



CITY UNIVERSITY

COMPUTER SCIENCE AND ENGINEERING
ARTIFICIAL INTELLIGENT LABORATORY
CSE418

LAB ASSIGNMENT 2

STUDENT ID :
153402306

February 12, 2019

Contents

1 MISSIONARIES AND CANNIBALS PROBLEM	2
1.1 STATE SPACE DIAGRAM	3
2 LION,LAMB AND GRASS PROBLEM	4
2.1 STATE SPACE DIAGRAM	5

1 MISSIONARIES AND CANNIBALS PROBLEM

INITIAL STATE: IT IS THE STATE WHEN CANNIBALS AND MISSIONARIES ARE ON THE LEFT BANK OF THE RIVER WITH BOAT. I STATED THIS STATE WITH (MMM/CCC>R)

FINAL STATE: FINAL STATE IS THEY ALL CROSS THE RIVER AND GO TO THE OTHER SIDE. WHICH I STATED AS (0>MMM/CCC)

1.1 STATE SPACE DIAGRAM



Figure 1: STATE SPACE DIAGRAM

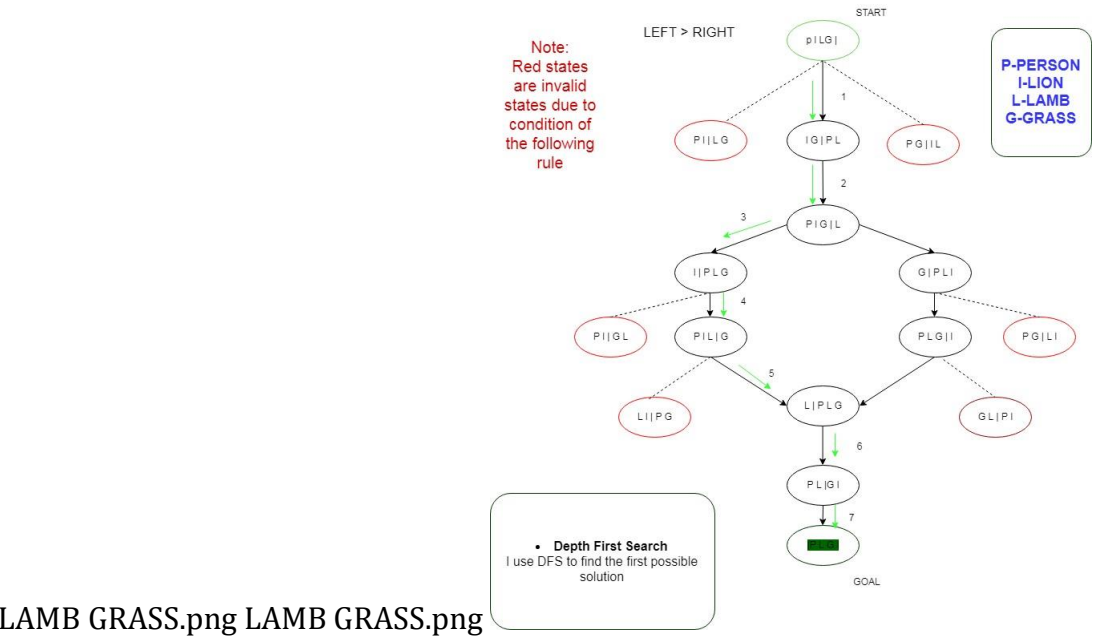
TO SLOVE THIS PROBLEM, I USED DFS BECAUSE IT WILL TAKE LESS STEPS THAN BFS.

2 LION,LAMB AND GRASS PROBLEM

INITIAL STATE: IT IS THE STATE WHEN LION,LAMBS AND GRASS ARE ON THE LEFT BANK OF THE RIVER WITH BOAT.(PILG>R

FINAL STATE: FINAL STATE IS THEY ALL CROSS THE RIVER AND GO TO THE OTHER SIDE.WHICH I STATED AS (0>PILG)

2.1 STATE SPACE DIAGRAM



LAMB GRASS.png LAMB GRASS.png

Figure 2: STATE SPACE DIAGRAM

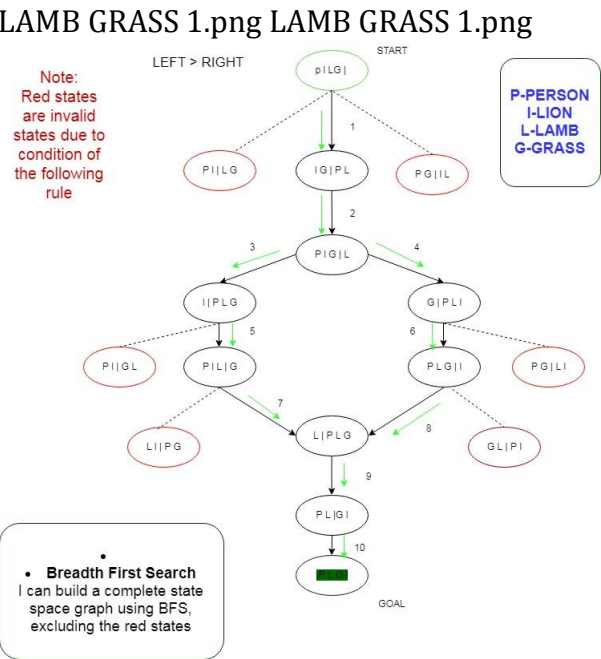


Figure 3: STATE SPACE DIAGRAM

TO SLOVE THIS PROBLEM, I USED DFS BECAUSE IT IS OPTIMAL SOLUTION.