

Current
Materials

Database Application Title – Electronics Parts Inventory

The electronics parts inventory application is being built for Montana Tech's Electrical Engineering department. The development team for this application consists of Jesse Anderson, Kendall Schmit, and Mitchell Deplazes. The project's mission statement is "The purpose of the Electronics Parts Inventory is to track inventory and facilitate the purchase and rental of electronic parts by students."

Objectives –

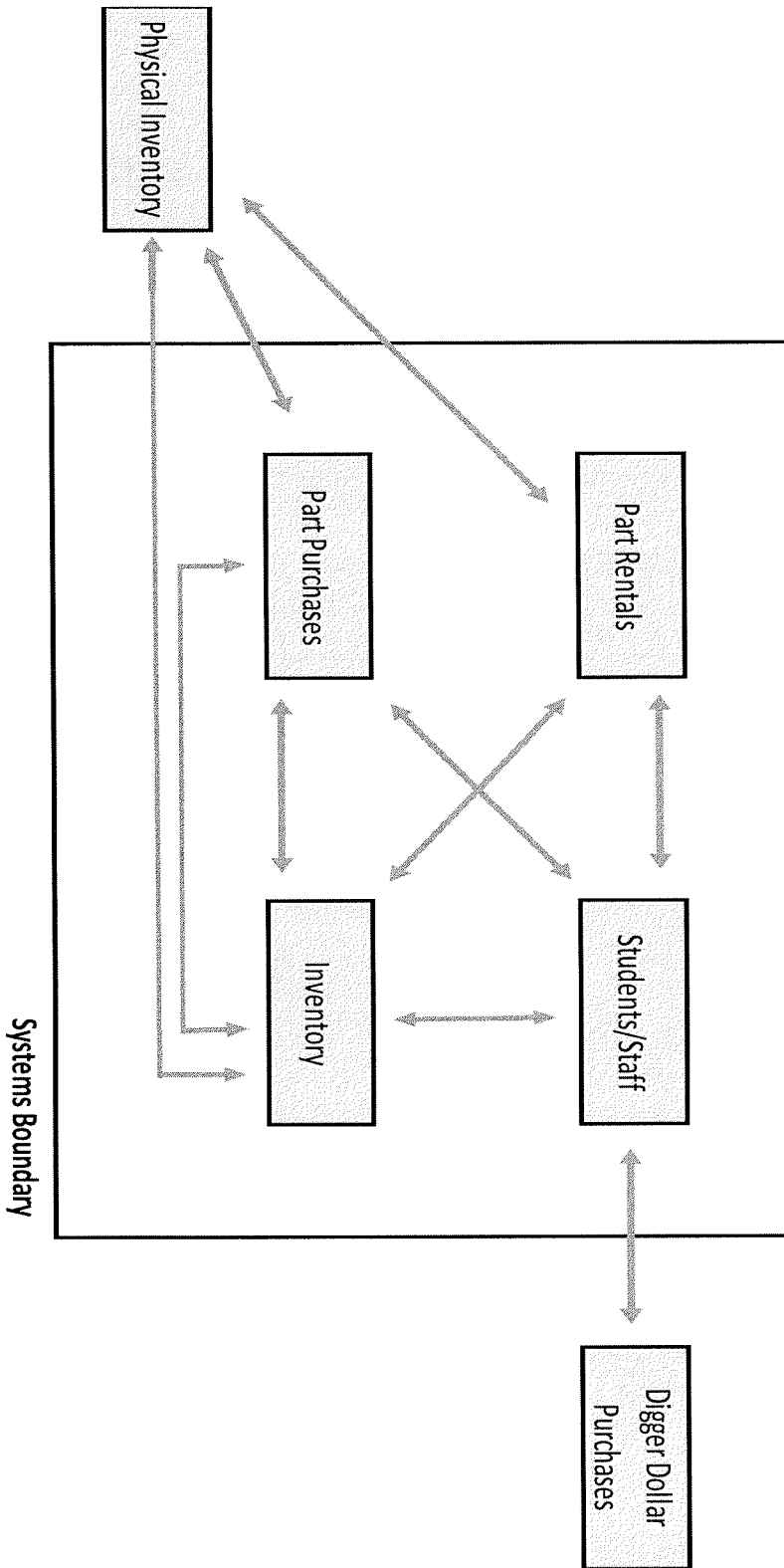
- Maintain (enter, update, delete) electronic parts in inventory.
- Allow rental and purchase of parts in inventory by students.
- Report on parts in inventory.
- Report on active leases.
- Report on overdue leases.
- Report on understocked parts.

