Due Date: Mar 27

The assignment is individual, so please do not make any information exchange or do not discuss about the answers or ask anybody for help except the instructor. You can use any Internet resources for reading, you can search for the answers on any search engine (like Google) or you can use any textbooks.

For all the parts below, please write your code in Lisp Programming Language and test with Dr. Racket.

Assumptions

Assume you have given a map with following information: List of Edges and List of Nodes
You are asked to find a solution for the map coloring problem on the given map. The problem can be defined as, use minimum number of colors possible to color all the nodes and the constraint is, you can not color to adjacent (neighbor) nodes into same color.

Questions

1) Implement a map coloring algorithm as a constraint satisfaction problem

Testing

For the given graph and heuristic values below:

```
;neighborhood map
;list of edges
(define myMap (list (list 1 2)
      (list 1 3)
      (list 1 4)
      (list 2 3)
      (list 3 4)
      )
  )
;list of edges
(define lnodes (list 1 2 3 4))
```

A solution can be as below (in node number, color order and each color code is unique):

```
(list (list 1 3)
      (list 2 2)
      (list 3 1)
      (list 4 2)
      ))
```

You can also download the programming practices for tree coding from the web page of course.