Sparse Matrix – Robert Parker

For the sparse matrix implementation, I chose to use java's built in linked list class. I created a separate "NodeData" class with three variables inside it: row, col, and data. The class contains get methods for each of these variables, so they can be accessed. A linked list is then instantiated with the NodeClass as its data type. I chose this implementation because it was simple, java's built in class has everything needed for this implementation. Computational complexities for the sparse matrix are as follows: clear() has O(1) time, setSize() has O(1) time, addElement() has O(n) time, removeElement is O(n) time, getElement is O(n) time, determinant is O(n!) time, minor is O(n) time, toString is O(n) time, and getSize() is O(1) time.