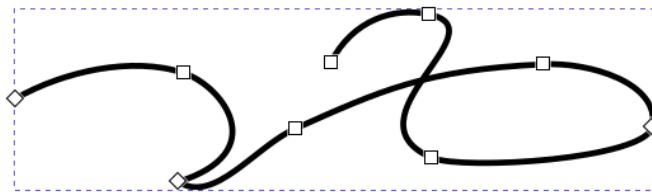


# Introduction to 2D Design for Laser Cutting

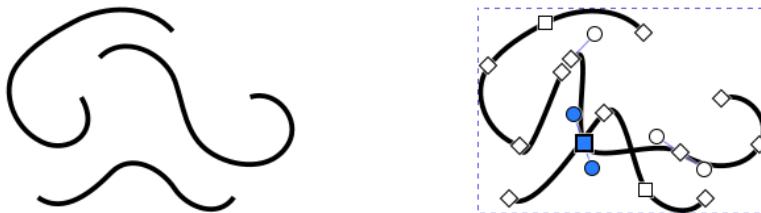
## Editing paths

Unlike shapes created by shape tools, the Pen and Pencil tools create what is called *paths*. A path is a sequence of straight line segments and/or Bezier curves which, as any other Inkscape object, may have arbitrary fill and stroke properties. But unlike a shape, a path can be edited by freely dragging any of its nodes (not just predefined handles) or by directly dragging a segment of the path. Select this path and switch to the Node tool (**N**):



## Subpaths and combining

A path object may contain more than one *subpath*. A subpath is a sequence of nodes connected to each other. (Therefore, if a path has more than one subpath, not all of its nodes are connected.) Below left, three subpaths belong to a single compound path; the same three subpaths on the right are independent path objects:



Note that a compound path is not the same as a group. It's a single object which is only selectable as a whole. If you select the left object above and switch to node tool, you will see nodes displayed on all three subpaths. On the right, you can only node-edit one path at a time.

Inkscape can [Combine](#) paths into a compound path (**Ctrl+K**) and [Break Apart](#) a compound path into separate paths (**Ctrl+Shift+K**). Parts of a path (i.e. a selection of nodes) can also be copied with **Ctrl+C** and inserted as a new subpath (into the same path or a different one) with **Ctrl+V**. Try these commands on the above examples. Since an object can only have one fill and stroke, a new compound path gets the style of the first (lowest in z-order) object being combined.

Select the red object and node-edit it; watch how both linked offsets respond. Now select any of the offsets and drag its handle to adjust the offset radius. Finally, note how you can move or transform the offset objects independently without losing their connection with the source.

