**MARMARA UNIVERSITY FACULTY OF ENGINEERING**

COMPUTER ENGINEERING

***Project:***

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***Project 2:***

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First of all, the first vertex in the generated graph is painted with the first color and stored in “result” variable (colors are represented by numbers). For the next vertex, it is determined whether the adjacent vertexes are painted or what color they are painted and stored in a set().Vertex is painted with the number representing the smallest color that is not in the in set() variable and the loop continues until all vertexes are painted.

Ex: The first vertex is painted by checking the colors of the adjacents of the first vertex. Since no vertex has been painted before, we can directly paint the first vertex with the first color. When the vertex is painted in the 4th iteration, when the neighbors of the 4th vertex are checked, we need to use a different color other than the colors in which the 1st and 2nd vertex have been painted before because these vertexes are neighbors of the 4th vertex.

{1:0} key: vertex\_id, value: color\_numberA screenshot of a computer

Description automatically generated