

CSE 404: Task-1(Group: B1)

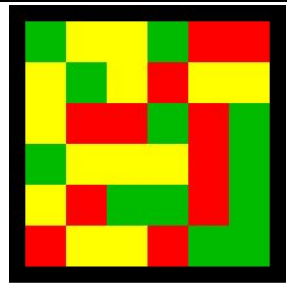
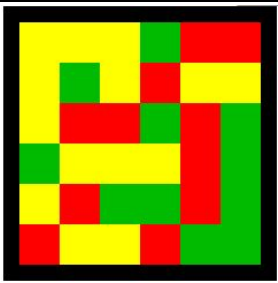
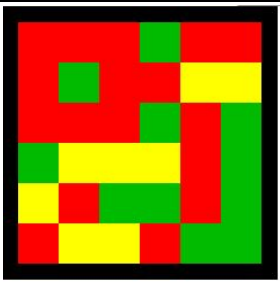
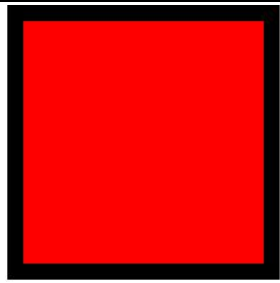
SOLVING “FLOOD-IT” USING A* SEARCH

In this assignment you will have to solve the game “Flood-It” using A* search.

The Problem

Flood-It is a computer game played by millions the world over. The object is to turn a board full of colored squares into one single color in minimum number of ‘flood-filling’ moves. Each move changes the color of the top-left square and all of the same colored squares, connected to it.

The game can be played online: <http://unixpapa.com/floodit/?sz=14&nc=6>

			...	
Initial State	1 st move	2 nd move	...	Goal State

A* Search

Refer to the slide provided in class.

The tasks

1. You have to design **at least** two different heuristics for the problem. The board size must be 6x6. The number of colors is fixed to three.
2. You will have to implement A* search to solve the problem, and implement both of the heuristics. Bonus will be given for GUI implementation and designing more than two heuristics.
3. You have to write a short report (Max 1-1.5 page, pdf), explaining the proposed heuristics and the comparative performance (optimality and runtime) of your proposed heuristics.