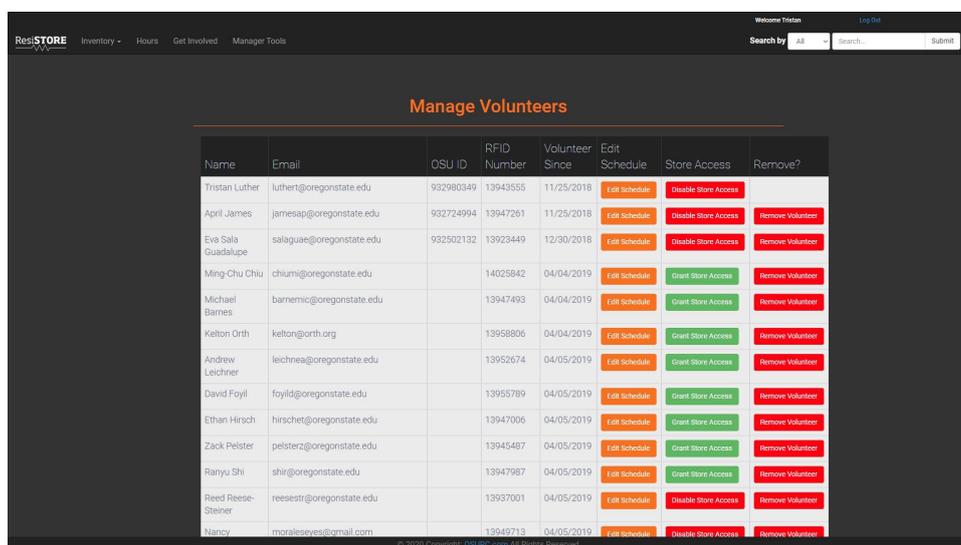
The Volunteer Registration page is how you make new entries into the volunteer table of the store database. Once a volunteer enters all of the required information and submits then the times they have selected will appear on the public Hours page and can only be edited by the manager. Covered in Section 2.5.2. Also once a volunteer submits their data entry into the database, they will be given access to the store via the Particle Photon RFID reader that controls the door mechanism. Be sure to test their access upon registration.

A volunteer data entry also serves as a volunteer account that they can use to sign into the ResiSTORE website, similar to the manager. However, their account Tools page will only allow them to either get ride of their store hours and submit online trouble tickets though the *resistore.bot@gmail.com* email account. This could serve as an alternative to the paper trouble ticket system should the Manager prefer a paperless system.

It should be noted that all password that volunteers enter into the database go though a 'salted & hash' type encryption and cannot be read by anyone (including the Manager). If a volunteer forgets their login information they will need to set a new password though the Forgot Password function on the sign-in page. This functions requires the *resistore.bot@gmail.com* email to be functioning. Check Section 6.2 if the bot is not sending emails.

The RFID Number field often troubles many new volunteers signing-up. Keep in mind that the volunteers must scan their Oregon State ID (Orange Cards) on the keyboard ID scanner in-order to fill out this field. Also be sure that the field is selected before scanning the ID card.

