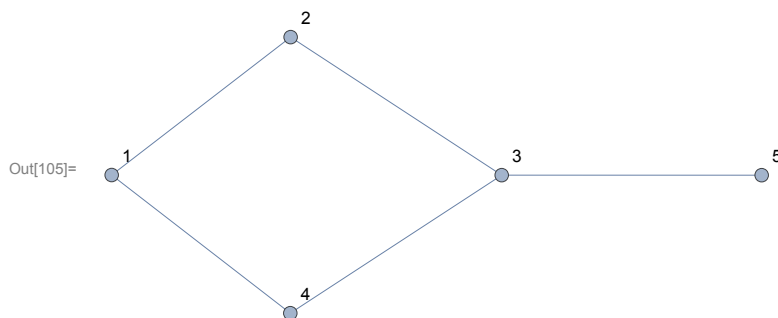# Graph coloring package

Loading the package

Remember:

- The file graphcoloring.wl must be in the same folder that your notebook file.
- You must change the directory where *Mathematica* searchs packages (to the current one).
- Typically, save first the notebook and then load the package as follows:

In[104]:= `SetDirectory[NotebookDirectory[]];`

`<< graphcoloring.wl`

Examples

First, let's create a graph using mathematica built-in function Graph[]

In[105]:= `G1 = Graph[{1 ⟷ 2, 2 ⟷ 3, 3 ⟷ 4, 4 ⟷ 1, 3 ⟷ 5}, VertexLabels → "Index"]`
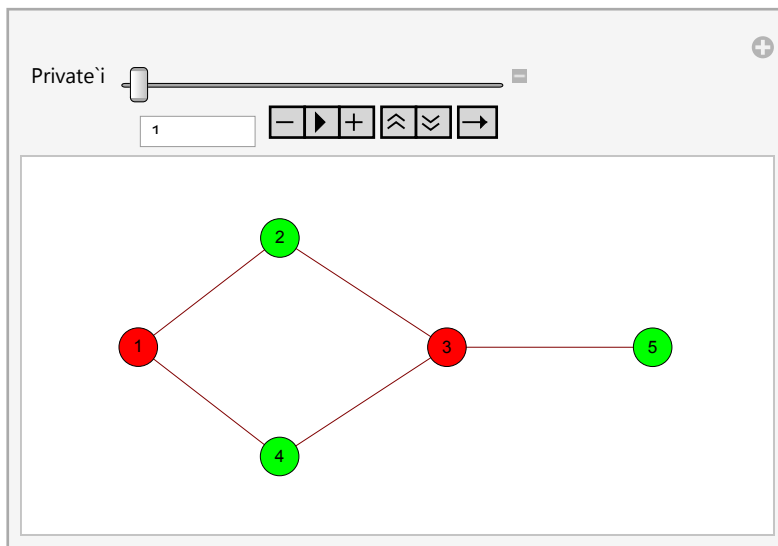
Out[105]=

Now, let's use the package. It has only one function, colorGraph[]. Its arguments are:

1. The graph you want to color.

2. The number of colors you want to use. You can only choose **3** or **4** as the number of colors.
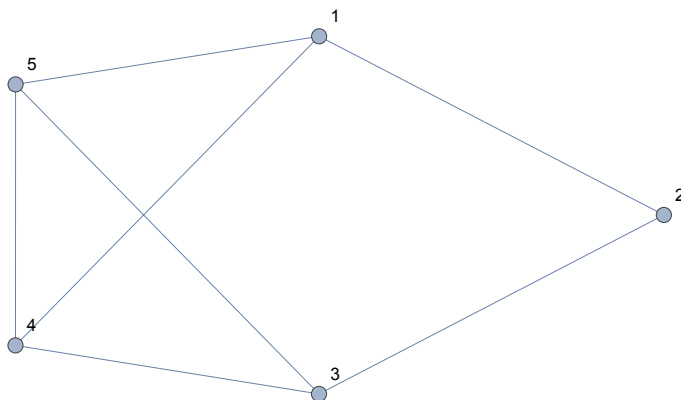
In[101]:= **colorGraph[G1, 3]**

Out[101]=

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```
1       [−] [▶] [+]  [≫] [≪]  [→]
```


Another example:

In[102]:= **G2 = Graph[{1 ⟷ 2, 2 ⟷ 3, 3 ⟷ 4, 4 ⟷ 1, 1 ⟷ 5, 3 ⟷ 5, 4 ⟷ 5}, VertexLabels → "Index"]**

Out[102]=

In[103]:= **colorGraph[G2, 4]**

Out[103]=