**Coloring Problem:**

the problem is that we must color the vertices of a G (vertex, edge) graph

such that no two adjacent vertices share the same color.

#Each color represents by intger.

```
this problem can be custom to a lot of others such as:

    * If graph is bipartite - color = 2.

    * Scheduling meeting - every vertex is a meeting, and the edge
       means there is a common person in the meeting
       color will be the minimum number of days between meeting for
       each person

    * Frequencies - frequencies assign to towers in the same location
          must be different because of interference
          edge means they in range (same location)
          every tower is vertex.
          color means minimum number of different frequencies.
```