**Attribute Class – (attr)**

**Attributes**

* attrE – private – Flag whether Attrs exist yet for \*this class (childs)
* attrList – protected – List of unique attribute name => value pairs for \*this class
* attrIndex – protected – The attribute data index for \*this class (Name, Label, Rank)

**Methods**

* \_\_construct() – This constructor will initialize attributes to their default values, retrieve the AttrIndex() and if provided with a thing’s ID will call the AttrList() method to retrieve unique thing’s values.
  + ACCEPTS:
    - $ID – optional, The thing’s unique identifier
* AttrIndex() – Retrieves the Attribute Index Table data associated with \*this class. The Attr Index Table holds data to describe the user-defined attributes (attrs). If a rank is provided, the method will return only attributes that match that rank#.
  + ACCEPTS:
    - $rank – optional, a rank # to filter results with.
  + RETURNS: Array of Attr Data | False
* AttrList() – Retrieves the Attribute, name = value, pairs from the Attribute Values table, if any are available for the unique thing’s ID provided.
  + ACCEPTS:
    - $ID – Thing’s unique identifier
  + RETURNS: Associative Array of Attr values | False
* AddAttribute()
* AddAttr() – Adds a new attribute to \*this class (child) within the system. If adding attributes to \*this class for the first time, this method will attempt to generate the require database tables and then create the new attribute/s. Parameters may be matched arrays to add more than one attribute at a time.
  + ACCEPTS:
    - $name – the “code” name of the attribute to add, ex: userName.
    - $label – The label of the attribute to add, ex: User Name
    - $rank – Optional, the rank to assign to the attribute, int(11)
    - $default – Optional, The default value the attribute should have ex: ‘none’
    - $vType – Optional, The verification type to use for form inputs with this attribute.
      * color – A hexadecimal color code
      * date – A date yyyy/mm/dd etc..
      * time – A timestamp
      * email – An E-mail address
      * month – A month out of the year, mm or Name
      * day – The numerical day of the month, dd
      * year – The year, yyyy+
      * tel (phone) – A standard telephone number
      * number – An integer number
      * basic – String with no spaces that begins with a letter
      * text (default) – Text…
  + RETURNS: True | False
* EditAttribute()
* EditAttr() – Allows changing of user-defined attribute labels and/or ranks only. Modifying any other attribute data could cause data corruption. Create new attributes instead using AddAttr(). WARNING! Does not change attr values! See UpdateValues().
  + ACCEPTS:
    - $name – The “code” name of the attribute to edit
    - $newLabel – The new label to give the attribute
    - $newRank – Optional, the new rank to assign to the attribute
  + RETURNS: True | False
* RemoveAttribute(), DropAttr(), KillAttr()
* RemoveAttr() – Removes the attribute/s from the attribute index table associated with \*this class, then modifies the attribute values table associated with \*this class and drops the attributes from the table. WARNING! All unique values associated with attribute will be lost!
  + ACCEPTS:
    - $name – The “code” name of the attribute to remove, may be array of attribute names to remove.
  + RETURNS: True | False
* UpdateValues() – Accepts an array of name => value pairs and if the array contains pairs matching attributes in the Attr Index Table those pairs are updated in the Attr Values Table. Any remaining pairs will be returned for further processing, unless an error occurs in which False is returned. If no data remains and no error occurs True is returned.
  + ACCEPTS:
    - $data – Array of name => value pairs to update
    - $ID – The thing’s unique identifier for which the values are associated
  + RETURNS: Remaining Data Array | True | False
* DropValues(), KillValues()
* RemoveValues() – Removes any values associated with the provided thing’s ID from the Attribute Values Table.
  + ACCEPTS:
    - $ID – The thing’s unique identifier for which the values are associated
  + RETURNS: True | False