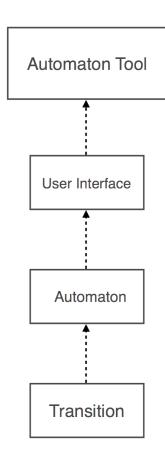
#### **MMJ-Automation**

Michael Nulle 11326384 Matthew Borland 11379387 Justin Jackson 11437751

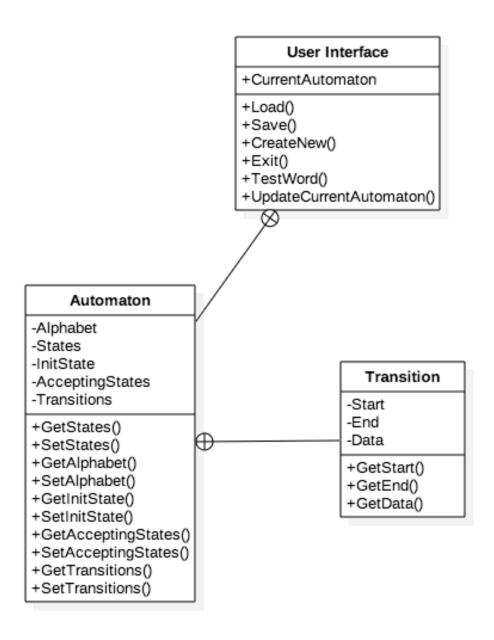
# Architectural Design Model:

Upon refining our classes we decided to completely remove the FSA class because it was not necessary. The FSA class inherited from the Automaton class and was only being used in our diagrams as a public accessor for the attributes of the Automaton class.



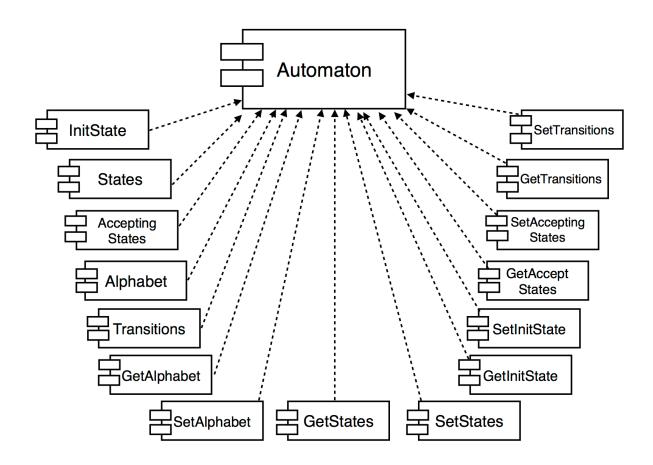
### Analysis Class Model:

The refinement of out Analysis Class Model included removing the FSA class, as I mentioned above. In the User Interface Class we removed the Generate Random method because we decided that the complexity of this function was too complicated and to devoted our time to other pieces of the program. Also we changed the Edit function to the function Update Current Automaton. Since we decided to use an "open menu" style UI (meaning that the automaton can be edited by the user at any point) the user can change anything in the current automaton and then click the Update button (which calls UpdateCurrentAutomaton()) to apply the changes made. The last refinement we made was adding all the public modifiers, previously held in FSA, to the Automaton class.

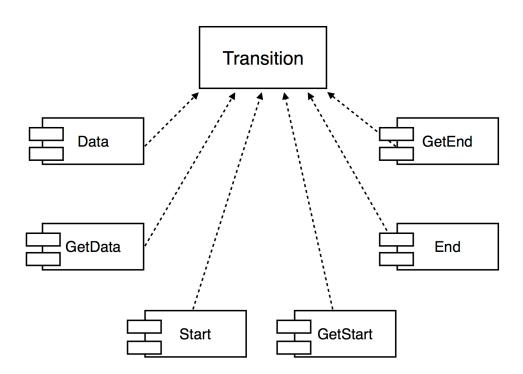


## Component Design Diagrams:

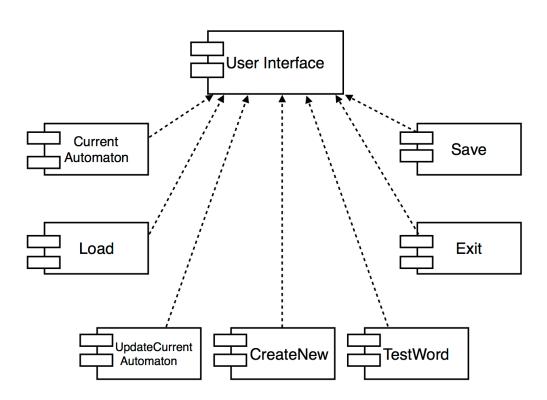
The refinement we made to our Component Level Design Diagrams is much similar to the changes we made in the Analysis Class model. Removing the FSA class from the program forced us to add all the methods held by FSA into the Automaton Class.



