



**UNIVERSIDAD DE PUERTO RICO  
RECINTO UNIVERSITARIO DE MAYAGÜEZ  
MAYAGÜEZ, PUERTO RICO  
FACULTAD DE INGENIERÍA  
DEPARTAMENTO DE INGENIERÍA ELÉCTRICA Y DE COMPUTADORAS**

## **ICOM5016-116**

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**ICOM5016-116**

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## DROOTS ER DIAGRAM

## Work Load

- 1) Users -Rafael
- 2) Administrator - Rafael
- 3) Suppliers - Vincent
- 4) Customer - Sebastian
- 5) Payment -Sebastian
- 6) Request - Sebastian
- 7) Reservation -Sebastian
- 8) Resources - Kensy
- 9) Clothing- Kensy
- 10) Tools - Kensy
- 11) Health- Vincent
- 12) Food- Vincent
- 13) Power Resources- Rafael
- 14) Fuel - Rafael
- 15) Heavy Equipment - Vincent
- 16) Batteries - Kensy

1. **Supplier**

- a. **Table Content:** Contains the id of all supplier users
- b. **Attribute Description:**
  - i. **supplier\_id:** serial primary key
- c. **Inheritance:** Inherits from table Users
- d. **Relationships:** Many to Many relationship with table Resources

2. **Health**

- a. **Table Content:** Contains all resources related to the medical field and first aid.
- b. **Attribute Description:**
  - i. **health\_id:** serial primary key
  - ii. **Health\_name:** varchar(10) product name
  - iii. **Health\_type:** char(10) equipment or medication
  - iv. **Health\_exp\_date:** char(10) the product's expiration date
  - v. **Health\_desccription:** varchar(250) short description on how to use it or any important note left by the supplier
- c. **Inheritance:** Inherits from table Resources
- d. **Relationships:** N/A

3. **Food**

- a. **Table Content:** Contains all food
- b. **Attribute Description:**
  - i. **food\_id:** serial primary key
  - ii. **food\_name:** varchar(10) product name
  - iii. **Food\_type:** perishable,
  - iv. **food\_exp\_date:** char(10) food expiration date
  - v. **food\_desccription:** varchar(250) important note(s) left by the supplier
- c. **Inheritance:** Inherits from table Resources
- d. **Relationships:** N/A

#### 4. Heavy Equipment

- a. **Table Content:** contains all food
- b. **Attribute Description:**
  - i. **heavy\_id:** serial primary key
  - ii. **heavy\_name:varchar(250)** product name
  - iii. **heavy\_description: varchar(250)** notes left by the supplier
- c. **Inheritance:** Inherits from table Resources
- d. **Relationships:** N/A

#### 5. Customer

- a. **Table Content:** Contains all users that reserves or purchase a resource
- b. **Attribute Description:**
  - i. **customer\_id:** serial primary key
- c. **Inheritance:** Inherits from Users table
- d. **Relationships:**
  - i. Has relation Pays, one-to-many, with table Payment. Primary key serves as foreign key in table Payment.
  - ii. Has relation Place Request, one-to-many, with table Request. Primary key serves as foreign key in table Request.
  - iii. Has relation Place Reservation, one-to-many, with table Reservation. Primary key serves as foreign key in table Reservation.

#### 6. Payment

- a. **Table Content:** Contains all payments made by users.
- b. **Attribute Description:**
  - i. **payment\_id:** serial primary key
  - ii. **payment\_method: varchar(100)** describes the method used to make payment (i.e.credit card, paypal, venmo etc.)
- c. **Inheritance:** N/A
- d. **Relationships:**
  - i. Has relationship Buy, many-to-one, with table Resources. The **resources\_id** will serve as foreign key in the Payment table.

