Analysis

- **Worst-case** completion time: 5 message transmission times
  - When the process with the lowest id in the system detects the failure.
    - (N-1) processes altogether begin elections, each sending messages to processes with higher ids.
    - i-th highest id process sends (i-1) election messages
  - Number of Election messages
    $= N\text{-}1 + N\text{-}2 + \dots + 1 = (N\text{-}1)*N/2 = O(N^2)$
- **Best-case**
  - Second-highest id detects leader failure
  - Sends (N-2) Coordinator messages
  - Completion time: 1 message transmission time