2.5.2 Manage Volunteers Page



Name	Email	OSU ID	RFID Number	Volunteer Since	Edit Schedule	Store Access	Remove?
Tristan Luther	luthert@oregonstate.edu	932980349	13943555	11/25/2018	Edit Schedule	Disable Store Access	
April James	jamesap@oregonstate.edu	932724994	13947261	11/25/2018	Edit Schedule	Disable Store Access	Remove Volunteer
Eva Sala Guadalupe	salaguae@oregonstate.edu	932502132	13923449	12/30/2018	Edit Schedule	Disable Store Access	Remove Volunteer
Ming-Chu Chiu	chiu@oregonstate.edu		14025842	04/04/2019	Edit Schedule	Grant Store Access	Remove Volunteer
Michael Barnes	barnemic@oregonstate.edu		13947493	04/04/2019	Edit Schedule	Grant Store Access	Remove Volunteer
Kelton Orth	kelton@orth.org		13958806	04/04/2019	Edit Schedule	Grant Store Access	Remove Volunteer
Andrew Lechner	lechnera@oregonstate.edu		13952674	04/05/2019	Edit Schedule	Grant Store Access	Remove Volunteer
David Foyil	foyild@oregonstate.edu		13955789	04/05/2019	Edit Schedule	Grant Store Access	Remove Volunteer
Ethan Hirsch	hirschet@oregonstate.edu		13947006	04/05/2019	Edit Schedule	Grant Store Access	Remove Volunteer
Zack Peister	peisterz@oregonstate.edu		13945487	04/05/2019	Edit Schedule	Grant Store Access	Remove Volunteer
Rianyu Shi	shi@oregonstate.edu		13947987	04/05/2019	Edit Schedule	Grant Store Access	Remove Volunteer
Reed Reese-Steiner	reese@oregonstate.edu		13937001	04/05/2019	Edit Schedule	Disable Store Access	Remove Volunteer
Nancy	moraleseyes@gmail.com		13949713	04/05/2019	Edit Schedule	Disable Store Access	Remove Volunteer

Figure 2.7: ResiSTORE Manage Volunteers Page

The Manage Volunteers page is how you can edit and remove volunteers from the database. It is common that a volunteer will want to stop volunteering part way through the term due to a lack of time or simply switch their schedule around to accommodate changes. Should that be the case, come to this page and edit their schedule to reflect their desired schedule and keep in mind to either keep or revoke store access with the buttons to the right of the page.

Keep in mind that ResiSTORE accounts with Manager privileges cannot be removed from the database. The only way to remove a manager is for the manager to pass their manager privileges to another user and then delete their volunteer level account.

If you want to edit any further information about a volunteer you will need to edit the volunteer table of the database directly through the phpMyAdmin portal (very dangerous if you don't know what you're doing and not recommended) or make the volunteer a new account with the updated information with the Register Volunteer page.

2.5.3 Edit Products Page

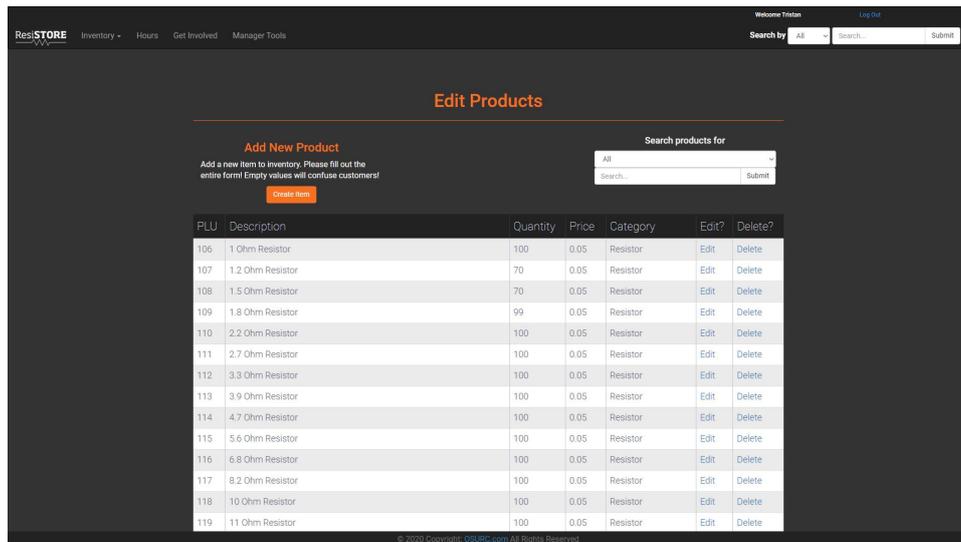


Figure 2.8: ResiSTORE Edit Products Page

The Edit Products page allows you to add, edit, and remove items from the inventory table of the database. To find a particular item in the database use the search bar on the upper right section of the page. You can then edit every attribute of the item by selecting the edit field on the table. Keep in mind that if you do not make changes to a field on the edit menu then the file or text that is currently in the field will remain. These changes will immediately be reflected on the public inventory page.

