EECE210: Task 8

Why Inheritance is Useful/Not Useful In Basic2DMatrix extends AbstractBasicMatrix implements DenseMatrix.

Why inheritance is useful:

-Creating subclasses if ever needed(hierarchy chart)
-Allows programmers to reuse code already written
-Creates objects similar to super class but with distinct characteristics
-Results in better organization of code

The use of inheritance is to replicate similar characteristics of a class to a subclass which has extra distinct characteristics. There are 2 main reasons why inheritance is so useful. Firstly, inheritance saves time. AbstractBasicMatrix is a parent of the class Basic2DMatrix. A programmer will save a lot of time because all the known characteristics of AbstractBasicMatrix (a matrix, and starts off as a block matrix) is a common characteristic for a Basic2DMatrix. The second reason why inheritance is helpful is because the classification system produced from inheritance creates better code organization: less code is written and each class is seperated. In conclusion, inheritance is very useful in Basic2DMatrix extends AbstractBasicMatrix because it reuses code from the parent, AbstractBasicMatrix, and clearly organizes/links related classes.