The commands in the middle are treated the "same". There is a pipe on each side.

cmd1 | cmd2 | cmd3 | cmd4 | cmd5 | **cmd6**

The commands at the ends of the list are different. A pipe either after the head of the left or before the tail of the list.

the middle.

loop through list of commands:
    if ! last:

        create pipe P[]

    fork:

        child:

            if ! first:

                dup2(p_trail, stdin)

            if ! last:

                dup2(P[output], stdout)
                close P[input]
                close P[output]
            exec with raggedy array

        parent:

            if ! first:

                close p_trail

            if ! last:

                close P[output]
                p_trail = P[input]

    end loop:

Redirection code happens between these lines.

The key is to keep track of P_trail.

All `wait()` calls occur **after** the loop.

p_trail is the input side of the pipe(P) from the previous command in the pipeline. It is just an `int`, for a file descriptor.

Small Print: No warranty comes with this pseudo-code.

R. Jesse Chaney