To create a new inventory item, click the Create Item button on the upper left side of the page. This will take you to a new form page where you will fill out all of the details on a new entry to the inventory table of the database. For the full description on how to add items to the ResiSTORE see Section 3.5.1.

2.5.4 Check Low Inventory Page

Out of Stock Items				Low Quantity Item			
PLU	Description	Quantity	Price (\$)	PLU	Description	Quantity	Price (\$)
285	10nF Ceramic Capacitor	0	\$0.35	288	33nF Ceramic Capacitor	3	\$0.35
291	50nF Ceramic Capacitor	0	\$0.35	300	680nF Ceramic Capacitor	1	\$0.35
297	220nF Ceramic Capacitor	0	\$0.35	320	150mH Inductor	3	\$3.00
	330nF Ceramic			358	Orange LED, 5mm	1	\$0.35

Figure 2.9: ResiSTORE Low Inventory Page

The Check Low Inventory page shows you a compiled list of all the items in the database that are Out of Stock (left side) or have a quantity below three (right side). This can be used to quickly assess what needs to be placed into the next order. For details on ordering inventory see Section 3.5.

2.5.5 Select Manager Page

Figure 2.10: ResiSTORE Transfer Manager Page

The Select Manager page is what allows you to transfer your manager account privileges to another ResiSTORE volunteer account. This should be used at the end of your time as manager

to transition the website power of manager to your successor. When you transfer your account privileges to another account your account loses these privileges and becomes the equivalent of a volunteer account.

2.5.6 Door RFID Log Page

Time Attempted	Firstname	Lastname	RFID Number	Status
02/16/2020 03:07PM	Cody	Nhem	14030221	Access Granted
02/16/2020 03:31PM	Malachi	Fisher	13951706	Access Granted
02/16/2020 03:49PM	Malachi	Fisher	13951706	Access Granted
02/16/2020 05:07PM	Malachi	Fisher	13951706	Access Granted
02/16/2020 10:01PM	Malachi	Fisher	13951706	Access Granted
02/17/2020 12:09AM	Malachi	Fisher	13951706	Access Granted
02/17/2020 11:00AM	Grant	Haines	13947715	Access Granted
02/17/2020 12:00PM	Tristan	Luther	13943555	Access Granted
02/17/2020 12:55PM	Yuhao	Su	14026209	Access Granted
02/17/2020 02:02PM	Andrew	Lechner	13952674	Access Granted
02/17/2020 02:55PM	Lyubo	Gankov	13943742	Access Granted
02/17/2020 02:56PM	Unknown		11534335	Access Denied
02/17/2020 04:00PM	Kyle	magness	13938875	Access Granted
02/17/2020 05:17PM	David	Wood	1958811045	Access Granted
02/17/2020 05:17PM	Unknown		16777215	Access Denied
02/17/2020 05:53PM	David	Wood	1958811045	Access Granted

Figure 2.11: ResiSTORE Door Log Page

The Door RFID Log page allows you to view any RFID card scans on the ResiSTORE door scanner. The page allows you to delete the door log should it become inflated and no longer possesses necessary information. Caution: Once this data is deleted it cannot be retrieved. If a card is scanned that is linked to a ResiSTORE account their name, time, and whether or not they were granted access to the store will be logged. If a card is scanned that is not in the ResiSTORE database then the RFID number, time, and whether or not they were granted access to the store will be logged (The should never have access if they are unrecognized).

2.5.7 Register Club Member Page

ResiSTORE Member Registration

Fill out this form to become a OSURC Member!

