Homework 09 – Extra Credit
Breadth First Search

Objective:
- Implement breadth first search.

Requirements:
- Functionality. (80pts)
    - No Syntax Errors. (80pts*)
        - *Code that cannot be compiled due to syntax errors is nonfunctional code and will receive no points for this entire section.
    - Write a class called **BreadthFirstSearch** with the following (80pts):
        - Methods – assume all methods are called with valid inputs.
            - search – Takes a State and PlanningDomain as input and returns a List of Integers that represents a path to a goal state.
            - main method – A main method that calls Search with a randomly generated EightPuzzleState and the EightPuzzleDomain.
- Coding Style. (10pts)
    - Code functionality organized within multiple methods other than the main method, and methods organized within multiple classes where appropriate. (5pts)
    - Readable Code. (5pts)
        - Meaningful identifiers for data and methods.
        - Proper indentation that clearly identifies statements within the body of a class, a method, a branching statement, a loop statement, etc.
        - All the above must apply for full credit.
- Comments. (10pts)
    - Your name in every file. (5pts)
    - At least 5 meaningful comments in addition to your name. These must describe the function of the code it is near. (5pts)

Finally:
Upload all java source files (.JAVA extension) to the CSCE Dropbox