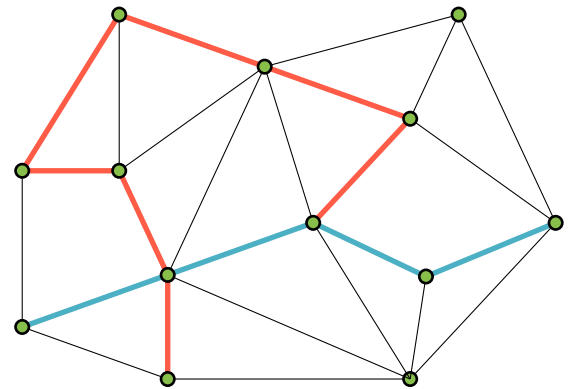


## Drawing Graphs to improve their Readability

Consider the graph of the figure and the two paths shown by blue and red colors. Now, try to follow the blue path from one of its end-vertices to the other. Do the same for the red path. You have probably observed that this task is much easier for the blue path.

The property which makes the blue path easy-to-follow is its “geodesic tendency”. Several user studies were conducted to understand how people read graphs and understand data. They determined that “geodesic tendency” is important in performing path-search tasks.



Within this project we are interested in creating drawings of graphs where several (or all) vertex-pairs are connected by “geodesic paths”. In particular, you will work on algorithms which produce such drawings.

In case you prefer to work on theoretical aspects, you will be concerned with development of polynomial-time algorithms to produce such drawings, or proving that the problem at hand is NP-hard. If you prefer practice, you will work on the development of heuristics solving the problem and their implementation to work on a touch-screen device.

**Requirements:** Lectures Algorithms for Planar Graphs, Graph Drawing(masters students), good programming skills in Java if you are interested in algorithm implementation.

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