First Name

Last Name

OSU ID Number

E-mail

Current Major

Standing at OSU

Club Interests

- Rovering Robots (Mars Rover)
- Flying Robots (Aeris)
- Drone Racing
- Swimming Robots (Underwater)
- DRK Robots (Cable Robotics Kit)
- Club Lab Work-space Access
- Personal Robots and Projects
- Job and Internship Networking
- Leadership Opportunities
- FIRST Involvement

RFID Number

Membership Option

- \$10 - Membership Only
- \$20 - Membership and Shirt
- \$0 - Payment Pending

Submit Reset

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Figure 2.12: ResiSTORE Register Robotics Club Member Page

The Register Club Member page is used for registering members of the Robotics Club to the Robotics Club member table in the ResiSTORE database. Keep in mind that the ResiSTORE is in control of the data of the Robotics Club members. The only accounts that have access to this page are the Manager of the ResiSTORE and ResiSTORE volunteer accounts that are marked to belong to Robotics Club Officers. The Robotics Club Officer accounts also have the ability to transfer their account power just like the Manager Transfer discussed in Section 2.5.5.

Chapter 3

Before the Term Starts

Your work in the ResiSTORE begins at least one week before the start week of the term. You need this time to get volunteers, check the status of the inventory, check the starting amount in the register, print any consumable documents that will be used during the term and be sure you know how to order stock/handle items.

3.1 Getting Volunteers

To get volunteers for the ResiSTORE you need to send out two of the same email. This email will get volunteers acquainted with the store and link them to a Doodle Poll where they can select their training times. One will go to the Secretary of the Robotics Club and the other will go to whoever is in control of the general EECS mailing list (as of the writing of this document that is Tina Batten tina.batten@oregonstate.edu).

The email should follow the following format:

The ResiSTORE is looking for ((TERM)) term volunteers! Read below if you are interested in volunteering for the ResiSTORE!

Fill out the doodle poll to sign-up for a volunteer training: ((Here(DoodlePollLink)))

What is the ResiSTORE?

The ResiSTORE is a volunteer-run electronics store located in the basement of Dearborn hall

that serves the OSU community.

Why should you volunteer?

There are many reasons to volunteer! They include after-hours access to the store for your own projects, learning about electronics (from customers and fellow volunteers), being part of the community, and more!

Student volunteers are necessary to operate the store.

Volunteering is fun, easy, educational, and it looks great on scholarship applications and résumés! A typical volunteer may work in the store for only one or two hours per week, although more is certainly welcome.

Volunteering is open to everyone of all majors!

How can you volunteer?

If you're interested in volunteering, please sign up for volunteer training: ((Here(DoodlePollLink)))

Even if you have already volunteered for the ResiSTORE, we ask that you attend a training session to get reacquainted, registered on the volunteer list, and take note of changes to the store.

If you have any questions, feel free to email ((YOUR EMAIL)).

Visit our website <https://resi.store> for more information!

Thank you,

((YOUR NAME))

Both the Secretary and the owner of the EECS mailing list will forward this message to the greater mailing list. As you might have noticed, you need to make a Doodle Poll with all of the times you are available during Week 1 (or Week 0 if it's Fall Term) to train volunteers. Doodle Polls are free to make and do not require an account: <https://doodle.com/en/>. Be sure to include the link to the poll in the emails or else there will be no way for people to sign-up to be trained. For a guide on how to train volunteers see Section 4.1.

3.2 Checking Inventory

You should make it habit to check the inventory of the store at the beginning and end of the term. Be sure to check during the beginning of your first term as Manager to ensure that the previous Manager left the store in a good enough condition to operate on for the coming term. If not, you are going to have to submit orders. Covered in Section 3.5.

Check the inventory by first looking at the Check Low Inventory page in the manager tools. Write down what is low and check the physical location in the store to see if the item is genuinely out of stock. If so, keep track of it using whatever method you prefer. Other than looking at the website walk around the store, in particular looking for top selling items and larger items. Make sure that they are stocked appropriately.

Also do not forget that the black and yellow storage bins around the store may contain an out of stock item. The surplus bins are organized by item category.

