COM S 213 – Fall 2004

Assignment #9

Exceptions

Due November 11, 2004

Your assignment this week is to add exceptions to Assignment #8. Specifically, create a `MatrixException` class which stores the following:

- An error code
- An error message
- The x,y coordinates of the position to which the exception applies

Just like in class, your exception class should have the following public member functions:

- A constructor to populate the data stored
- A getter function to retrieve the error code
- A getter function to retrieve the error message
- A getter function to retrieve the x and y coordinates

In addition to the `MatrixException` class, you should also add one more public member function to the `Matrix` class

- `moveItem(fromX,fromY,toX,toY)`

The moveItem member function moves a piece from the specified "from" coordinates to the specified "to" coordinates.

In order to have meaningful values for the error codes in your `MatrixException` class, use an `enum` statement to create error constants for each error condition you are checking for—similar to examples I've used in class.

Finally, you should detect the following error conditions in all public member functions of the `Matrix` class and throw exceptions when they are detected:

- No item present in position during a move (from) or remove
- Item exists in location during a move (to) or a place

Please construct an appropriate `main()` function which tests all the cases of catching the exceptions that you throw!