**MAT 2440 Properties that a computer program should have**

**Input**. An algorithm has input values from a specified set.

**Output**. From each set of input values an algorithm produces output values from a specified set. The output values are the solution to the problem.

**Definiteness**. The steps of an algorithm must be defined precisely.

**Correctness**. An algorithm should produce the correct output values for each set of input values.

**Finiteness**. An algorithm should produce the desired output after a finite (but perhaps large) number of steps for any input in the set.

**Effectiveness**. It must be possible to perform each step of an algorithm exactly and in a finite amount of time.

**Generality**. The procedure should be applicable for all problems of the desired form, not just for a particular set of input values.