3.3 Checking the Register

To ensure that transactions during the term go smoothly and nobody is caught in the awkward position of not having the correct amount of change, check the register. The register should always be stocked with at least the following items:

- At least 30 Pennies
- At least 20 Nickels
- At least 20 Dimes
- At least 20 Quarters
- No more than 15 \$1 bills
- No more than 4 \$5 bills
- No more than 2 \$10 bills
- No more than 1 \$20 bill

Try to not only maintain this at the beginning of the term, but throughout. Adding and taking

from the safe under the sales counter as needed. Be sure that you ask the Manager proceeding you for the combination to the safe. Try to use the cash deposit handle as much as possible.

3.4 Ordering Stock

Ordering new inventory is a multistage process that must be completed though the Robotics Club as of the time of writing this document. We will go though it step-by-step so you become a master at completing one of the most important tasks as Manager.

1. Collect your list of all of the out of stock, low stock, or popular items. Look at the Square POS sales to see what kind of money can be spent in this order. Use this to help you assess the amount of items you can get.
2. Get the Robotics Club Order Form spreadsheet and fill in the rows with your item information, including a link to the item online. Ask any Robotics Club Officer for access to the Google Drive to get access the order form. Keep in mind that the price you set for the customer will follow the item and shipping cost. Try to keep the purchased price with shipping near the price we have listed it for. Popular distributors for getting electronics are <https://www.aliexpress.com>, <https://www.dhgate.com>, <https://www.digikey.com>, and <https://www.mouser.com>.
3. Once the order form is filled out to full fill the current and future needs of the store, the order must be submitted. Go to the order submission form on the Robotics Club Google Drive.
4. You will need approval from two of the Robotics Officers to get your order though. Message two Robotics Officer and request that they approve your order.
5. Submit the order though the form with the officer approvals.

Once the order is submitted it is up to the Robotics Club Treasurer to actually order your items. Once they find themselves available to do so, the order is submitted and will arrive based on estimates from the distributor.

To see those estimates, you will need access to the Robotics Club accounts related to that distributor. Sign onto the website of that distributor and find your order among the other

Robotics Club orders.

This system is bulky and requires the help of many individuals who many not have the same passion for the store that you do. Improvements to the ordering system are always encouraged.

3.5 Picking Up Ordered Stock

Once the orders do come in they will be given to the mail room in Rogers Hall (Room 204). You will be alerted to incoming packages so long as you are on the Robotics Club Lab email list. Be sure to request to one of the Robotics Club Officers to add you to this mailing list.

When in the mail room, look for packages that have the last name of the person who ordered the package (typically the Robotics Club Treasurer). Go to the mail room's incoming mail clipboard and sign your name in the correct box. Go over the order description with the highlighter provided by the mail room to show to the staff that the package has been picked-up. You can now take you package down to the ResiSTORE and restock the newly arrived items.

It is common for someone else in the Robotics Club to beat you to the package and pick it up for you. They will place the package in either Graf Hall Room 206 or Room 306 (The two Robotics Club Labs).

3.5.1 Adding New Items to the ResiSTORE

It may be the case that you ordered an item that has never been introduced into the ResiSTORE. If this is the case you will need to go though the following procedures to create a new item. To summarize the procedures you need to: Create the Item in the ResiSTORE Database, Create the Item in the Square Database, Connect and complete the two databases by printing a barcode label and finding a location.