Originally the Component Level Design Model submitted to Github was wrong (see previous diagram). At first we had the attributes Data, Start, and End directly related to the Transition Class and then the three methods GetData(), GetStart(), and GetEnd() connected to their own attribute, respectively. During refinement we connected all the attributes and methods directly to the Transition Object.



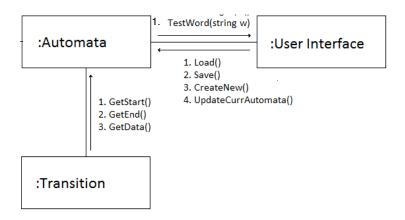
Upon refinement of the Component Level Diagrams of the User Interface class we added one function and removed two others. We added an UpdateCurrentAutomaton() function which applies any changes made to the current automaton. The two functions we removed was the Edit() and the GenerateRandomWord(). We removed the Edit() function so that it could be replaced with the UpdateCurrentAutomaton() because we changed our design of the UI. We got rid of the GenerateRandomWord() function because we originally added it as an extra feature but during implementation we realized the algorithm required for this would be too time expensive and complicated for us.



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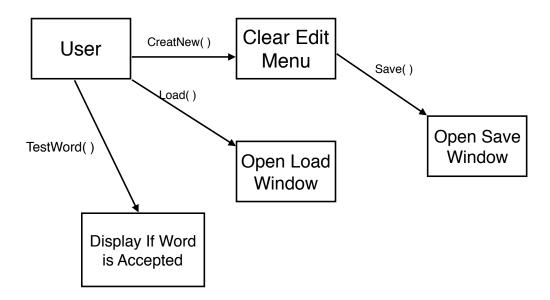
## Communication Diagram:

The only refinement we made to the communication diagram was cutting off the part where FSA communicates with the Automata object. We made this revision because we no longer need the FSA class. We also removed the Generate Random function from communicating with the Automata object because like I mentioned earlier that the function proved to be too complicated.



# Collaboration Diagram:

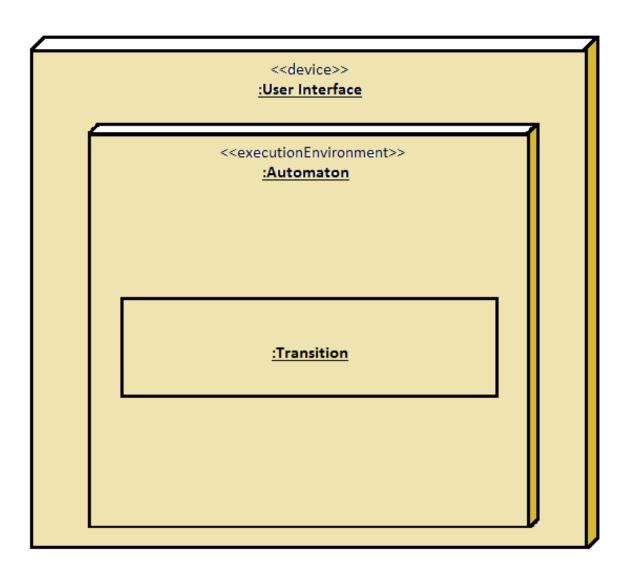
To refine the Collaboration Diagram we removed the Open Edit Window even because we no longer have the edit window as part of our User Interface. Also we are no longer going to support the GenerateRandomWord function so we had to take that out of our diagram.



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# Refine Deployment Diagram:

We refined this diagram by removing the FSA class from the Automaton class. During the programming of this project we realized that the FSA class was an unnecessary level of abstraction and chose to remove it.



# State Chart Diagram:

We did not refine this diagram because it is still accurate to our implementation and design of our Automaton Simulator.

