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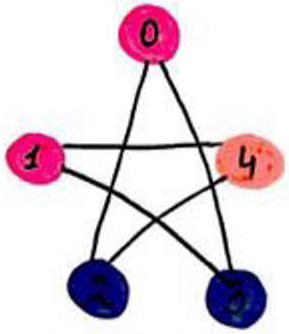
GR 915/1

PRACTICAL WORK NO. 5 EX. 3



VERTEX COLORING
WITH THE MIN. NR. OF COLORS

vertices	edges
5	5

edge	cost
0 2	1
0 3	1
1 3	1
1 4	1
2 4	1

vertex	banned colors for vertex	color
0	[]	a
1	[]	a
2	[a]	b
3	[a]	b
4	[a, b]	c

For vertex 0:
- we get the banned colors = []
- we set the color 'a'
- we parse the adjacency list and add to the banned list of its neighbours [2, 3] the color 'a'.

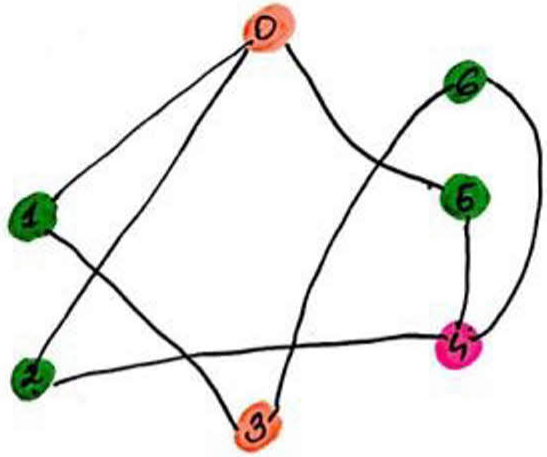
For vertex 1:
- we get the banned colors = []
- we set the color 'a'
- add to the banned list of its neighbours [3, 4] the color 'a'

For vertex 2:
- banned colors = ['a']
- 'a' is in banned colors so we set the color 'b'
- add to the banned list of its neighbours [0, 4] color 'b'

For vertex 3:
- banned colors = ['a']
- 'a' is banned => color 'b'
- add to the banned colors list of its neighbours color 'b'

For vertex 4:
- banned colors = {'a', 'b'}
- 'a', 'b' - banned => color 'c'
- add to the banned list of its neighbours color 'c'.

7 vertices 10 edges



9vertices 16 edges