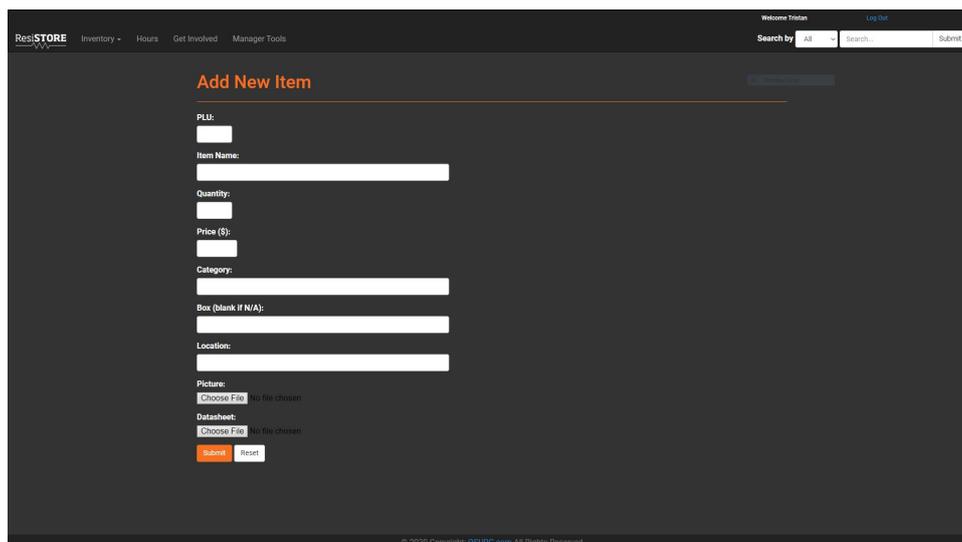


Figure 3.1: ResiSTORE Add New Item Page

1. Start by going to the ResiSTORE Manager Tools and go to Edit Inventory.
2. Select the Create Item button. You'll be greeted with the form in Figure 3.1.
3. Fill out the form, making sure the inputted PLU is not the same as another in the database. Add one to the largest existing PLU to determine the PLU of the item you are adding. Look for a open location in the grid system to be the location of the item. Be sure to also note the box it belongs to if the item is below one of the wooden signs. If the item does not fit into the grid system, then be as descriptive as possible in the Location field. The photo of the item must be in jpeg format and in a 4:3 aspect ratio so it aligns with all other items. Be sure that the picture of the item is in at least 720p quality or higher and has a flat white background (a piece of printer paper under cool florescent light works very well). The datasheet must be included in pdf format. If there is no datasheet available then find a placeholder document that says that there is no existing datasheet. Keep in mind that both the jpeg picture and pdf datasheet cannot exceed 8MB in size (This is the largest allowable size of data transfer though a single GET Request). If the picture and datasheet are larger than 8MB then the item will process without the image or datasheet, leaving the database with NULL entries for the picture and datasheet. Be sure to edit this item, should this occur, with a image and datasheet that are under 8MB.
4. Verify that the item appears on the ResiSTORE Database by searching for it on the website. If the item appears normal, with the datasheet opening as well, then you are ready to make the item in Square POS.

5. Once signed into the Robotics Club Square Account go to the left navbar and select Items.
6. From there go to the upper right side of the Items page and select Create an Item. You will be greeted with the form in Figure 3.2.
7. Fill out this information, be sure that it is matching that of the ResiSTORE Database entry. Sqaure POS' version of our PLU is called SKU. Do not feel obligated to upload an image since this database is for internal use. Under the locations tab, be sure that this item is only available at the ResiSTORE, not the Robotics Club. Be sure to enable the Stock Tracking so we can keep accurate inventory counts when the ResiSTORE Website makes the Sqaure POS API calls to get the quantity count.
8. With the item created in Square POS, it is time to link the two items with the physical barcode. This is the tricky part of the process.
9. The barcode label of choice for the store is the Avery 5430 .75" x 1.5". These can be printed with a very high quality from the Samsung printer in the store (must be in order to be read by the scanner). These labels can be made with a python script on the Robotics Server. Located at `../` from the home directory with the filename `labels.py`. Be sure the command is run as `./labels.py Inventory.xls [PLU_LIST]`. For example, if I wanted to print a sheet with the label for PLU 344 I would use the command `./labels.py Inventory.xls [344]` with `Inventory.xls` containing all of the correct information in the correct rows. See the comments of the script for details. If this doesn't work due to deprecated software then go with the alternative step below.
10. If the barcode generation method above doesn't work then try the zint utility for Windows <https://zint.github.io>. You can use this to generate the correct barcodes and format them on a template for the Avery 5430 labels in a Microsoft Word document. The barcode standard used by the ResiSTORE is Code 39 (ISO 16388).
11. With the barcode printed, be sure it scans and retrieves the correct item with the barcode scanner attached to the Square POS. Place it on the component box identified in the ResiSTORE Website.
12. This item is now fully entered! Great job.

