**Castelazo – STATE DIAGRAM**

A state diagram shows the behavior of classes in response to external trigger. Specifically, a state machine diagram models the behavior of a single object, specifying the sequence of events that an object goes through during its lifetime in response to events. Key items to remember in a state machine diagram include the following.

* A **state** is denoted by a round-cornered rectangle with the name of the state written inside it.
* The **initial state** is denoted by a filled black circle and may be labeled with a name. The **final state** is denoted by a filled black circle with a ring around it and may also be labeled with a name.
* **Transitions** from one state to the next are denoted by lines with arrowheads. A transition may have a trigger, a guard and an effect
* **Guards or conditions** are illustrated by a diamond.

In the state diagram below, I will be showing the state for a shopping list program. Upon a successful login, the user will show the list. If the list is read as having no items, it will create a new list. Then the program will show the list again. If it has more than 0 items, it will display the items on the list. It will check to see if new items need to be added. If a new item is added, it will update the list and display the updated list of items. It will continue this cycle until the user exits and logs out. If no items are being added, then the user will just be viewing the items until he/she is ready to exit and log off.