```cpp
#include <iostream>
#include <cstdlib>
#include <vector>
#include <string>
#include <list>
#include <stdexcept>
//#include <stddef.h>
#include "eightPuzzle.h"

using namespace std;

// constructor
puzzle::puzzle()
{
        rootNode = NULL;
}

// Uses default puzzle or takes user input
void puzzle::generatePuzzle(int x){
        path* p = new path;
        p->child1 = NULL;
        p->child2 = NULL;
        p->child3 = NULL;
        p->child4 = NULL;
        p->head = NULL;
        p->heuristic = 0;
        p->branchCost = 0;

        goalState = false;
        totalNodes = 0;
        nodesInQueue = 0;

        if(x == 1){
                // pre-set puzzle
                // 1 2 3
                // 4 8 0
                // 7 6 5
                cout << "Default puzzle is " << endl;
                vector<char> row1, row2, row3;
                row1.push_back('1');
                row1.push_back('2');
                row1.push_back('3');

                row2.push_back('4');
                row2.push_back('8');
                row2.push_back('0');

                row3.push_back('7');
                row3.push_back('6');
                row3.push_back('5');
```