Create an Item Save

Details

Name	Item Name
Category	None
Description	Enter a description of this item. Describe details like features, options, and measurements.
Locations	All Locations

Price and Inventory Edit Per Location

Unit Type	Per Item		
Price	\$0.00	SKU	SKU
Stock	None	Low Stock Alert	None

[Add Variation](#)

Online Checkout

Create and share a checkout link to sell this item online.
[Enable online sales >](#)

Figure 3.2: Square Add New Item Page

Chapter 4

During the Term

You may be surprised to hear that the ResiSTORE during the term requires little attention. This means that all of the systems that you have maintained though the website, before and after the term are working as planned.

4.1 Signing-up & Training Volunteers

When volunteers arrive at the store to receive their termly training they must receive the basic information to open the store, run the store, and close the store.

Prepare for your volunteers, do not keep them waiting. Try to arrive at least 10 minutes before the volunteer group is meant to arrive. Be sure that the ResiSTORE whiteboard has the following information on it so you can relay it to your volunteers.

- The url of the store website: `https://resi.store`
- Your name
- Your email (@oregonstate.edu or whatever you check most frequently)
- Your office hours (whatever time you are doing the role of volunteer, at least 1 hour for refunds)
- State that 'Refunds are handled during your office hours'

Have the ResiSTORE website open and ready for your volunteers. Go to the Register Volunteer

page in the Manager Tools. This is the form that the volunteers will need to fill out in order to be in the system. Also be sure that the RFID Keyboard scanner is on-hand. You will need this to get the RFID number off of their student ID.

Be sure to hit all of the points listed below in your main presentation to them. Be gregarious and excited to see both returning and new volunteers. Keep in mind that this is all for education and fun.

1. Greet volunteers and direct them to the computer to fill out the registration form.
2. If they are a returning volunteer that is already in the system, go to their account in the Manage Volunteers page of the Manager Tools. Find their account and allow them to edit their schedule. Once they have chosen times, they are free to go. No need to stay for a presentation they have already seen.
3. Once all the volunteer that signed-up for that time slot have arrived (or when all that are going to show up) begin the presentation outside of the store and demonstrate how to get into the store. This is also the perfect chance to make sure that all of their RFID cards work.
4. Show them the opening procedure, count the register, sign the log, open the sales window.
5. Show them how the ring up basic items in the grid system by using the website and the location markers around the store.
6. Show them how they can use the mirrored monitors and website to search for an item with the customer.
7. Show them the basics of using the Square Register. Scan item, adjust quantity, remove from queue, search for item.
8. Show them how to ring-up more complicated items such as SMD components, wire, and solder.
9. Ask if they have any questions.
10. Show them how to use the Trouble Tickets should they find an item out of stock. More in Section 4.2.

11. Show them the equipment available to them such as soldering station, oscilloscopes, DC power supply. Mention that it is just fine to watch media or listen to music using the computer and amplifier (keep it off the mirrored monitor). Just be sure the volume stays between 2-3 on the amplifier so the neighboring labs do not get disturbed.
12. Go over what they should do if they need to move/cancel their shift (mention you email is available).
13. Show them the closing procedures, including, counting the register again at the end, signing-out, begin sure that the hours page is on the mirrored monitor and closing the windows and turning off the lights.
14. Thank them for wanting to volunteer and wish them a good term!

4.2 Trouble Tickets

Trouble Tickets are your main avenue for communication between you and your volunteers during the term. The content that could be written in Trouble Tickets can range from 'we need more hand sanitizer' to 'we were robbed at gun point at 2:30 today' (hopefully that never happens). You need to be receiving this communication frequently, not just once a week during your office hours. When you are on-campus, stop by the store whenever you are near Dearborn to check up and pick up Trouble Tickets.

Try to make a habit of stopping by the store at least every two days during the term. This will allow you to figure out what the store needs and get order forms in proactively.

The document for printing more Trouble Tickets is available in the ResiSTORE folder on the Robotics Club Google Drive.