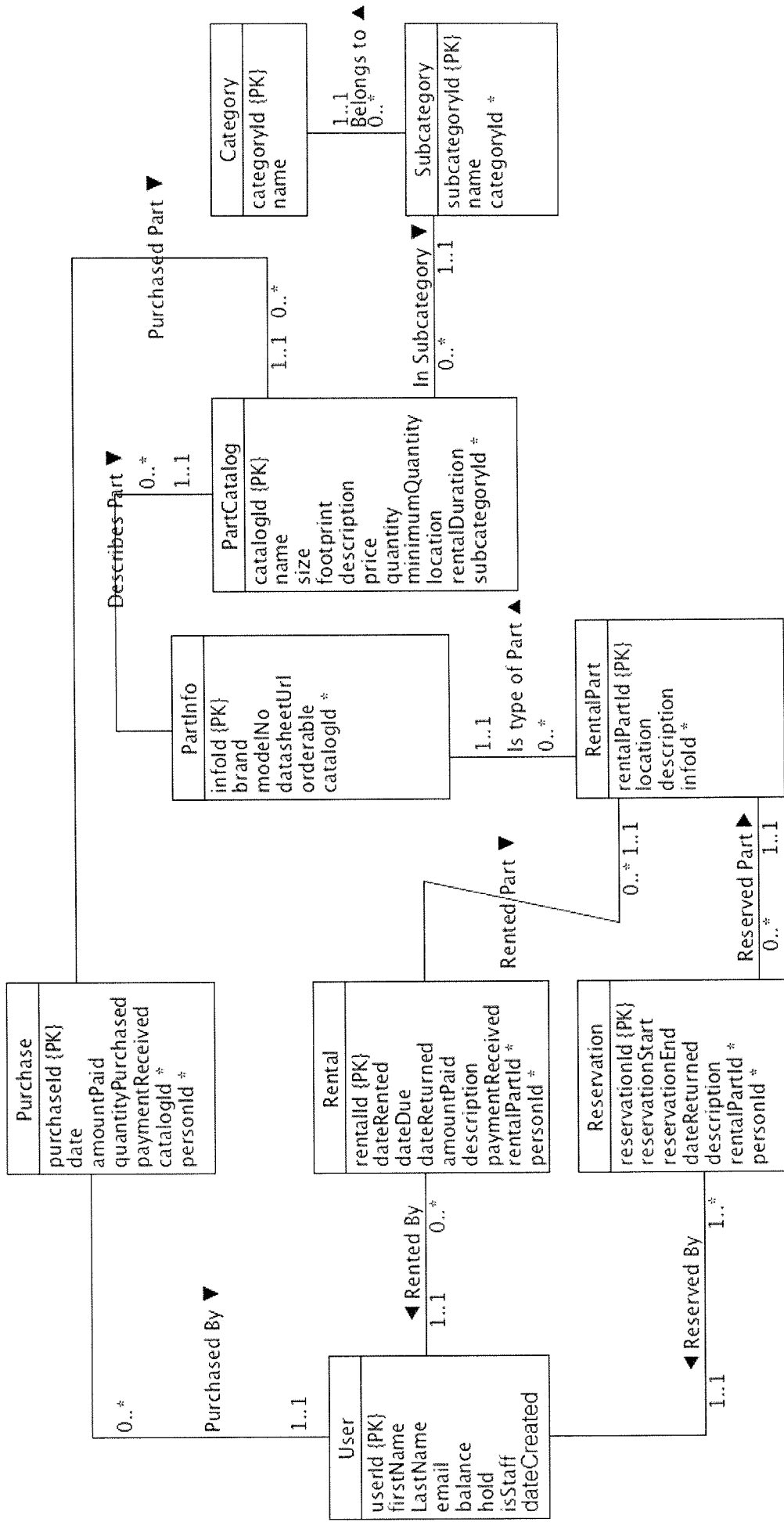
List of Tasks –

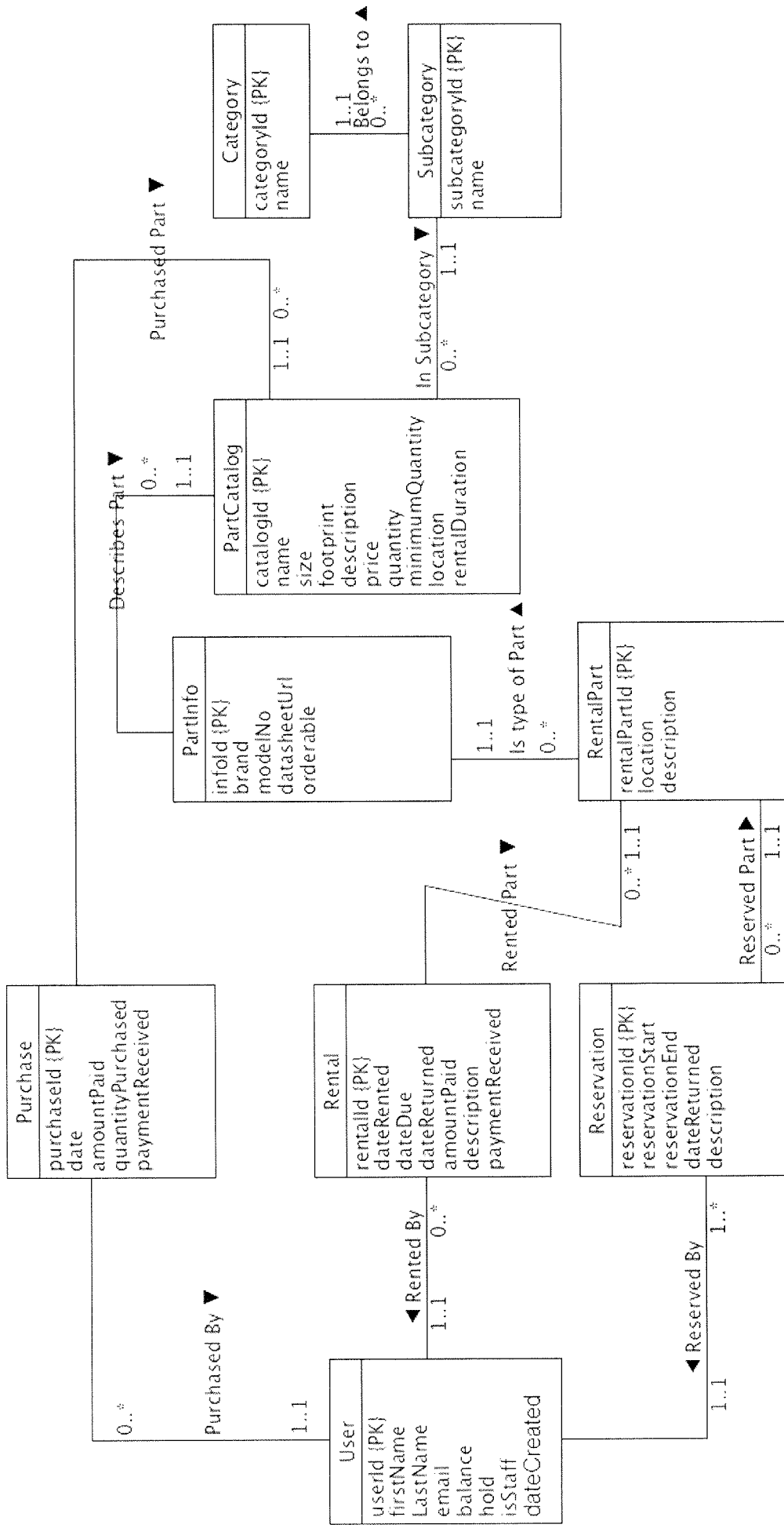
- Store information about electronics parts that the EE department has available to buy or rent.
- Allow the use of student ID card reading for purchases or rentals.
- Implement forms for entering, editing, and deleting student information.
- Implement forms for entering, editing, and deleting electronic parts information. (Including minimum stock)
- Implement a form to facilitate renting an available part.
- Implement a form to facilitate buying an available part.
- Implement a form for viewing available electronic inventory.
- Create inventory reports.
- Create rental reports.
- Allow the use of barcode scanning.
- Have a method for creating barcodes.

