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DEPARTAMENTO DE INGENIERÍA ELÉCTRICA Y DE COMPUTADORAS

DB App for Resources



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Entities:

User:

Represents users and has attributes for their username and password.

Admin:

Represents a user that is an admin, contains first and last name. Inherits from 'User'.

Consumer:

Represents a user that is a consumer, contains first and last name, address and phone number. Has relationships: 'owns', 'makes', 'reserves'. Inherits from 'User'.

Company:

Represents a company and contains the name, location and total price.
Has the 'employs' relationships.

Supplier:

Represents a supplier and contains the first and last name and location. Can be independent or employed by a company. Has relationship with 'employs' and 'supplies'.

Resources:

Represents the resources to be ordered or supplied, contain attributes reserved, to identify if the resource is reserved, quantity, price, description and location.
Has relations: 'contains', 'requested', and 'supplies'

Water:

Represents water resource, inherits 'Resources' attributes. Includes container type(galon or small bottles).

Medications:

Represents medication resource, inherits 'Resources' attributes.

Fuel:

Represents fuel resource, inherits 'Resources' attributes. Includes fuel type(diesel, propane, or gas).

Heavy Equipment:

Represents Heavy Equipments, inherits 'Resources' attributes.

Clothing:

Represents clothing, inherits 'Resources' attributes.

Food:

Represents food resource, inherits 'Resources' attributes. Includes food type(canned, baby food, or dry).

Ice:

Represents ice. Inherits 'Resources' attributes.

Medical Devices:

Represents medical devices. Inherits 'Resources' attributes.

Tools: Represents tools. Inherits 'Resources' attributes.

Power Generator:

Represents power generators. Inherits 'Resources' attributes.

Batteries:

Represents batteries. Inherits 'Resources' attributes.

Credit Card:

This entity represents the capability to purchase orders. With one Credit Card, you can purchase multiple orders. This entity is fully dependent on a consumer. A consumer can own from 0 to multiple credit cards.

Request:

This entity represents the need of 1 or more resources. A consumer can make from 0 to multiple requests of resources, so the 'request' entity is fully dependent on the consumer entity. A request has a many-to-many relationship with resources, meaning that many requests can be looking for a resource, and multiple resources can be on a single request.

Order:

This entity contains resources. The attributes of this entity are id, date, location and the total price. A consumer can reserve an order or multiple ones. A credit card can purchase multiple orders.

Relations:

Owns:

This relationship is between Consumer and credit card, consumer may own various credit cards and credit cards are owned by only one consumer.

Makes:

This relationship is between Consumer and Request, consumers make many requests and requests are made by one consumer.

Requested:

This relationship is between Request and Resources, different requests request many resources and resources are requested by many requests.

Reserves:

This relationship is between Consumer and Order, consumers reserve many orders and the orders are reserved by one consumer.

Purchases:

This relationship is between Consumer and Order, consumers purchase many orders and the order is purchased by one consumer.

Contains:

This relationship is between Order and Resources, different orders contain many resources and resources are contained in many orders.

Employs:

This relationship is between Company and Supplier, a company may employ one or various suppliers, suppliers are employed under one company.

Supplies:

This relationship is between Supplier and Resources, a supplier may supply various resources, a resource may be supplied by various suppliers.