Programming Assignment 5-4: A Simple Channel Router

Problem Descriptions:

Given the order of terminals along the routing channel, apply basic left-edge algorithm to route the nets so that the total number of wiring tracks are minimized.

Input format:

The input file consists of two number sequences that represent the order of terminals along the channel. Those numbers are the name of each net, and 0 represents no connection. In the following example, the number sequence in the left represents the channel routing problem on the right.



Output format:

1. A text output that describes the track assignment in the routing procedure. Take the above problem as an example:

Track 1: I1, I3, I6 Track 2: I2, I5 Track 3: I4

2. A GUI to display the routing result as in the above example. (optional)

Grading:

Your grade depends on the correctness, and runtime of your program. You may first compress all of the source code and execution file and then email your homework to TA before the deadline (please specify your student ID in the subject). The implementation details and your comments about this homework should be written in a simple report and mailed to TA together.