S2: Design of a new View: Combat View

**Design Description:**

A combat view **is a** list view, so it publicly inherits from list view. It also keeps some attributes that a typical visual view has: size, scale and origin. These attributes are kept so that the combat view knows which objects are within the display range of the local map. Consequently, only information for these “insiders” will be displayed.

There are however some overlapping between the functionality of a combat view and a local view. For example, they both move as the focus object moves, and they both display information for only limited number of objects. But since a combat view is neither a local view nor a visual view, it does not inherit from these two classes, nor does it have any private member of these two classes. This results in some code duplication, but as opposed to inheriting from local view or visual view, this corresponds to the reality better.

Combat view reuses the code in list view for updating and removing information. It also uses the container in list view to store health values of all existing agents. In addition, it keeps a private container for storing locations of all existing objects. A protected function **plot\_selected()** is added to list view so that combat view can choose whose information to be displayed. Every time a combat view draws itself, it first determines the list of candidates, and then pass the candidate list to list view to have all information displayed.

Neither Model nor any of the Sim\_objects were changed. Controller was slightly changed so that combat views can be opened and closed. The error checking is also slightly changed to fit the description in the feature document. Now there are three kinds of exceptions that might be thrown: invalid view type, non-existent object and view already open.