User(UserID, Username, Password, EmailAddress, Address, PaymentInfo)

The *User* table represents an individual user of the software and owner of terrariums. A user has an authorization token for being logged in and an arbitrary number of terrariums. Username, password, emailaddress, address, and paymentinfo are all informational attributes relating to a user.

AuthToken(UserID, AuthToken)

* UserID references User

An AuthToken is a map from users to tokens that provide authentication for users to access information in the database.

LiveTerrarium(TerrariumID, UserID, ModelID, CurrentPlantID, Temperature, SoilMoisture, Humidity, LightLevel, DaysGrown)

* Foreign Key UserID references User
* Foreign Key ModelID references TerrariumModel
* Foreign Key CurrentPlantID references Plant

A live terrarium is a single, physical terrarium product owned by a user and in use. Each terrarium has metric attributes for keeping track of current growing conditions as well as the ID of the type of plant currently growing in the terrarium. *TerrariumID* is an internal key to identify each terrarium, *UserID* maps terrariums to users who own them, *ModelID* tells which model the terrarium is, *CurrentPlantID* references the type of plant currently growing. All other attribute names reference internal growing conditions.

TerrariumModel(ModelID, SpaceAvailable)

Every live terrarium is an instance of one of three different sized models of terrariums. The *SpaceAvailable* attribute tells how many square feet of capacity the model has.

Plant(PlantID, Name, Temperature, SoilMoisture, Humidity, LightLevel, GrowthTimeDays, SpaceRequirement)

A *Plant* is an abstraction of a specific plant that can be grown in a terrarium. These values are pre populated in the database. *PlantID* is an internal key. *Name* is the real-world name of the plant. All other attributes are a type of plant’s ideal growing conditions.

User

* Shipping address
* Payment info
* Order history
  + Kits
  + Plants
  + Bots
  + Accessories
* "Green thumb" score (success rate which would allow recommendations of plants of a suitable difficulty)
* Username/Login & Password
* Contact info

Plant

* Ideal growing conditions
  + Air temperature
  + Light requirements
  + Soil requirements
    - Acidity
    - Elemental/molecular nutrient preferences
    - Water level/moisture
    - Oxygen levels
    - Temperature
  + Humidity
  + Space requirements
  + Air disturbance requirements
* Troubleshooting methods (if \_\_ happens, \_\_ is what you should do)
* Harvesting schedule
* Expected stages of growth
* Edibility information
  + Edibility at various life stages
  + Nutrient profile
  + Hazards, as applicable

Terrarium

* Kits/physical facilities they have
* Which plants they have in which plots
* For each plant they have:
  + Age of plant
  + Soil info in plot (see soil requirements in plant info, above)
  + Health issues
  + Harvestable indicator
* Maintenance info for automated systems
  + Servo "health"
  + Track "health"
  + Sensor "health"
  + Light node "health"
  + Nutrient resource levels
  + GardenerBot info
    - Location
    - Non-completed task queue
    - Current task info
    - Completed tasks
    - Uncompletable tasks