4.3 Handling Refunds

Refunds are handled by the Manager during their office hours. Give the customer as much slack as possible when dealing with returned items. There should be no punishment for failure when dealing with education. You can administer refunds by checking the transaction log in Square POS. The Transactions log is on the left upper navbar of the Square Dashboard. Find

the transaction from the list and submit a refund. Simple as that if they paid with card. If the payment was cash then use what is available in either the register or the safe, should you deem the refund valid.

Chapter 5

Closing the Term

Once you have reached the Dead Week of the term (Week 10) it is time to begin implementing the closing procedures for the ResiSTORE. This includes congratulating and thanking your hardworking and dedicated volunteers for sticking with the store throughout the term as well as doing another check of inventory to see what needs to be replenished.

5.1 Saying Thank You

Say thank you to all of the volunteer that have stuck around until the end of the term. As far as unpaid volunteer work goes, this is not a particularly easy job. Write a message on the store whiteboard expressing your appreciation and hope that you see everyone again next term.

This might seem futile or unimportant but it goes a long way and you'll be remembered for these actions in particular.

5.2 Checking Inventory Again

This process should not be too different from what you did during the beginning of the term. See Section 3.2. The difference between this inventory check and the previous is that now you have the data from Square POS to determine what was most popular from the term and what is completely out of stock.

Walk though the store and see what is missing or low and add it to the order forms described

in Section 3.5.

When ordering at the end of the term also keep in mind what classes are coming up next term. What kind of components do classes like ECE 342 or ME 382 need that the ResiSTORE can provide? Ask around, emailing and talking to both students and instructors what they would like to see at the ResiSTORE.

5.3 Interfacing with the Robotics Club

At the end of the term, it is likely that the Robotics Club Treasurer will request that you give the funds that are currently in the ResiSTORE safe to the Robotics Club. Allow there to be enough funds in the safe to replenish the register as described in Section 3.3 two-fold. Otherwise the funds should be given to the Treasurer for placement in a Robotics Club owned bank account, but the funds given are only permitted for use by the ResiSTORE in order to replenish/expand it's stock.

Should the Treasurer forget to fulfill this responsibility, then maybe you'll catch them at the end of next term.

Chapter 6

Secrets of the ResiSTORE

The ResiSTORE's subterranean location and often unintentionally sporadic hours of operation contribute to the culture of the store. The store appears to many as a 'if you know you know' type of institution that helps many but does most of it's advertising though word of mouth. Future managers may seek to change these attributes, denouncing them as 'bad business'. In ther personal opinion of the Manager writing this document, this is what makes the ResiSTORE so special. We are our own secret society, but in a fun way. In fact, just like any self-respecting secret society, we have our own list of coveted secrets. As a new manager it is only appropriate that they are shared with you.

6.1 Ins & Outs

At the time of this document, we have only one recorded break-in. Take a look at the footage gathered from the security cameras: <https://youtu.be/Z0HuYT6h2mk>. The flashing at the end is the result of the power begin cut. Awfully scary and yes the person responsible got away with it and stole all of the money that was in the register at the time. Since then, the window that the perpetrator broke though has been replaced with a sheet of plywood. Thankfully the plywood is not in direct eyesight of customers.

There are more than a few interesting nooks and crannies in the ResiSTORE and the Dearborn Basement. Be sure to ask the previous Manager to give you the Manager's Tour of the Store and Dearborn.

6.2 Here & There

There are a select few in Dearborn Hall and in the Engineering Program at Oregon State University that can help the ResiSTORE Manager get what they need to properly run the store. Be sure to ask the previous Manager for these people's details.

You will also want access to the security cameras that are in the ResiSTORE. Be sure that the previous Manager gets you all of the information to get you phone hooked up to those cameras so you can view them remotely at any time.

You will also need the passwords to the various Square POS systems, `resistore.bot@gmail.com` email account, hidden lock boxes with critical materials inside, Apple ID for the Square iPad Air, as well as the lock combinations to the Robotics Club Labs. This information **MUST** be kept confidential for obvious reasons.