**Assignment**

The attached spreadsheet represents an electrical transmission network. Think of it as a connected network. The sheet contains 3 tabs.

1. Line Data: Each row here represents a branch in the network. From and To bus are the nodes in the network.
2. Generator Data: Each row represents a generator connected to a bus (node)
3. Sample SLD: Represents a sample of the output that should be generated. Ignore types of generators. Represent all generators as a simple circle with “G” written in it

Read that excel file programmatically and plot it as an SLD as shown in ‘Sample SLD’ tab while achieving the following requirements

1. Bus should show up as a line not a point
2. Overlaps among the lines should be negligible
3. Show different colors for different voltage levels
4. Show generators as circle connected to the bus, and load as arrow pointing away from the bus. Load in this case would be nodes which are connected only at a single point and not in a loop.
5. If two buses of different voltage levels are connected with each other, show it as transformer and use two circles overlapping with each other to present transformer.
6. Bonus points for visually appealing outputs

Use any language or tool as necessary but opensource tools are preferred.

1. First deliverable will be the SLD image you generated in jpg/png format
2. Second, we would like to be able to run the code. Your submission should contain instructions to reproduce it. Extra points for a deliverable which is easy to test. eg. say an online test jig.