

Documentation

hw1.cpp

Puzzle();

Constructor to initialize the object

Puzzle(vector< vector<int> > src)

Constructor to initialize the object by passing a 2d vector

Puzzle(istream& file)

Initialize the object by accepting an ifstream of a file and reading it into the object

int at(int i, int j) const

gives you the value of the element at that position

void printState()

prints out the current state of the board

vector<vector<int> > stateClone()

this makes a clone of the state within the class

bool checkStateCompletion()

checks for whether the goal is achieved

vector<string> moveList(int piece)

prints out the move list for the given element

void allMoveList()

prints out all the valid moves for all the elements present

void normalize()

normalizes the current state of the game

void swapIdx(int idx1,int idx2)

works in conjunction with the normalize function.

bool compare(vector< vector<int> > src)

compares the state with another 2d array

bool compare(const Puzzle& p)

compares with another puzzle type object

vector<int> elementList()

gives a list of all the possible elements in the board.