The Electronic Parts Inventory application will have two types of users. Due to FERPA regulations in relation to storing Student ID numbers and Names together, only faculty or TA's will be allowed to access the entire database. The faculty user view will have access to all forms and reports. The student user view will have access to data about what parts are available for rental/purchase and access to checking or buying a part.

System Boundaries –







Access to the application:

HomePage –

<https://katie.mtech.edu/~mpdeplazes/ElectronicParts/>

Faculty Forms Access –

Username: user

Password: password

Student Access –

ID#: 799103850

```
mysql> SELECT * FROM Category;
```

categoryId	name
2	Microcontroller
3	Oscilloscope
1	Resistor

```
3 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM Subcategory;
```

subcategoryId	name	categoryId
1	Small Resistors	1
2	Big Resistors	1
3	Medium Resistors	1
4	MSP430	2
5	Tektronix	3

```
5 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM User
```

```
-> ;
```

userId	firstName	lastName	email	balance	hold
799103850	Mitchell	Deplazes	mpdeplazes@mtech.edu	9001.00	0
799104568	John	Doe	JDoe@mtech.edu	784.00	1
799114351	Ryan	Thompson	rsthompson@mtech.edu	50.00	1
799845687	Jane	Doe	jane@mtech.edu	2345.00	0

```
4 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM PartCatalog;
```

```
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
+-----+
| catalogId | name           | size | footprint | description |
| price    | quantity | location | minimumQuantity | rentalDuration |
| subcategoryId |
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
+-----+
|          4 | Small Resistor | small | small    | A small resistor |
| 0.05    | 10 | Storage Area | 50 | 0 |
| 1 |
|          5 | Medium Resistor | Medium | Medium   | A Medium Resistor |
| 0.10    | 145 | Storage Area | 50 | 0 |
| 3 |
|          6 | Large Resistor | Large | Large    | A large resistor |
| 0.15    | 73 | Storage Area | 100 | 0 |
| 2 |
|          7 | Oscilloscope   | Medium | Medium   | A tektronix Oscilloscope. |
| 400.00  | 1 | Storage Area | 1 | 7 |
| 5 |
|          8 | MSP430         | Small | Small    | A MSP430 Microcontroller. |
| 10.00   | 10 | Storage Area | 5 | 100 |
| 4 |
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
+-----+
```

```
5 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM PartInfo;
```

```
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
+-----+
| infoId | brand           | modelNo | datasheetUrl | orderable |
| catalogId |
+-----+-----+-----+-----+-----+
+-----+
| 123 | Radio Shack | 123adf | example@example.com | 1 |
| 4 |
| 1235 | digikey | 456ert | example.com | 1 |
| 5 |
| 95846 | Texas Instruments | MPS430 | example.com | 1 |
| 8 |
| 8202345 | Tektronix | 475A | example.com | 1 |
| 7 |
+-----+-----+-----+-----+-----+
+-----+
```

```
4 rows in set (0.00 sec)
```



```
mysql> SELECT * FROM RentalPart;
```

rentalPartId	description	location	infoId
112	Main Oscilloscope	Storage Room	8202345
113	micro rental	storage room	95846
114	micro rental	storage room	95846
115	microrental	storage room	95846

```
4 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM Purchase;
```

purchaseId	date	amountPaid	quantityPurchased	paymentReceived	catalogId	userId
2	2015-04-08 00:00:15	0.00	10	1	5	799104568
3	2015-04-08 00:00:31	0.00	15	1	4	799104568
4	2015-04-08 00:00:35	0.00	5	1	6	799104568

```
3 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM Rental;
```

rentalId	dateRented	dateDue	dateReturned	amountPaid	paymentReceived	description	rentalPartId	userId
4	2015-04-07 23:56:25	2015-04-14 23:56:25	NULL	0.00	1	Renting for class	112	799103850
5	2015-04-07 23:56:36	2014-05-14 12:00:00	NULL	0.00	1	Renting for assignment	112	799103850
6	2015-04-07 23:57:16	2015-07-16 23:57:16	2015-04-07 23:57:59	0.00	1	renting for class	115	799845687

