Missionaries and Cannibals Solution

Vivek Sah

January 12, 2016

1 Introduction

t his problem asks us to solve a problems

2 Implementation of the model

The model is implemented in `CannibalProblem.java`. Here's my code for `getSuccessors`:

```
    public ArrayList<UUSearchNode> getSuccessors() {
        if (this.goalTest()){
            return new ArrayList<UUSearchNode>();
                            }
    ArrayList<UUSearchNode> tempList = new ArrayList<UUSearchNode>();
    int new_state = 1-this.state[2];
    int t = (int) Math.pow(-1,this.state[2]);//decide if boat is here or not, if its he

    for(int[] array: possibilities){
        CannibalNode temp = new CannibalNode(this.state[0]+t*array[0], this.state[1]+t*a
            if(isLegalState(temp,this)){
                tempList.add(temp);
}
    }
    return tempList;
}
```

The basic idea of `getSuccessors` is...
I used a method `isSafeState` that returns `true` if...

```
    private boolean isSafeState(int m, int c) {

    }
```

3 Breadth-first search

4 Memoizing depth-first search

5 Path-checking depth-first search

6 Iterative deepening search

7 Lossy missionaries and cannibals