ER Model Description

Entities:

- **Account - Entity that manages all the user accounts registered on the application. It holds information related to each user.**

  - **pid** - Primary key of the entity; it represents a unique id for each account.
  - **pname** - User's first name
  - **plname** - User's last name
  - **city** - User's city
  - **address** - User's current address
  - **gps** - User's GPS location
  - **email** - User's email
  - **username** - User's username in the application
  - **password** - User's password for accessing their account on the application

- **Administrator - Entity that establishes an account as an administrator's account.**

  - **aid** - Primary key of the entity. It references the id of the user's account on the Account entity.

- **Needer - Entity that establishes an account as a needer's account. These users are able to make requests for resources on the application.**

  - **nid** - Primary key of the entity. It references the id of the user's account on the Account entity.

- **Supplier - Entity that establishes an account as a supplier's account. These users are able to register on the application the resources they have available to supply.**

  - **sid** - Primary key of the entity. It references the id of the user's account on the Account entity.

- **City - Entity that establishes all the cities where transactions can take place. It also serves to establish all the cities possible that users can designate as their current city.**

  - **cname** - Primary key of the entity. It represents the name of the city
  - **rname** - Foreign key that references the primary key of the Region entity. It represents the demographic region where the city is located.

- **Category - Entity that establishes the different categories for the resources in our application.**

    - <u>**cat**</u> - Unique name for each category

- **Region - Entity for managing the regions in which suppliers are able to supply resources and needers are able to request resources.**

    - <u>**rname**</u> - Unique name for each region

- **Resource - Entity to handle the resources within the application. Suppliers can supply these resources and needers can request these resources. Each resource can be identified and browsed by several attributes.**

    - <u>**rid**</u> - Unique id for each resource
    - **rqty** - Available quantity for each resource
    - **rname** - Name identifier for each resource
    - **cat** - Category that each resource belongs to

<u>Relationships</u>

- **Supply - Relationship between supplier and resource. It is created when a supplier supply a resource. This is useful in order to find who supply a resource or what supply a supplier.**

    - <u>**supid**</u> - Unique id for each supply
    - **qty** - quantity of the supply
    - **supply_date** - date the resource was supplied
    - **rid** - resource id of the resource supplied
    - **sid** - supplier id of the resource supplier

- **Request - Relationship between needer and resource. It is created when a supplier supply a resource. This is useful in order to find who need a resource or what request a needer.**

    - <u>**reqid**</u> - Unique id for each request
    - **qty** - quantity of the request
    - **request_date** - date the resource was requested
    - **rid** - resource id of the resource requested
    - **nid** - needer id of the resource requester

- **Transaction - Relationship between needer, supplier and resource. It is created when a supplier sell or donate a resource to a needer. This is useful in order to find many information regarding the resource's transactions.**

    - **traid** - Unique id for each transaction
    - **price** - price supplier ask for the transaction
    - **quantity** - quantity of resource involved in the transaction
    - **purchase_date** - date the transaction was executed
    - **rid** - resource id of the resource involved in the transaction
    - **sid** - supplier id of the supplier involved in the transaction
    - **nid** - needer id of the needer involved in the transaction