Attributes of Design Entities:

TreeOperations:

Variables:

* tree\_content: content of the tree.
* active\_tree: a GUI component that displays tree.

Methods:

* create\_tree: gets input from the user and creates a new tree with the input name.
* add\_member: gets input from user and creates new member with that information.
* check\_relation: requests user to select two members then checks if that relation exists in the system.
* import\_tree: imports tree.
* export\_tree: exports tree.
* merge\_trees: requests user to select a new tree to merge with his/her currently selected family tree.
* save\_as\_image: creates an image file of the tree.
* update\_info\_tab: updates the member info tab with the information of member object that user clicked on.
* add\_filter: gets input from the user and adds that input as a new filter in the filter list.
* remove\_filter: gets input from the user, then checks if that filter exists in the filter list. If filter exists, then that filter gets deleted from the filter list.

Member:

Variables:

* name: name of the family member
* surname: surname of the family member
* age: age of the family member
* birthday: birthday of the family member (optional)
* member\_layer\_level: indicates the vertical position relative to its root node (0 -> grandparent, 1 -> parent, 2 -> child)

Methods:

* check\_level: checks and returns the member\_layer\_level attribute.

Birthday (optional):

Variables:

* day: day of the birthday
* month: month of the birthday
* year: year of the birthday

Methods:

* date\_to\_string: converts the birthday information to string format.