7. **Resources:**

- a. **Table Content:** Contain all the category resources in the systems and their current availability.
- b. **Attributes Description:**
  - i. **Resource\_id: Integer** Serial primary key.
  - ii. **Resource\_category: varchar(14)** Represents the table category of each resource.
- c. **Inheritance:** N/A
- d. **Relationship:** One to Many with Suppliers table, having total participation of Resources with one attribute of price.

8. **Clothing:**

- a. **Table Content:** Contains all the clothing resources.
- b. **Attributes Description:**
  - i. **Clothe\_id: Integer** Serial primary key.
  - ii. **clothe\_type: varchar()** Represents a predetermined type of cloth from the next categorie:[Head,Top, Hands, Bottom, Feet].
  - iii. **clothe\_size: varchar(10)** The size of the particular cloth.
  - iv. **description: text** Description of the cloth item
- c. **Inheritance:** Inherits from Resources table.
- d. **Relationship:** N/A

9. **Tools:**

- a. **Table Content:**
- b. **Attributes Description:**
  - i. **tool\_id: Integer** Serial primary key.
  - Ii. **tool\_name: varchar(10)** Name of the tool.
  - Iii. **tool\_description: text** Description of the tool.
- c. **Inheritance:** Inherits from Resources table.
- d. **Relationship:** N/A

10. **Request**

- a. **Table Content:** Contains all requests of resources made by users.
- b. **Attribute Description:**
  - i. **request\_id:** Serial primary key
- c. **Inheritance:** N/A

d. **Relationships:** Has relation Ask For More, many-to-one, with table Resources. The **resource\_id** will serve as a foreign key in table Request.

11. **Reservation**

a. **Table Content:** Contains all reservations of resources made by users.

b. **Attribute Description:**

i. **reservation\_id:** Serial primary key

c. **Inheritance:** N/A

d. **Relationships:** Has relationships Separate, many-to-one, with table Resources. The **resources\_id** will serve as foreign key in the Reservation table.

12. **Users**

a. **Table Content:** Contains all users.

b. **Attribute Description:**

i. **user\_id:** Serial primary key

ii. **user\_first\_name: varchar(10)** User first name

iii. **user\_last\_name: varchar(20)** User last name

iv. **user\_location: varchar(40)** Location of user

v. **user\_name: varchar(10)** User username

vi. **user\_password: varchar(10)** User password

c. **Inheritance:** Is the parent of Administrator, Suppliers and Customers.

d. **Relationships:** N/A

13. **Administrator**

a. **Table Content:** Contains all administrators.

b. **Attribute Description:**

i. **admin\_id:** Serial primary key

ii. **admin\_name: varchar(10)** Administrator name

c. **Inheritance:** Inherits from Users table.

d. **Relationship:** N/A

14. **Fuel**

a. **Table Content:** Contains all fuels.

b. **Attribute Description:**

i. **fuel\_id:** Serial primary key

ii. **fuel\_type: varchar(10)** Type of fuel(diesel, gas, etc.)

iii. **fuel\_liters: integer** Quantity of fuel in liters

c. **Inheritance:** Inherits from Resources table.

d. **Relationship:** N/A

15. **Power Resources**

a. **Table Content:** Contains all Power Resources.

b. **Attribute Description:**

i. **power\_id:** Serial Primary Key

ii. **power\_category: varchar(10)** Power resource category(fuel, batteries, solar, etc.)

iii. **power\_type: varchar(10)** Type of power resource depending it's category.

iv. **power\_description: varchar(250)** Description of the product.

c. **Inheritance:** Inherits from Resources.

d. **Relationship:** N/A

16. **Batteries:**

a. **Table Content:**

b. **Attributes Description:**

i. **batteries\_id: Integer** Serial primary key.

ii. **batteries\_type: text** Type of battery [Lithium Ion, lithium polymer, Lead Acid, Nickel Cadmium, Nickel-Metal Hydride].

iii. **batteries\_voltage: char(4)**

iv. **batteries\_description: text** Description of the product being sold.

c. **Inheritance:** Inherits from Resources table.

d. **Relationship:** N/A