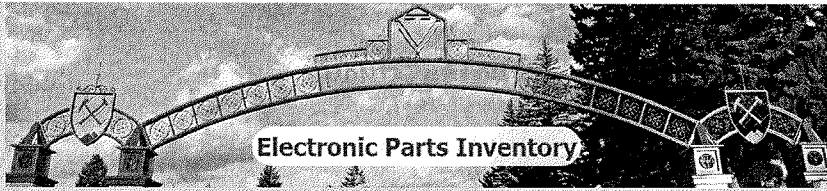
```
3 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM Reservation;
```

```
+-----+-----+-----+-----+
| reservationId | reservationStart   | reservationEnd     | dateReturned
| description    | rentalPartId | userId |
+-----+-----+-----+-----+
|          3 | 2016-01-01 00:00:00 | 2017-01-01 00:00:00 | NULL
| A long reservation. |          114 | 799104568 |
|          4 | 2015-05-03 00:00:00 | 2015-06-03 00:00:00 | NULL
| A medium reservation |          114 | 799104568 |
|          5 | 2018-01-01 00:00:00 | 2018-01-02 00:00:00 | NULL
| Very Short Reservation |          114 | 799104568 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

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http://katie.mtech.edu/~mpdeplaces/ElectronicParts/faculty/home.php htaccess password



Electronic Parts Inventory Home

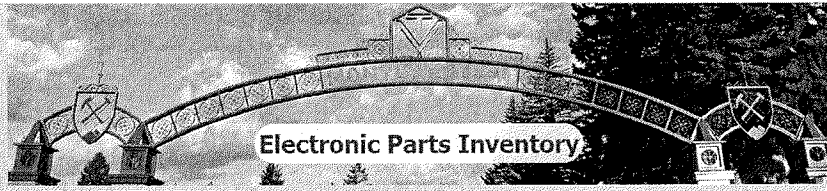
- Rent/Buy/Reserve a Part
- Search for a Part
- Faculty Login

http://katie.mtech.edu/~mpdeplaces/ElectronicParts/faculty/facultyHome.php

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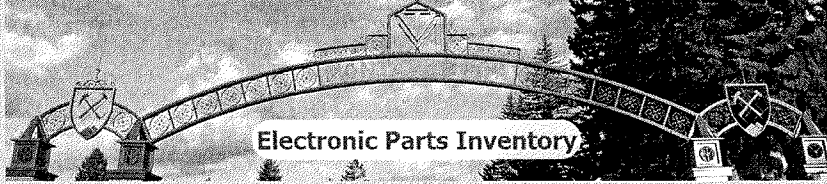
Faculty Home

- Edit Users
- Parts
- Reports
- Edit Part Categories
- Clean Database

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Add User

First Name:

Last Name:

Email:

Balance:

Staff Member:
 No
 Yes

Student ID:

Add User

Edit User

Student ID: Get User

Remove User

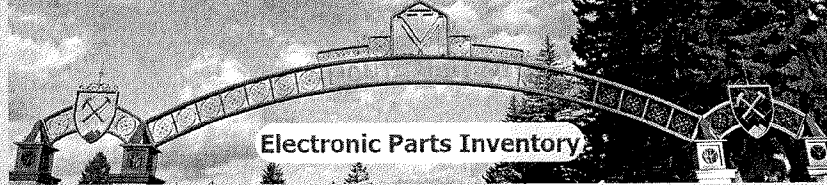
Student ID:

Remove User

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https://fabr.mtech.edu/.../mgd/plaza/.../ElectronicsParts/faculty/searchParts.php htmaccess password



Faculty Parts

Add Catalog Part

Add Inventory

Search for Catalog Part

Category Name: All Filter

PartCatalogName:

Size:

Footprint:

Max Price:

Minimum Price:

Quantity Available:

Find

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